Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie L. Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	
Witness(es)	:	

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

Prepared Testimony in Response to California Water Service 2023 General Rate Case Application 21-07-002

PUBLIC

San Francisco, California
February 4, 2022

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Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie L. Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	Brian Yu
Witness(es)	:	Chris Ronco

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

Executive Summary and Results of Operations Tables

California Water Service Company

Test Year 2023 General Rate Case

A.21-07-002

San Francisco, California
February 4, 2022

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MEMORANDUM

The Public Advocates Office at the California Public Utilities Commission ("Cal Advocates") examined requests and data presented by California Water Service Company ("CWS" or "Cal Water") in Application ("A.") 21-07-002 ("Application") to provide the California Public Utilities Commission ("Commission") with recommendations that represent the interests of ratepayers for safe and reliable service at the lowest cost. The Executive Summary was prepared by Brian Yu under the general supervision of Program Manager Richard Rauschmeier, and Program & Project Supervisor Syreeta Gibbs. The Results of Operations Tables were prepared by Chris Ronco, and under the general supervision of Program Manager Richard Rauschmeier, and Program & Project Supervisor Syreeta Gibbs and Project Lead Brian Yu. Marybelle Ang and Caryn Mandelbaum serve as Cal Advocates legal counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any issue connotes neither agreement nor disagreement with the underlying request, methodology, or policy position related to that issue.

EXECUTIVE SUMMARY

The Commission must consider a utility's incentive to increase capital investment beyond what is necessary when determining whether proposed investments are reasonable. Certain aspects of cost-based regulation motivate utilities to invest in systems to an unnecessary degree, burdening ratepayers with unnecessary costs. The greater the capital investment, the greater the return or profit for the utility. One way a regulatory body can protect ratepayers against a utility's incentive to overspend is to require utilities to demonstrate the need for infrastructure investment based on the actual, physical condition of the current system, rather than simply on the infrastructure age.

As described in Cal Advocates' Reports, CWS's reliance solely on the paper-age of infrastructure to determine whether that infrastructure should be replaced can lead to unnecessary replacements and unnecessary costs.[1] By requiring CWS to demonstrate that the physical condition of infrastructure warrants replacement, the Commission can help prevent premature replacements and reduce unnecessary burdens for the ratepayers.

In a general rate case, the utility must be able to demonstrate the reasonableness of every dollar in its revenue requirement.[2] CWS's request for contingency allowances for most capital projects should be denied ratepayer funding in advance of expenditures. Contingency amounts are, by definition, unknown, and therefore inappropriate for inclusion in revenue requirements.[3] In D.21-08-036, the Commission stated that "budgeting for contingencies is not necessarily appropriate in the context of a general rate case, where the utility must demonstrate the reasonableness of every dollar in its forecast revenue requirement."[4]

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[1] Public Advocates Report on Allocations and Plant for CSS & RDOM District, Pipeline Replacement, and Physical Security, Pipeline Replacement chapter by Suliman Ibrahim.

[2] D.96-12-066, 69 CPUC2d, p. 695.

[3] Public Advocates Report on Common Plant Issues, Contingency chapter by Suliman Ibrahim.

[4] D.21-08-036, p. 331.

CWS's request to continue to receive ratepayer funding for projects previously funded but still incomplete is also unreasonable. Ratepayers should not be required to fund projects twice when they have yet to receive benefits once. Projects previously funded under the assumption that they would be already providing service to customers, but for whatever reason have either not been started or remain incomplete, should not continue to burden ratepayers. CWS can request recovery of these previously funded projects in a subsequent general rate case when the projects can be demonstrated to provide additional benefits to customers.[5]

The Commission should also discontinue CWS's Sales Reconciliation Mechanism (SRM) pilot which the Commission authorized specifically to reduce variability in revenue caused by the Water Revenue Adjustment Mechanism (WRAM). With the elimination of the WRAM, the SRM pilot is unnecessary and results in single-issue ratemaking that unfairly shifts the cost burden resulting from inaccurate sales forecasting to ratepayers.[6] Furthermore, the Commission should affirm that as of January 1, 2023, ratepayers will no longer experience any of the burdensome surcharges emanating from the WRAM mechanism that the Commission has determined to discontinue.[7]

To achieve significant ratepayer benefit in all CWS districts, the Commission should limit the Allowance for Funds Used During Construction (AFUDC) rate below CWS's full rate of return. Allowing an AFUDC rate equal or greater to CWS's full rate of return violates the basic risk-return relationship, contravenes the actual financing CWS utilizes for projects under construction, and harms ratepayers by allowing the abusive monopolistic practice of compounding profits on incomplete projects—a practice that would not be permitted in a competitive environment. It is important that the

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[5] Public Advocates Report on Allocations and Plant for CSS & RDOM District, Pipeline Replacement, and Physical Security, Previously Funded Incomplete Projects Chapter.

[6] Cal Advocates Report on Special Requests #3, #4 and #14.

[7] Ibid.

Commission fulfill its fundamental role as a substitute for competition and prevent ratepayers from funding AFUDC at CWS's full rate of return.[8]

CWS's application addresses several of the Commission's Environmental and Social Justice (ESJ) Action Plan objectives published on February 21, 2019. CWS states it has reviewed potential impacts on ESJ communities within its service areas and took proactive steps to work towards meeting the applicable goals outlined in the Commission's ESJ Action Plan.[9] CWS submitted its 2020 annual Environmental, Social and Governance (ESG) Report and states that it addresses the Commission's ESJ Action Plan goals.[10] Although the ESG Report broadly covers the Commission's ESJ Action Plan's goals, it does not appear CWS's goals were specifically developed to address the Commission's ESJ Action Plan objectives. Rather, CWS's testimony presents a collection of existing practices that can be applied to the ESJ communities. The list of impacts that CWS identified in its testimony[11] were for all its customers, not specific to ESJ communities. The Commission is in the process of finalizing a new version of its ESJ Action Plan which has slightly modified and added goals and objectives.[12] CWS should develop a plan that specifically addresses the Commission's revised ESJ Action Plan's goals and objectives and present its achievements in the next rate case.

CWS's application and customer notices rely on a non-standard calculation of proposed revenue and rate increases. The standard calculation of revenue and rate changes compares the revenue that would be generated under present rates

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[8] "Our objective through regulation is to act as a substitute for competition." D.96-04-050 citing D.86-08-083.

[9] CWS Additional Testimony, Direct Testimony of Shannon Dean, Section 20, p. 134.

[10] CWS Additional Testimony, Direct Testimony of Shannon Dean, Attachment H.

[11] CWS Additional Testimony, Direct Testimony of Shannon Dean, Section 20, pp. 134-141.

[12] CPUC Environmental & Social Justice Action Plan, Version 2.0 – Draft version for public comments, October 26, 2021.

with the revenue that would be generated under proposed rates. The percentage difference is then the change in average systems rates. However, CWS compares its last authorized revenue requirement with its proposed revenue requirement. In the current proceeding, this non-standard calculation understates the change in average system rates.

In order to accurately present the change in average system rates, it is imperative to compare the proposed revenue requirement (i.e., revenue at proposed rates) with the utility's ability to meet that revenue requirement without changing rates (i.e. revenue at present rates). Comparing only the change in revenue requirements (as CWS had done in its Application and Customer Notices) will not accurately depict the change. For example, it is possible to increase revenue requirements (i.e., utility costs) but require a decrease in rates if customer demand is increasing relatively more. Conversely, it is possible to have a decrease in revenue requirements but require rates to increase in order to accommodate decreasing customer demand.

Simply put, CWS's calculation utilizing only revenue requirements compares only the change in utility costs and completely ignores the ability to meet costs under present rates. As such, it does not result in an accurate depiction of the overall change in rates being proposed. At a minimum, the Commission should be aware of the different methodology utilized by CWS in depicting its proposed rate changes and order CWS to comply in all future proceedings with the standard calculation utilized by other water utilities and industries when depicting rate changes. In the current proceeding, it would also be appropriate for CWS to be required to re-notice all customers of the correct changes in system rates and revenues being proposed in its application.

1 The following table (Table 1) compares Cal Advocate's recommended
2 system-wide increases with those presented by CWS in its application and those
3 that would have been presented if CWS had used the correct calculation.

Table 1: Overall Revenue Increase Comparison (% Change in System Rates)

	CWS Application		**CWS Corrected**		**Cal Advocates**	
YEAR	Increased Revenue	Percentage Change	Increased Revenue	Percentage Change	Increased Revenue	Percentage Change
2022	$80.5M	11.11%	$130.5M	19.34%	$56.6M	8.39%
2023	$43.6M	5.42%	$43.6M	5.42%	$17.8M	2.44%
2024	$43.2M	5.09%	$43.2M	5.09%	$20.3M	2.72%

4 The following table (Table 2) compares Cal Advocate's recommended
5 percentage changes in system rates by district with those proposed by CWS using
6 the correct calculation referenced above.

Table 2: Percentage Increase Comparison by District

	CWS PROPOSED			CAL ADVOCATES		
District Name	**2023**	**2024**	**2025**	**2023**	**2024**	**2025**
Bakersfield	18.34%	5.36%	4.87%	6.27%	2.41%	2.43%
Bay Area Region	25.84%	4.02%	3.82%	8.43%	2.22%	2.38%
Bear Gulch	20.20%	7.38%	6.82%	6.72%	4.48%	4.46%
Chico	16.39%	5.51%	5.11%	8.67%	2.33%	2.70%
Dixon	62.99%	3.72%	3.48%	57.62%	1.96%	2.17%
Dominguez	16.60%	4.82%	5.10%	8.86%	-0.26%	0.83%
East Los Angeles	14.52%	3.15%	2.31%	6.87%	1.47%	1.47%
Hermosa Redondo	17.22%	4.70%	4.49%	10.27%	1.84%	2.26%
Kern River Valley	15.11%	6.17%	5.90%	9.68%	1.92%	2.36%
Livermore	20.46%	5.97%	5.69%	13.61%	2.55%	2.80%
Los Altos	14.43%	9.50%	8.64%	4.63%	6.03%	5.95%
LAR - Antelope Valley (PV+AV)	11.55%	4.97%	4.60%	4.96%	2.45%	2.67%
LAR - Palos Verdes (PV+AV+PV Pipe)	15.08%	3.82%	3.57%	8.76%	1.70%	1.90%
Marysville	16.74%	5.53%	5.20%	6.02%	4.87%	5.01%
Salinas Valley Region	26.72%	5.42%	5.11%	1.58%	2.82%	3.06%
Oroville	12.31%	5.75%	5.34%	2.35%	3.59%	3.77%
Selma	2.58%	4.90%	4.72%	-7.77%	1.05%	1.61%
Stockton	27.39%	5.98%	5.59%	17.66%	3.82%	3.97%
Visalia	8.78%	7.14%	6.58%	0.64%	2.65%	3.04%
Westlake	14.49%	1.67%	1.65%	9.53%	0.36%	0.65%
Willows	34.72%	3.10%	2.91%	31.12%	2.20%	2.46%
Travis	73.00%	37.08%	26.92%	23.63%	6.56%	6.33%

1 **Cal Advocates Reports and Witnesses**

2 The following table identifies the various Cal Advocates reports and witnesses that
3 provide analysis and recommendations relevant to the requests made by CWS in the
4 current proceeding:

Report Author	Report Title
Prashanta Adhikari	Report and Recommendations on Taxes, and Special Requests 7&8.
Lauren Cunningham	Report on Operations and Maintenance Expenses, Supply Costs, and Special Requests #10 for Districts.
Kerrie Evans	Report and Recommendations on Balancing and Memorandum Accounts, Special Requests #11, #12 and #13.
Isaac Gendler	Report on Plant for Bakersfield, Kern River Valley, Selma, and Visalia Districts. Report on Rate Base. Report on Common Plant Issues Chapter – Wildfire Hardening Program.
Sari Ibrahim	Report on Plant for Livermore and Stockton Districts.
Suliman Ibrahim	Report on Allocations and Plant for CSS&RDOM District, Pipeline Replacement and Physical Security. Report on Common Plant Issues Chapter – Contingency, Construction Management and Special Inspections, and Previously Funded Incomplete Projects.
Sam Lam	Report on Sales Forecast, Conservation Budgets, Rate Design, and Special Request 2.
Brian Lui	Special Request #9
Justin Menda	Report on Plant for Bay Area Region, Salinas Valley Region, Bear Gulch and Los Altos Districts. Report on Common Plant Issues Chapters – Meter Replacement Program, Flowmeter Replacement, Tank Coatings, and Special Request #5.

Report Author	Report Title
Niamh Murphy	Report on Plant for Dixon, Chico, Oroville, Marysville, and Willows Districts. Report on Common Plant Issues Chapters - Pump and Motor Replacement Program, Cathodic Protection Systems and Components, Control Valve Overhaul and Replacement, Water Quality Analyzers, SB 1398 Service Replacement Program, Water Quality Sample Sites.
Susana Nasserie	Report on Common Plant Issues Chapters – Vehicles Replacement Program, Water Quality, AWIA Report and Emergency Plan Submission, and Special Request #6.
Chris Ronco	Results of Operations Tables
Zaved Sarkar	Report on Plant for Los Angeles County and South Bay Regions, East Los Angles, Westlake, and Travis AFB Districts, and Special Request #9. Report on Common Plant Issues Chapters – Tank Retrofits, Pressure Vessel, and Well Infrastructure Renewal Program.
Edward Scher	Report on Special Requests #3, #4, and #14.
Andrew Sweeney	Report on Administrative and General Operations.
Brian Yu	Executive Summary.

1 **Appendix 1: Witness Statement of Qualifications**

QUALIFICATIONS AND PREPARED TESTIMONY

OF

Brian Yu

Q1. Please state your name, business address, and position with the California Public Utilities Commission ("Commission").

A1. My name is Brian Yu and my business address is 320 W. 4th Street, Suite 500, Los Angeles, CA 90013. I am a Senior Utilities Engineer in the Water Branch of the Public Advocates Office.

Q2. Please summarize your education background and professional experience.

A2. I graduated from the California State Polytechnic University, Pomona, with a Bachelor of Science degree in Mechanical Engineering.

I have been employed by the Public Advocates Office – Water Branch since 2007 and participated in many GRCs including Great Oaks Water, Golden State Water, Valencia Water, Suburban Water, San Gabriel Water, and California Water Services cases. More recently, I served as a project lead in the last Cal Water GRC A.18-07-001.

Q3. What is your responsibility in this proceeding?

A3. I am responsible for overseeing the Public Advocates Office's final testimonies, communicating with Cal Water regarding data discovery, and coordinating internally and externally to resolve any issues that arise in this GRC. I am also responsible for the Executive Summary chapters of the Executive Summary and Results of Operations Tables Report.

Q4. Does this conclude your prepared direct testimony?

A4. Yes, it does.

QUALIFICATIONS AND PREPARED TESTIMONY

OF

Chris Ronco

Q.1 Please state your name and business address.

A.1 My name is Chris Ronco and my business address is 505 Van Ness Avenue, San Francisco, California 94102.

Q.2 By whom are you employed and what is your job title?

A.2 I am a Public Utilities Regulatory Analyst I in the Water Branch of the Public Advocates Office.

Q.3 Please describe your educational and professional experience.

A.3 I received a Bachelor of Science Degree in Environmental Economics & Policy and a Bachelor of Arts Degree in Geography from the University of California, Berkeley in 2019. My previous professional experience includes working as a water conservation assistant and as an intern with a resource conservation district. I have been with the Public Advocates Office – Water Branch since October 2019, during which I have worked on several General Rate Cases.

Q.4 What is your area of responsibility in this proceeding?

A.4 In this proceeding I was responsible for the Public Advocates' Results of Operation Model.

Q.5 Does that complete your prepared testimony?

A.5 Yes, it does

Appendix 2: Results of Operations Tables (Cal Advocates RO Tables)

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	4,772.5	13,959.1	9,186.7
2. Test Year 2023 Increase (%)	6.3%	18.3%	12.1%
3. Escalation Year 2024 Increase (%)	2.9%	5.9%	3.0%
4. Escalation Year 2025 Increase (%)	2.1%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**76,096.4**	**76,096.4**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	27,069.5	27,167.4	97.9	0.4%
3a	Administrative & General	853.8	1,042.4	188.6	18.1%
4a	Payroll	7,456.9	7,771.5	314.6	4.0%
5a	General Office - *prorated expenses*	13,139.9	14,260.1	1,120.2	7.9%
6a	Depreciation Expense	13,435.3	15,436.1	2,000.7	13.0%
7a	Taxes Other Than Income	3,764.9	4,277.3	512.5	12.0%
8a	California Corporate Franchise Tax	(166.5)	(1,821.2)	(1,654.7)	90.9%
9a	Federal Income Tax	(525.2)	(1,341.5)	(816.3)	60.8%
10a	Total Operating Expenses	65,028.6	66,792.2	1,763.6	2.6%
11a	Net Operating Revenues	11,067.8	9,304.3	(1,763.6)	-19.0%
12a	Weighted Average Rate Base	193,003.1	256,011.3	63,008.2	24.6%
13a	***Return on Rate Base***	***5.73%***	***3.63%***	***-2.10%***	***-57.8%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	80,868.9	90,055.6	**9,186.7**	**10.2%**
	Operating Expenses:				
2b	Operation & Maintenance	27,100.4	27,257.6	157.2	0.6%
3b	Administrative & General	853.8	1,042.4	188.6	18.1%
4b	Payroll	7,456.9	7,771.5	314.6	4.0%
5b	General Office - *prorated expenses*	13,139.9	14,260.1	1,120.2	7.9%
6b	Depreciation Expense	13,435.3	15,436.1	2,000.7	13.0%
7b	Taxes Other Than Income	3,828.7	4,463.8	635.1	14.2%
8b	California Corporate Franchise Tax	247.0	(611.7)	(858.7)	140.4%
9b	Federal Income Tax	370.3	1,277.8	907.6	71.0%
10b	Total Operating Expenses	66,432.2	70,897.7	4,465.4	6.3%
11b	Net Operating Revenues	14,436.6	19,157.9	4,721.3	24.6%
12b	Weighted Average Rate Base	193,003	256,011.3	63,008.2	24.6%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**4,772.5**	**13,959.1**	**9,186.7**	**65.8%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	82,815.6	84,569.9	1,754.2	2.1%
2	Operating Expenses:*				
3	Operation & Maintenance	27,457.9	28,007.1	549.2	2.0%
4	Administrative & General	1,074.8	1,096.3	21.5	2.0%
5	Payroll	7,702.9	7,857.0	154.1	2.0%
6	G.O. Prorated Expenses	13,078.7	13,340.3	261.6	2.0%
7	Depreciation Expense	14,000.6	14,280.7	280.0	2.0%
8	Taxes Other Than Income	3,903.4	3,981.5	78.1	2.0%
9	California Corporate Franchise Tax	248.6	248.64	0.0	0.0%
10	Federal Income Tax	502.1	502.11	0.0	0.0%
11	Total Operating Expenses	67,969.2	69,313.5	1,344.4	1.9%
12	Net Operating Revenues	14,846.5	15,256.3	409.8	2.7%
13	Weighted Average Rate Base	198,482.3	203,961.5	5,479.2	2.7%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***0.0***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	227.1	227.1	0.0	0.0%
2a	Business	695.4	695.4	0.0	0.0%
3a	Multiple Family	1,138.0	1,138.0	0.0	0.0%
4a	Industrial	545.5	545.5	0.0	0.0%
5a	Public Authority	2,991.7	2,991.7	0.0	0.0%
6a	Other	1,006.5	1,006.5	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	267.0	267.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	227.1	227.1	0.0	0.0%
2b	Business	695.4	695.4	0.0	0.0%
3b	Multiple Family	1,138.0	1,138.0	0.0	0.0%
4b	Industrial	545.5	545.5	0.0	0.0%
5b	Public Authority	2,975.6	2,975.6	0.0	0.0%
6b	Other	994.7	994.7	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	267.0	267.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	61,444	61,444	0	0%
2a	Business	6,245	6,245	0	0%
3a	Multiple Family	1,204	1,204	0	0%
4a	Industrial	32	32	0	0%
5a	Public Authority	743	743	0	0%
6a	Other	84	84	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	69,752	69,752	0	0%
	Unmetered Connections:				
10a	Residential Flat	4,000	4,000	0	0%
11a	Private Fire Protection	915	915	0	0%
12a	Public Fire Protection	106	106	0	0%
13a	Total Number of Unmetered Connections	5,021	5,021	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	74,773	74,773	0	0%
15a	Excluding Fire Protection	73,752	73,752	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	63,991	63,991	0	0%
2b	Business	6,238	6,238	0	0%
3b	Multiple Family	1,205	1,205	0	0%
4b	Industrial	32	32	0	0%
5b	Public Authority	747	747	0	0%
6b	Other	85	85	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	72,297	72,297	0	0%
	Unmetered Connections:				
10b	Residential Flat	2,000	2,000	0	0%
11b	Private Fire Protection	925	925	0	0%
12b	Public Fire Protection	108	108	0	0%
13b	Total Number of Unmetered Connections	3,033	3,033	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	75,330	75,330	0	0%
15b	Excluding Fire Protection	74,297	74,297	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

Test Year 2023 (KCCF)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	13,952.1	13,952.1	0.0	0.0%
2a	Business	4,342.8	4,342.8	0.0	0.0%
3a	Multiple Family	1,370.1	1,370.1	0.0	0.0%
4a	Industrial	17.5	17.5	0.0	0.0%
5a	Public Authority	2,222.3	2,222.3	0.0	0.0%
6a	Other	84.5	84.5	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	21,989.3	21,989.3	0.0	0.0%
10a	Total Unmetered Connections' Sales	1,067.9	1,067.9	0.0	0.0%
11a	Total Sales	23,057.2	23,057.2	0.0	0.0%
12a	*Unaccounted For Water Rate*	*10.3%*	*10.3%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	2,638.0	2,638.0	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**25,695.2**	**25,695.2**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	58,988.5	58,988.5	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	9,180.5	9,180.5	0.0	0.0%
17a	Purchased Water	8,930.4	8,930.4	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	7,584.3	7,584.3	0.0	0.0%
19a	**Total Supply ***	**25,695.2**	**25,695.2**	**0.0**	**0.0%**

Escalation Year 2024 (KCCF)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	14,530.5	14,530.5	0.0	0.0%
2b	Business	4,337.6	4,337.6	0.0	0.0%
3b	Multiple Family	1,370.8	1,370.8	0.0	0.0%
4b	Industrial	17.5	17.5	0.0	0.0%
5b	Public Authority	2,222.3	2,222.3	0.0	0.0%
6b	Other	84.5	84.5	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	22,563.2	22,563.2	0.0	0.0%
10b	Total Unmetered Connections' Sales	534.0	534.0	0.0	0.0%
11b	Total Sales	23,097.2	23,097.2	0.0	0.0%
12b	*Unaccounted For Water Rate*	*10.3%*	*10.3%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	2,657.6	2,657.6	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**25,754.8**	**25,754.8**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	59,125.3	59,125.3	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	9,226.6	9,226.6	0.0	0.0%
17b	Purchased Water	8,930.4	8,930.4	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	7,597.8	7,597.8	0.0	0.0%
19b	**Total Supply ***	**25,754.8**	**25,754.8**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	30,787.8	30,787.8	0.0	0.0%
2a	Business	9,126.3	9,126.3	0.0	0.0%
3a	Multiple Family	2,879.3	2,879.3	0.0	0.0%
4a	Industrial	36.7	36.7	0.0	0.0%
5a	Public Authority	4,670.1	4,670.1	0.0	0.0%
6a	Other	177.7	177.7	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	47,678.0	47,678.0	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	22,607.2	22,607.2	0.0	0.0%
11a	Residental Flat	4,740.9	4,740.9	0.0	0.0%
12a	Total Unmetered Revenues	27,348.1	27,348.1	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	713.4	713.4	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	356.9	356.9	0.0	0.0%
16a	Total Other Revenues	1,070.4	1,070.4	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	76,096.4	76,096.4	0.0	0.0%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	32,065.4	35,002.0	2,936.7	8.4%
2b	Business	9,115.9	9,951.3	835.4	8.4%
3b	Multiple Family	2,881.0	3,145.0	264.0	8.4%
4b	Industrial	36.7	40.1	3.4	8.4%
5b	Public Authority	4,670.4	5,098.4	428.0	8.4%
6b	Other	177.7	194.0	16.3	8.4%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	48,946.9	53,430.7	4,483.8	8.4%
	Unmetered Revenues:				
10b	Service Charge	27,831.6	32,200.1	4,368.5	13.6%
11b	Residental Flat	2,519.8	2,807.4	287.6	10.2%
12b	Total Unmetered Revenues	30,351.4	35,007.4	4,656.1	13.3%
	Other Revenues:				
13b	Private Fire Protection	776.7	776.7	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	383.3	383.3	0.0	0.0%
16b	Total Other Revenues	1,160.0	1,160.0	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	80,458.3	89,598.1	9,139.8	10.2%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	10,797.3	10,797.3	0.0	0.0%
2	Groundwater Charges	1,885.6	1,885.6	0.0	0.0%
3	Purchased Power	5,609.6	5,609.6	0.0	0.0%
4	Purchased Chemicals	863.0	863.0	0.0	0.0%
5	Payroll	3,518.9	3,667.3	148.5	4.0%
6	Postage	239.7	226.1	(13.6)	-6.0%
7	Transportation	661.6	668.1	6.6	1.0%
	Purchased Services:				
8	Source of Supply	0.7	0.7	0.0	0.0%
9	Pumping	315.6	315.6	0.0	0.0%
10	Water Treatment	1,218.9	1,218.9	0.0	0.0%
11	Transmission & Distribution	748.4	748.4	0.0	0.0%
12	Customer Accounting	874.7	874.7	0.0	0.0%
13	Conservation	764.7	804.9	40.2	5.0%
14	Total Operations Exp. excluding Uncollectibles	27,498.7	27,680.4	181.7	0.7%
	Maintenance Expenses:				
15	Payroll	2,304.2	2,401.4	97.2	4.0%
16	Transportation	184.3	186.4	2.1	1.1%
17	Stores	147.1	147.1	0.0	0.0%
18	Contracted Maintenance	2,266.5	2,266.5	0.0	0.0%
19	Total Maintenance Expenses	4,902.1	5,001.5	99.3	2.0%
	At Present Rates				
20	Operating Revenues	76,096.4	76,096.4	0.0	0.0%
21	*Uncollectible Rate*	0.6461%	0.7283%	*0.0822%*	*11.3%*
22	Uncollectibles Expense	491.7	554.2	62.5	11.3%
23	Total O&M Expenses including Uncollectibles	32,892.5	33,236.1	343.6	1.0%
	At Proposed Rates				
25	Operating Revenues	80,868.9	90,055.6	9,186.7	10.2%
26	*Uncollectible Rate*	0.6461%	0.6461%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	522.5	644.4	121.9	18.9%
28	Total O&M Expenses including Uncollectibles	32,923.4	33,326.3	402.9	1.2%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	10,800.1	10,800.1	0.0	0.0%
2	Groundwater Charges	1,890.8	1,890.8	0.0	0.0%
3	Purchased Power	5,752.9	5,752.9	0.0	0.0%
4	Purchased Chemicals	887.9	887.9	0.0	0.0%
5	Payroll	3,635.0	3,788.4	153.4	4.0%
6	Postage	242.0	228.3	(13.7)	-6.0%
7	Transportation	678.2	684.9	6.7	1.0%
	Purchased Services:				
8	Source of Supply	0.8	0.8	0.0	0.0%
9	Pumping	323.6	323.6	0.0	0.0%
10	Water Treatment	1,228.7	1,228.7	0.0	0.0%
11	Transmission & Distribution	767.3	767.3	0.0	0.0%
12	Customer Accounting	896.7	896.7	0.0	0.0%
13	Conservation	804.9	804.9	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	27,908.9	28,055.3	146.4	0.5%
	Maintenance Expenses:				
15	Payroll	2,380.2	2,480.6	100.4	4.0%
16	Transportation	189.0	191.1	2.2	1.1%
17	Stores	150.8	150.8	0.0	0.0%
18	Contracted Maintenance	2,309.2	2,309.2	0.0	0.0%
19	Total Maintenance Expenses	5,029.2	5,131.8	102.6	2.0%
	At Present Rates				
20	Operating Revenues	80,458.3	89,598.1	9,139.8	10.2%
21	*Uncollectible Rate*	0.6461%	0.7283%	*8.2193%*	*11.3%*
22	Uncollectibles Expense	519.8	652.5	132.7	20.3%
23	Total O&M Expenses including Uncollectibles	33,457.9	33,839.6	381.7	1.1%
	At Proposed Rates				
25	Operating Revenues	82,815.6	94,885.1	12,069.4	12.7%
26	*Uncollectible Rate*	0.6461%	0.7283%	*8.2193%*	*11.3%*
27	Uncollectibles Expense	535.1	691.0	156.0	22.6%
28	Total O&M Expenses including Uncollectibles	33,473.1	33,878.1	405.0	1.2%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Administrative & General Expenses:				
1a	Payroll	1,633.8	1,702.8	68.9	4.0%
2a	Benefits	2,445.2	2,539.4	94.2	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	0.3	0.3	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(1,344.5)	(1,344.5)	0.0	0.0%
6a	Workers' Compensation	136.3	114.9	(21.5)	-18.7%
7a	Non-Specifics	(383.3)	(334.7)	48.7	-14.6%
8a	Subtotal	2,487.9	2,678.2	190.3	7.1%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	5.5	72.8	67.2	92.4%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(5.8)	(5.8)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	2,487.6	2,745.2	257.6	9.4%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Administrative & General Expenses:				
1b	Payroll	1,687.8	1,759.0	71.2	4.0%
2b	Benefits	2,657.5	2,742.5	85.0	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	0.3	0.3	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(1,388.8)	(1,388.8)	0.0	0.0%
6b	Workers' Compensation	139.8	122.7	(17.1)	-13.9%
7b	Non-Specifics	(357.0)	(357.0)	0.0	0.0%
8b	Subtotal	2,739.5	2,878.7	139.2	4.8%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	29.0	97.8	68.8	70.3%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(6.0)	(6.0)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	2,762.6	2,970.5	207.9	7.0%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Ad Valorem Taxes	2,121.1	2,608.0	486.9	18.7%
2a	Payroll Taxes	626.5	653.0	26.4	4.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	75,604.8	75,542.2	(62.5)	-0.1%
4a	*Effective Local Franchise Tax Rate*	*1.345%*	*1.345%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	1,017.2	1,016.4	(0.8)	-0.1%
5a1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	3,764.9	4,277.3	512.5	12.0%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	80,346.4	89,411.2	9,064.8	10.1%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*1.345%*	*27.108%*	*20.1%*
9a	Franchise Taxes-Proposed Rates	1,081.0	1,202.9	121.8	10.1%
9a1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	3,828.7	4,463.8	635.1	14.2%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Ad Valorem Taxes	2,149.1	2,825.4	676.3	23.9%
2b	Payroll Taxes	647.2	674.5	27.3	4.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	79,938.5	88,945.6	9,007.1	10.1%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*1.345%*	*27.108%*	*20.1%*
5b	Franchise Taxes-Present Rates	1,075.6	1,196.7	121.2	10.1%
5b1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	3,871.9	4,696.7	824.8	17.6%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	82,280.6	94,194.0	11,913.4	12.6%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*1.345%*	*27.108%*	*20.1%*
9b	Franchise Taxes-Proposed Rates	1,107.1	1,267.4	160.3	12.6%
9b1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	3,903.4	4,767.3	863.9	18.1%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	76,096.4	76,096.4	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	32,400.9	32,681.9	281.0	0.9%
3	Uncollectibles Expense	491.7	554.2	62.5	11.3%
4	A&G Expenses	2,487.6	2,745.2	257.6	9.4%
5	G.O. Prorated Expenses	13,139.9	14,260.1	1,120.2	7.9%
6	G.O. Book Depreciation (to be excluded)	(1,457.4)	(1,830.1)	(372.7)	20.4%
7	Transportation Deprec. Expense (to be excluded)	(283.0)	(562.9)	(280.0)	49.7%
8	Taxes On Other Than Income	3,764.9	4,277.3	512.5	12.0%
8a	Non-deductible Meals	(59.9)	(60.2)	(0.3)	0.5%
9	Interest Expense	4,547.7	6,137.4	1,589.7	25.9%
10	Total Common Deductions	55,032.4	58,202.9	3,170.5	5.4%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	22,007.9	36,958.7	14,950.8	40.5%
12	Tax Depreciation - G.O.	939.4	1,536.5	597.1	38.9%
13	Subtotal	22,947.4	38,495.2	15,547.9	40.4%
14	Total State Deductions, incl. Common Deductions	77,979.8	96,698.2	18,718.4	19.4%
	Federal Tax Deductions				
16	Book Depreciation - District	13,435.3	15,436.1	2,000.7	13.0%
17	Book Depreciation - G.O.	1,457.4	1,830.1	372.7	20.4%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(166.5)	(1,821.2)	(1,654.7)	90.9%
20	Subtotal	14,726.2	15,444.9	718.7	4.7%
21	Total Fed. Deductions, incl. Common Deductions	69,758.6	73,647.9	3,889.3	5.3%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(1,883.4)	(20,601.8)	(18,718.4)	90.9%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(166.5)	(1,821.2)	(1,654.7)	90.9%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	6,337.8	2,448.5	(3,889.3)	-158.8%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	1,330.9	514.2	(3,889.3)	-158.8%
28	Adjustment to FIT, Regulatory Liability	(1,856.1)	(1,855.7)	0.5	0.0%
29	Total FIT, with Adjustment	(525.2)	(1,341.5)	(816.3)	60.8%
30	Total Income Taxes for Revenues at Present Rates	(691.7)	(3,162.7)	(2,471.0)	78.1%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	80,868.9	90,055.6	9,186.7	10.2%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	32,400.9	32,681.9	281.0	0.9%
3	Uncollectibles Expense	522.5	644.4	121.9	18.9%
4	A&G Expenses	2,487.6	2,745.2	257.6	9.4%
5	G.O. Prorated Expenses	13,139.9	14,260.1	1,120.2	7.9%
6	G.O. Book Depreciation (to be excluded)	(1,457.4)	(1,830.1)	(372.7)	20.4%
7	Transportation Deprec. Expense (to be excluded)	(283.0)	(562.9)	(280.0)	49.7%
8	Taxes On Other Than Income	3,828.7	4,463.8	635.1	14.2%
8a	Non-deductible Meals	(59.9)	(60.2)	(0.3)	0.5%
9	Interest Expense	4,547.7	6,137.4	1,589.7	25.9%
10	Total Common Deductions	55,127.0	58,479.6	3,352.5	5.7%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	22,007.9	36,958.7	14,950.8	40.5%
12	Tax Depreciation - G.O.	939.4	1,536.5	597.1	38.9%
13	Subtotal	22,947.4	38,495.2	15,547.9	40.4%
14	Total State Deductions, incl. Common Deductions	78,074.4	96,974.8	18,900.4	19.5%
	Federal Tax Deductions				
16	Book Depreciation - District	13,435.3	15,436.1	2,000.7	13.0%
17	Book Depreciation - G.O.	1,457.4	1,830.1	372.7	20.4%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	247.0	(611.7)	(858.7)	140.4%
20	Subtotal	15,139.7	16,654.5	1,514.8	9.1%
21	Total Fed. Deductions, incl. Common Deductions	70,266.8	75,134.1	4,867.3	6.5%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	2,794.4	(6,919.2)	(9,713.7)	140.4%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	247.0	(611.7)	(858.7)	140.4%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	10,602.1	14,921.5	4,319.4	28.9%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	2,226.4	3,133.5	907.1	28.9%
28	Adjustment to FIT, Regulatory Liability	(1,856.1)	(1,855.7)	0.5	0.0%
29	Total FIT, with Adjustment	370.3	1,277.8	907.6	71.0%
30	Total Income Taxes for Revenues at Proposed Rates	617.3	666.2	48.9	7.3%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	520,231.0	577,721.4	57,490.4	10.0%
2a	Adjustments	73.4	73.4	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	15,093.8	36,167.1	21,073.3	58.3%
4a	Advances	1,663.2	1,663.2	0.0	0.0%
5a	Contributions	1,144.0	1,144.0	0.0	0.0%
6a	Total Gross Additions	17,901.1	38,974.4	21,073.3	54.1%
8a	Retirements	1,602.3	1,602.3	0.0	0.0%
9a	Net Additions	19,503.3	40,576.6	21,073.3	51.9%
10a	Plant in Service - End of Year	539,807.8	618,371.4	78,563.7	12.7%
11a	*Plant Weighting Factor*	*43.40%*	*43.40%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	528,695.5	595,331.8	66,636.2	11.2%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	538,845.6	616,755.6	77,910.0	12.6%
2b	Adjustments	60.6	60.6	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	17,731.3	39,475.7	21,744.3	55.1%
4b	Advances	1,663.2	1,663.2	0.0	0.0%
5b	Contributions	1,144.0	1,144.0	0.0	0.0%
6b	Total Gross Additions	20,538.6	42,282.9	21,744.3	51.4%
8b	Retirements	1,973.6	1,973.6	0.0	0.0%
9b	Net Additions	22,512.2	44,256.5	21,744.3	49.1%
10b	Plant in Service - End of Year	561,418.4	661,072.7	99,654.3	15.1%
11b	*Plant Weighting Factor*	*43.40%*	*43.40%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	548,616.0	635,963.0	87,347.1	13.7%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Depreciation Reserve - Beginning of Year	199,466.0	200,719.8	1,253.9	0.6%
1aa	Adjustments to Reserve Balance	(625.3)	(637.4)	(12.2)	1.9%
	Accruals:				
2a	Transportation Equipment	(225.2)	(450.2)	(225.0)	50.0%
3a	Contributed Plant	(2,098.1)	(2,112.4)	(14.4)	0.7%
4a	Depreciation Accrual	15,785.103	18,035.8	2,250.7	12.5%
5a	Total Accruals	13,461.8	15,473.1	2,011.3	13.0%
	Retirements				
6a	Net Retirements	(1,602.252)	(1,602.3)	0.0	0.0%
8a	Total Retirement	(1,602.3)	(1,602.3)	0.0	0.0%
9a	Net Additions	14,183	16,433.5	2,250.7	13.7%
7a	Carry Forward Adjustment	0.0	(393.6)	(393.6)	100.0%
10a	Depreciation Reserve - End of Year	213,023.6	216,122.4	3,098.8	1.4%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	205,932.1	207,905.6	1,973.5	0.9%
13a	*Deprec. expense for summary of earnings calc.*	13,435.3	15,436.1	2,000.7	13.0%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Depreciation Reserve - Beginning of Year	213,023.6	216,122.4	3,098.8	1.4%
1bb	Adjustment to Reserve Balance	(652.8)	(675.1)	(22.3)	3.3%
	Accruals:				
2b	Transportation Equipment	(223.4)	(453.1)	(229.6)	50.7%
3b	Contributed Plant	(2,133.7)	(2,145.6)	(11.9)	0.6%
4b	Depreciation Accrual	16,384.8	19,263.6	2,878.8	14.9%
5b	Total Accruals	14,027.7	16,665.0	2,637.3	15.8%
	Retirements and Adjustments:				
6b	Net Retirements	(1,973.6)	(1,973.6)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(1,973.6)	(1,973.6)	0.0	
					0.0%
9b	Net Additions	14,411.2	17,290.0	2,878.8	16.7%
10b	Depreciation Reserve - End of Year	226,781.9	232,737.2	5,955.3	2.6%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	219,576.3	224,092.2	4,515.9	2.0%
13b	* *Deprec. expense for summary of earnings calc.*	14,000.6	16,626.9	2,626.3	15.8%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	528,695.5	595,331.8	66,636.2	11.2%
3	Weighted Average Depreciation Reserve	(205,932.1)	(207,905.6)	(1,973.5)	0.9%
4	Net Utility Plant	322,763.4	387,426.2	64,662.8	16.7%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	47,384.6	47,366.7	(17.9)	0.0%
5	Advances in Construction	64,945.6	64,945.6	0.0	0.0%
6	Reserve for Amortization of Intangibles	1,161.5	1,225.8	64.2	5.2%
7	Deferred Taxes	42,514.2	50,471.3	7,957.1	15.8%
8	Unamortized Investment Tax Credits	227.0	227.0	0.0	0.0%
9	Total Deductions from Rate Base	156,232.9	164,236.2	8,003.4	4.9%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	546.9	546.9	0.0	0.0%
10a	Tank Painting	3,772.2	4,104.6	332.4	8.1%
11	Working Cash, Lead-Lag	11,768.9	12,589.9	821.0	6.5%
12	Amount Withheld from Employees	(37.3)	(37.6)	(0.4)	0.9%
13	Total Working Capital	16,050.7	17,203.7	1,153.0	6.7%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	2,010.5	2,010.5	0.0	0.0%
17	Total Additions to Rate Base	18,061.2	19,214.3	1,153.0	6.0%
18	Weighted Average Rate Base, District	184,591.8	242,404.2	57,812.4	23.8%
19	Weighted Average Rate Base, G.O. Allocation	8,411.3	13,607.1	5,195.8	38.2%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	193,003.1	256,011.3	63,008.2	24.6%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*176,952.378*	*238,807.5*	*61,855.2*	*25.9%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*4,547.7*	*6,137.4*	*1,589.7*	*25.9%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	548,616.0	635,963.0	87,347.1	13.7%
3	Weighted Average Depreciation Reserve	(219,576.3)	(224,092.2)	(4,515.9)	2.0%
4	Net Utility Plant	329,039.6	411,870.8	82,831.2	20.1%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	46,412.8	46,381.7	(31.1)	-0.1%
5	Advances in Construction	67,026.2	67,026.2	0.0	0.0%
6	Reserve for Amortization of Intangibles	1,211.2	1,375.4	164.2	11.9%
7	Deferred Taxes	42,665.9	53,200.0	10,534.1	19.8%
8	Unamortized Investment Tax Credits	220.5	220.5	0.0	0.0%
9	Total Deductions from Rate Base	157,536.6	168,203.8	10,667.3	6.3%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	546.9	546.9	0.0	0.0%
10a	Tank Painting	3,117.4	3,449.7	332.4	9.6%
11	Working Cash, Lead-Lag	11,975.2	12,975.7	1,000.5	7.7%
12	Amount Withheld from Employees	(37.3)	(37.6)	(0.4)	0.9%
13	Total Working Capital	15,602.2	16,934.7	1,332.5	7.9%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	2,865.0	2,865.0	0.0	0.0%
17	Total Additions to Rate Base	18,467.2	19,799.7	1,332.5	6.7%
18	Weighted Average Rate Base, District	189,970.3	263,466.7	73,496.4	27.9%
19	Weighted Average Rate Base, G.O. Allocation	8,512.0	14,734.8	6,222.8	42.2%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	198,482.3	278,201.5	79,719.2	28.7%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*182,880.2*	*261,266.9*	*78,386.7*	*30.0%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*4,700.0*	*6,714.6*	*2,014.5*	*30.0%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	10,814.0	20,810.6	9,996.6
2. Test Year 2023 Increase (%)	12.4%	24.0%	11.6%
3. Escalation Year 2024 Increase (%)	2.0%	3.8%	1.7%
4. Escalation Year 2025 Increase (%)	2.6%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**87,446.1**	**86,667.0**	**(779.1)**	**-0.9%**
	Operating Expenses:				
2a	Operation & Maintenance	51,047.0	51,080.8	33.9	0.1%
3a	Administrative & General	2,117.8	2,283.3	165.5	7.2%
4a	Payroll	5,639.4	5,639.4	0.0	0.0%
5a	General Office - *prorated expenses*	11,692.3	12,551.5	859.2	6.8%
6a	Depreciation Expense	8,481.0	10,329.5	1,848.4	17.9%
7a	Taxes Other Than Income	2,391.2	2,962.5	571.4	19.3%
8a	California Corporate Franchise Tax	(102.3)	(1,413.0)	(1,310.7)	92.8%
9a	Federal Income Tax	(791.3)	(1,712.4)	(921.1)	53.8%
10a	Total Operating Expenses	80,475.1	81,721.7	1,246.6	1.5%
11a	Net Operating Revenues	6,971.0	4,945.3	(2,025.7)	-41.0%
12a	Weighted Average Rate Base	197,225.0	266,182.2	68,957.2	25.9%
13a	***Return on Rate Base***	***3.53%***	***1.86%***	***-1.68%***	***-90.2%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	98,260.1	107,477.6	**9,217.5**	**8.6%**
	Operating Expenses:				
2b	Operation & Maintenance	51,055.9	51,098.0	42.1	0.1%
3b	Administrative & General	2,117.8	2,283.3	165.5	7.2%
4b	Payroll	5,639.4	5,639.4	0.0	0.0%
5b	General Office - *prorated expenses*	11,692.3	12,551.5	859.2	6.8%
6b	Depreciation Expense	8,481.0	10,329.5	1,848.4	17.9%
7b	Taxes Other Than Income	2,391.9	2,964.0	572.1	19.3%
8b	California Corporate Franchise Tax	852.8	425.0	(427.8)	-100.6%
9b	Federal Income Tax	1,277.0	2,267.9	990.9	43.7%
10b	Total Operating Expenses	83,508.3	87,558.8	4,050.5	4.6%
11b	Net Operating Revenues	14,751.8	19,918.9	5,167.0	25.9%
12b	Weighted Average Rate Base	197,225	266,182.2	68,957.2	25.9%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**10,814.0**	**20,810.6**	**9,996.6**	**48.0%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	100,512.5	103,086.7	2,574.3	2.5%
2	Operating Expenses:*				
3	Operation & Maintenance	51,347.3	52,374.2	1,026.9	2.0%
4	Administrative & General	2,250.4	2,295.4	45.0	2.0%
5	Payroll	5,825.5	5,942.0	116.5	2.0%
6	G.O. Prorated Expenses	11,637.8	11,870.5	232.8	2.0%
7	Depreciation Expense	8,921.6	9,100.1	178.4	2.0%
8	Taxes Other Than Income	2,509.4	2,559.6	50.2	2.0%
9	California Corporate Franchise Tax	894.7	894.67	0.0	0.0%
10	Federal Income Tax	1,434.9	1,434.90	0.0	0.0%
11	Total Operating Expenses	84,821.7	86,471.5	1,649.8	1.9%
12	Net Operating Revenues	15,690.8	16,615.2	924.4	5.6%
13	Weighted Average Rate Base	209,676.7	222,128.5	12,451.8	5.6%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***(0.0)***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	94.8	97.1	2.3	2.4%
2a	Business	416.0	417.6	1.6	0.4%
3a	Multiple Family	1,063.1	1,081.3	18.2	1.7%
4a	Industrial	1,793.6	1,793.6	0.0	0.0%
5a	Public Authority	777.6	793.5	15.9	2.0%
6a	Other	758.2	758.2	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	94.7	97.1	2.3	2.4%
2b	Business	416.0	417.6	1.6	0.4%
3b	Multiple Family	1,063.4	1,081.4	17.9	1.7%
4b	Industrial	1,806.6	1,806.6	0.0	0.0%
5b	Public Authority	778.4	794.3	15.8	2.0%
6b	Other	749.2	749.2	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	48,970	47,375	(1,595)	-3%
2a	Business	5,430	5,382	(48)	-1%
3a	Multiple Family	1,012	995	(17)	-2%
4a	Industrial	139	139	0	0%
5a	Public Authority	543	532	(11)	-2%
6a	Other	84	84	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	56,177	54,506	(1,671)	-3%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	1,685	1,685	0	0%
12a	Public Fire Protection	67	67	0	0%
13a	Total Number of Unmetered Connections	1,752	1,752	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	57,929	56,258	(1,671)	-3%
15a	Excluding Fire Protection	56,177	54,506	(1,671)	-3%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	49,032	47,429	(1,604)	-3%
2b	Business	5,439	5,390	(48)	-1%
3b	Multiple Family	1,024	1,007	(17)	-2%
4b	Industrial	138	138	0	0%
5b	Public Authority	542	531	(11)	-2%
6b	Other	85	85	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	56,260	54,580	(1,680)	-3%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	1,715	1,715	0	0%
12b	Public Fire Protection	68	68	0	0%
13b	Total Number of Unmetered Connections	1,783	1,783	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	58,043	56,363	(1,680)	-3%
15b	Excluding Fire Protection	56,260	54,580	(1,680)	-3%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	4,640.2	4,599.2	(41.1)	-0.9%
2a	Business	2,258.9	2,247.7	(11.2)	-0.5%
3a	Multiple Family	1,075.3	1,075.3	0.0	0.0%
4a	Industrial	249.3	249.3	0.0	0.0%
5a	Public Authority	421.9	421.9	0.0	0.0%
6a	Other	63.7	63.7	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	8,709.4	8,657.1	(52.3)	-0.6%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	8,709.4	8,657.1	(52.3)	-0.6%
12a	*Unaccounted For Water Rate*	*72.3%*	*73.1%*	*0.8%*	*1.0%*
13a	Unaccounted For Water (UAF)	457.1	509.4	52.3	10.3%
14a	**Total Requirement (Sales + UAF) ***	**9,166.5**	**9,166.5**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	21,043.5	21,043.5	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	91.9	91.9	0.0	0.0%
17a	Purchased Water	9,074.6	9,074.6	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**9,166.5**	**9,166.5**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	4,645.4	4,604.1	(41.3)	-0.9%
2b	Business	2,262.4	2,251.1	(11.3)	-0.5%
3b	Multiple Family	1,089.1	1,089.1	0.0	0.0%
4b	Industrial	249.3	249.3	0.0	0.0%
5b	Public Authority	421.9	421.9	0.0	0.0%
6b	Other	63.7	63.7	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	8,731.8	8,679.2	(52.6)	-0.6%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	8,731.8	8,679.2	(52.6)	-0.6%
12b	*Unaccounted For Water Rate*	*72.3%*	*73.1%*	*0.8%*	*1.0%*
13b	Unaccounted For Water	457.8	510.4	52.6	10.3%
14b	**Total Requirement (Sales + UAF) ***	**9,189.6**	**9,189.6**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	21,096.5	21,096.5	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	92.0	92.0	0.0	0.0%
17b	Purchased Water	9,097.6	9,097.6	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**9,189.6**	**9,189.6**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Revenues:				
1a	Residential	32,707.7	32,456.6	(251.1)	-0.8%
2a	Business	16,911.5	16,827.4	(84.1)	-0.5%
3a	Multiple Family	8,050.6	8,050.6	0.0	0.0%
4a	Industrial	1,866.4	1,866.4	0.0	0.0%
5a	Public Authority	3,158.3	3,158.3	0.0	0.0%
6a	Other	476.8	476.8	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	63,171.5	62,836.3	(335.2)	-0.5%
	Unmetered Revenues:				
10a	Service Charge	22,783.1	22,339.2	(443.9)	-2.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	22,783.1	22,339.2	(443.9)	-2.0%
	Other Revenues:				
13a	Private Fire Protection	1,137.9	1,137.9	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	353.7	353.7	0.0	0.0%
16a	Total Other Revenues	1,491.5	1,491.5	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	87,446.1	86,667.0	(779.1)	-0.9%
	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Revenues:				
1b	Residential	38,778.7	38,938.3	159.6	0.4%
2b	Business	20,058.5	20,194.5	136.0	0.7%
3b	Multiple Family	9,655.8	9,770.0	114.2	1.2%
4b	Industrial	2,210.3	2,236.5	26.2	1.2%
5b	Public Authority	3,740.3	3,784.5	44.3	1.2%
6b	Other	564.6	571.3	6.7	1.2%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	75,008.2	75,495.1	486.9	0.6%
	Unmetered Revenues:				
10b	Service Charge	21,917.3	30,664.8	8,747.5	28.5%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	21,917.3	30,664.8	8,747.5	28.5%
	Other Revenues:				
13b	Private Fire Protection	1,246.0	1,246.0	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	348.6	348.6	0.0	0.0%
16b	Total Other Revenues	1,594.6	1,594.6	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	98,520.1	107,754.4	9,234.4	8.6%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	43,604.2	43,604.2	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	728.9	728.9	0.0	0.0%
4	Purchased Chemicals	96.9	96.9	0.0	0.0%
5	Payroll	3,810.2	3,810.2	0.0	0.0%
6	Postage	194.7	172.8	(21.9)	-12.7%
7	Transportation	360.2	360.2	0.0	0.0%
	Purchased Services:				
8	Source of Supply	54.2	54.2	0.0	0.0%
9	Pumping	226.7	226.7	0.0	0.0%
10	Water Treatment	494.3	494.3	0.0	0.0%
11	Transmission & Distribution	523.4	523.4	0.0	0.0%
12	Customer Accounting	681.7	681.7	0.0	0.0%
13	Conservation	1,151.3	1,207.3	56.0	4.6%
14	Total Operations Exp. excluding Uncollectibles	51,926.7	51,960.7	34.1	0.1%
	Maintenance Expenses:				
15	Payroll	921.3	921.3	0.0	0.0%
16	Transportation	112.3	112.3	0.0	0.0%
17	Stores	83.8	83.8	0.0	0.0%
18	Contracted Maintenance	2,673.0	2,673.0	0.0	0.0%
19	Total Maintenance Expenses	3,790.4	3,790.4	0.0	0.0%
	At Present Rates				
20	Operating Revenues	87,446.1	86,667.0	(779.1)	-0.9%
21	*Uncollectible Rate*	0.0703%	0.0706%	*0.0004%*	*0.5%*
22	Uncollectibles Expense	61.4	61.2	(0.2)	-0.4%
23	Total O&M Expenses including Uncollectibles	55,778.5	55,812.3	33.9	0.1%
	At Proposed Rates				
25	Operating Revenues	98,260.1	107,477.6	9,217.5	8.6%
26	*Uncollectible Rate*	0.0826%	0.0826%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	70.4	78.4	8.0	10.2%
28	Total O&M Expenses including Uncollectibles	55,787.4	55,829.5	42.1	0.1%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	43,697.7	43,697.7	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	777.3	777.3	0.0	0.0%
4	Purchased Chemicals	99.4	99.4	0.0	0.0%
5	Payroll	3,935.9	3,935.9	0.0	0.0%
6	Postage	183.4	173.0	(10.4)	-6.0%
7	Transportation	369.3	369.3	0.0	0.0%
	Purchased Services:				
8	Source of Supply	55.5	55.5	0.0	0.0%
9	Pumping	232.5	232.5	0.0	0.0%
10	Water Treatment	504.1	504.1	0.0	0.0%
11	Transmission & Distribution	536.5	536.5	0.0	0.0%
12	Customer Accounting	698.9	698.9	0.0	0.0%
13	Conservation	1,207.3	1,207.3	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	52,297.8	52,287.3	(10.4)	0.0%
	Maintenance Expenses:				
15	Payroll	951.7	951.7	0.0	0.0%
16	Transportation	115.1	115.1	0.0	0.0%
17	Stores	85.9	85.9	0.0	0.0%
18	Contracted Maintenance	2,718.9	2,718.9	0.0	0.0%
19	Total Maintenance Expenses	3,871.5	3,871.5	0.0	0.0%
	At Present Rates				
20	Operating Revenues	98,520.1	107,754.4	9,234.4	8.6%
21	*Uncollectible Rate*	0.0650%	0.0717%	*0.6777%*	*9.4%*
22	Uncollectibles Expense	64.0	77.3	13.3	17.2%
23	Total O&M Expenses including Uncollectibles	56,233.3	56,236.2	2.9	0.0%
	At Proposed Rates				
25	Operating Revenues	100,512.5	111,797.3	11,284.8	10.1%
26	*Uncollectible Rate*	0.0826%	0.1390%	*5.6376%*	*40.6%*
27	Uncollectibles Expense	65.7	82.9	17.3	20.8%
28	Total O&M Expenses including Uncollectibles	56,234.9	56,241.8	6.8	0.0%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Administrative & General Expenses:				
1a	Payroll	907.9	907.9	0.0	0.0%
2a	Benefits	1,812.8	1,882.6	69.8	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	109.7	109.7	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(303.0)	(303.0)	0.0	0.0%
6a	Workers' Compensation	75.3	85.2	9.8	11.6%
7a	Non-Specifics	384.5	354.1	(30.4)	-8.6%
8a	Subtotal	2,987.2	3,036.5	49.3	1.6%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	50.5	166.7	116.2	69.7%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(11.9)	(11.9)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	3,025.8	3,191.3	165.5	5.2%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Administrative & General Expenses:				
1b	Payroll	937.9	937.9	0.0	0.0%
2b	Benefits	1,970.1	2,033.2	63.0	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	109.9	109.9	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(313.0)	(313.0)	0.0	0.0%
6b	Workers' Compensation	77.2	91.0	13.8	15.1%
7b	Non-Specifics	357.0	357.0	0.0	0.0%
8b	Subtotal	3,139.1	3,215.9	76.8	2.4%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	61.5	196.7	135.2	68.8%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(12.2)	(12.2)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	3,188.3	3,400.3	212.0	6.2%

TABLE 5-1
TAXES OTHER THAN INCOME

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	1,976.5	2,547.8	571.3	22.4%
2a	Payroll Taxes	408.4	408.4	0.1	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	87,384.7	86,605.8	(778.9)	-0.9%
4a	*Effective Local Franchise Tax Rate*	*0.000%*	*0.000%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5a1	Business License-Present Rates	6.3	6.3	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	2,391.2	2,962.5	571.4	19.3%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	98,189.8	107,399.2	9,209.5	8.6%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9a	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9a1	Business License-Proposed Rates	7.1	7.8	0.7	9.3%
10a	Total Taxes Other Than Income, At Proposed Rates	2,391.9	2,964.0	572.1	19.3%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	2,080.3	2,797.3	717.0	25.6%
2b	Payroll Taxes	421.8	421.9	0.1	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	98,456.0	107,677.1	9,221.1	8.6%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
5b	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5b1	Business License-Present Rates	6.4	7.9	1.4	18.4%
6b	Total Taxes Other Than Income, At Present Rates	2,508.6	3,227.1	718.5	22.3%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	100,446.8	111,714.3	11,267.5	10.1%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9b	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9b1	Business License-Proposed Rates	7.3	8.2	0.9	11.0%
10b	Total Taxes Other Than Income, At Proposed Rates	2,509.4	3,227.4	717.9	22.2%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	87,446.1	86,667.0	(779.1)	-0.9%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	55,717.0	55,751.1	34.1	0.1%
3	Uncollectibles Expense	61.4	61.2	(0.2)	-0.4%
4	A&G Expenses	3,025.8	3,191.3	165.5	5.2%
5	G.O. Prorated Expenses	11,692.3	12,551.5	859.2	6.8%
6	G.O. Book Depreciation (to be excluded)	(1,296.8)	(1,610.8)	(314.0)	19.5%
7	Transportation Deprec. Expense (to be excluded)	(192.3)	(499.5)	(307.2)	61.5%
8	Taxes On Other Than Income	2,391.2	2,962.5	571.4	19.3%
8a	Non-deductible Meals	(42.5)	(42.5)	0.0	-0.1%
9	Interest Expense	4,802.6	6,548.9	1,746.3	26.7%
10	Total Common Deductions	76,158.6	78,913.7	2,755.1	3.5%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	11,119.9	21,690.2	10,570.3	48.7%
12	Tax Depreciation - G.O.	1,324.5	2,046.9	722.4	35.3%
13	Subtotal	12,444.5	23,737.1	11,292.6	47.6%
14	Total State Deductions, incl. Common Deductions	88,603.1	102,650.8	14,047.7	13.7%
	Federal Tax Deductions				
16	Book Depreciation - District	8,481.0	10,329.5	1,848.4	17.9%
17	Book Depreciation - G.O.	1,296.8	1,610.8	314.0	19.5%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(102.3)	(1,413.0)	(1,310.7)	92.8%
20	Subtotal	9,675.6	10,527.3	851.7	8.1%
21	Total Fed. Deductions, incl. Common Deductions	85,834.2	89,441.0	3,606.8	4.0%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(1,157.0)	(15,983.8)	(14,826.8)	92.8%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(102.3)	(1,413.0)	(1,310.7)	92.8%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	1,611.9	(2,774.0)	(4,385.9)	158.1%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	338.5	(582.5)	(4,385.9)	158.1%
28	Adjustment to FIT, Regulatory Liability	(1,129.8)	(1,129.9)	(0.1)	0.0%
29	Total FIT, with Adjustment	(791.3)	(1,712.4)	(921.1)	53.8%
30	Total Income Taxes for Revenues at Present Rates	(893.6)	(3,125.4)	(2,231.8)	71.4%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	98,260.1	107,477.6	9,217.5	8.6%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	55,717.0	55,751.1	34.1	0.1%
3	Uncollectibles Expense	70.4	78.4	8.0	10.2%
4	A&G Expenses	3,025.8	3,191.3	165.5	5.2%
5	G.O. Prorated Expenses	11,692.3	12,551.5	859.2	6.8%
6	G.O. Book Depreciation (to be excluded)	(1,296.8)	(1,610.8)	(314.0)	19.5%
7	Transportation Deprec. Expense (to be excluded)	(192.3)	(499.5)	(307.2)	61.5%
8	Taxes On Other Than Income	2,391.9	2,964.0	572.1	19.3%
8a	Non-deductible Meals	(42.5)	(42.5)	0.0	-0.1%
9	Interest Expense	4,802.6	6,548.9	1,746.3	26.7%
10	Total Common Deductions	76,168.4	78,932.4	2,764.0	3.5%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	11,119.9	21,690.2	10,570.3	48.7%
12	Tax Depreciation - G.O.	1,324.5	2,046.9	722.4	35.3%
13	Subtotal	12,444.5	23,737.1	11,292.6	47.6%
14	Total State Deductions, incl. Common Deductions	88,612.8	102,669.5	14,056.7	13.7%
	Federal Tax Deductions				
16	Book Depreciation - District	8,481.0	10,329.5	1,848.4	17.9%
17	Book Depreciation - G.O.	1,296.8	1,610.8	314.0	19.5%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	852.8	425.0	(427.8)	-100.6%
20	Subtotal	10,630.7	12,365.3	1,734.6	14.0%
21	Total Fed. Deductions, incl. Common Deductions	86,799.0	91,297.7	4,498.7	4.9%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	9,647.3	4,808.1	(4,839.2)	-100.6%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	852.8	425.0	(427.8)	-100.6%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	11,461.1	16,179.9	4,718.8	29.2%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	2,406.8	3,397.8	991.0	29.2%
28	Adjustment to FIT, Regulatory Liability	(1,129.8)	(1,129.9)	(0.1)	0.0%
29	Total FIT, with Adjustment	1,277.0	2,267.9	990.9	43.7%
30	Total Income Taxes for Revenues at Proposed Rates	2,129.9	2,693.0	563.1	20.9%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	339,835.6	407,150.3	67,314.7	16.5%
2a	Adjustments	173.7	173.7	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	16,507.2	31,729.5	15,222.2	48.0%
4a	Advances	59.0	59.0	0.0	0.0%
5a	Contributions	2,025.1	2,025.1	0.0	0.0%
6a	Total Gross Additions	18,591.3	33,813.5	15,222.2	45.0%
8a	Retirements	1,687.7	1,687.7	0.0	0.0%
9a	Net Additions	20,279.0	35,501.2	15,222.2	42.9%
10a	Plant in Service - End of Year	360,288.3	442,825.2	82,537.0	18.6%
11a	*Plant Weighting Factor*	*35.81%*	*35.81%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	347,098.1	419,864.4	72,766.3	17.3%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	360,288.3	442,825.2	82,537.0	18.6%
2b	Adjustments	161.4	161.4	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	12,438.4	26,670.7	14,232.3	53.4%
4b	Advances	59.0	59.0	0.0	0.0%
5b	Contributions	2,025.1	2,025.1	0.0	0.0%
6b	Total Gross Additions	14,522.5	28,754.8	14,232.3	49.5%
8b	Retirements	1,672.8	1,672.8	0.0	0.0%
9b	Net Additions	16,195.3	30,427.7	14,232.3	46.8%
10b	Plant in Service - End of Year	376,645.0	473,414.3	96,769.3	20.4%
11b	*Plant Weighting Factor*	*35.93%*	*35.93%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	366,106.8	453,757.1	87,650.2	19.3%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Depreciation Reserve - Beginning of Year	111,568.9	112,735.5	1,166.6	1.0%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(140.9)	(400.3)	(259.3)	64.8%
3a	Contributed Plant	(1,087.8)	(1,081.3)	6.5	-0.6%
4a	Depreciation Accrual	9,734.106	11,882.4	2,148.3	18.1%
5a	Total Accruals	8,505.4	10,400.8	1,895.4	18.2%
	Retirements				
6a	Net Retirements	(1,687.695)	(1,687.7)	0.0	0.0%
8a	Total Retirement	(1,687.7)	(1,687.7)	0.0	0.0%
9a	Net Additions	8,046	10,194.7	2,148.3	21.1%
7a	Carry Forward Adjustment	0.0	(348.5)	(348.5)	100.0%
10a	Depreciation Reserve - End of Year	119,615.3	122,581.6	2,966.4	2.4%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	115,592.1	117,484.3	1,892.2	1.6%
13a	*Deprec. expense for summary of earnings calc.*	8,481.0	10,329.5	1,848.4	17.9%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Depreciation Reserve - Beginning of Year	119,615.3	122,581.6	2,966.4	2.4%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(145.1)	(420.8)	(275.7)	65.5%
3b	Contributed Plant	(1,137.9)	(1,127.7)	10.1	-0.9%
4b	Depreciation Accrual	10,240.2	12,771.7	2,531.5	19.8%
5b	Total Accruals	8,957.2	11,223.2	2,266.0	20.2%
	Retirements and Adjustments:				
6b	Net Retirements	(1,672.8)	(1,672.8)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(1,672.8)	(1,672.8)	0.0	
					0.0%
9b	Net Additions	8,567.4	11,098.9	2,531.5	22.8%
10b	Depreciation Reserve - End of Year	128,182.7	133,680.6	5,497.9	4.1%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	123,899.0	128,131.1	4,232.1	3.3%
13b	* *Deprec. expense for summary of earnings calc.*	8,921.6	11,128.3	2,206.7	19.8%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	347,098.1	419,864.4	72,766.3	17.3%
3	Weighted Average Depreciation Reserve	(115,592.1)	(117,484.3)	(1,892.2)	1.6%
4	Net Utility Plant	231,506.1	302,380.1	70,874.0	23.4%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	23,240.2	23,272.8	32.6	0.1%
5	Advances in Construction	4,203.7	4,203.7	0.0	0.0%
6	Reserve for Amortization of Intangibles	1,635.6	1,727.9	92.3	5.3%
7	Deferred Taxes	25,332.9	32,626.6	7,293.7	22.4%
8	Unamortized Investment Tax Credits	107.7	107.7	0.0	0.0%
9	Total Deductions from Rate Base	54,520.1	61,938.8	7,418.6	12.0%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	381.0	381.0	0.0	0.0%
10a	Tank Painting	5,659.5	6,183.9	524.4	8.5%
11	Working Cash, Lead-Lag	4,344.9	4,830.2	485.3	10.0%
12	Amount Withheld from Employees	(33.2)	(33.1)	0.0	-0.1%
13	Total Working Capital	10,352.2	11,362.0	1,009.8	8.9%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	2,402.2	2,402.2	0.0	0.0%
17	Total Additions to Rate Base	12,754.4	13,764.2	1,009.8	7.3%
18	Weighted Average Rate Base, District	189,740.4	254,205.5	64,465.1	25.4%
19	Weighted Average Rate Base, G.O. Allocation	7,484.6	11,976.7	4,492.1	37.5%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	(0.0)	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	197,225.0	266,182.2	68,957.2	25.9%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*186,872.766*	*254,820.2*	*67,947.5*	*26.7%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*4,802.6*	*6,548.9*	*1,746.3*	*26.7%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	366,106.8	453,757.1	87,650.2	19.3%
3	Weighted Average Depreciation Reserve	(123,899.0)	(128,131.1)	(4,232.1)	3.3%
4	Net Utility Plant	242,207.8	325,626.0	83,418.1	25.6%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	24,152.4	24,193.3	40.9	0.2%
5	Advances in Construction	4,207.6	4,207.6	0.0	0.0%
6	Reserve for Amortization of Intangibles	1,720.4	1,966.2	245.9	12.5%
7	Deferred Taxes	24,687.1	33,665.8	8,978.7	26.7%
8	Unamortized Investment Tax Credits	96.6	96.6	0.0	0.0%
9	Total Deductions from Rate Base	54,864.0	64,129.5	9,265.5	14.4%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	381.0	381.0	0.0	0.0%
10a	Tank Painting	7,345.6	8,190.0	844.4	10.3%
11	Working Cash, Lead-Lag	4,445.0	5,042.1	597.1	11.8%
12	Amount Withheld from Employees	(33.2)	(33.1)	0.0	-0.1%
13	Total Working Capital	12,138.5	13,580.1	1,441.6	10.6%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	2,620.2	2,620.2	0.0	0.0%
17	Total Additions to Rate Base	14,758.6	16,200.2	1,441.6	8.9%
18	Weighted Average Rate Base, District	202,102.5	277,696.7	75,594.3	27.2%
19	Weighted Average Rate Base, G.O. Allocation	7,574.3	12,969.4	5,395.1	41.6%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	(0.0)	(0.0)	150.0%
20	Total Weighted Average Rate Base	209,676.7	290,666.1	80,989.4	27.9%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*197,538.3*	*277,086.0*	*79,547.8*	*28.7%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*5,076.7*	*7,121.1*	*2,044.4*	*28.7%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	3,762.7	11,300.1	7,537.4
2. Test Year 2023 Increase (%)	6.7%	20.2%	13.5%
3. Escalation Year 2024 Increase (%)	4.3%	7.2%	2.9%
4. Escalation Year 2025 Increase (%)	3.6%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**55,951.9**	**55,951.9**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	28,682.8	28,710.7	27.9	0.1%
3a	Administrative & General	1,350.7	1,456.9	106.2	7.3%
4a	Payroll	2,984.3	2,984.3	0.0	0.0%
5a	General Office - *prorated expenses*	6,268.2	6,885.1	616.9	9.0%
6a	Depreciation Expense	5,817.9	7,372.4	1,554.5	21.1%
7a	Taxes Other Than Income	2,234.7	2,655.5	420.8	15.8%
8a	California Corporate Franchise Tax	(134.1)	(972.1)	(838.1)	86.2%
9a	Federal Income Tax	213.6	(467.3)	(681.0)	145.7%
10a	Total Operating Expenses	47,418.2	48,625.5	1,207.3	2.5%
11a	Net Operating Revenues	8,533.7	7,326.4	(1,207.3)	-16.5%
12a	Weighted Average Rate Base	149,963.8	205,692.0	55,728.2	27.1%
13a	***Return on Rate Base***	***5.69%***	***3.56%***	***-2.13%***	***-59.8%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	59,714.6	67,252.0	**7,537.4**	**11.2%**
	Operating Expenses:				
2b	Operation & Maintenance	28,684.9	28,717.1	32.2	0.1%
3b	Administrative & General	1,350.7	1,456.9	106.2	7.3%
4b	Payroll	2,984.3	2,984.3	0.0	0.0%
5b	General Office - *prorated expenses*	6,268.2	6,885.1	616.9	9.0%
6b	Depreciation Expense	5,817.9	7,372.4	1,554.5	21.1%
7b	Taxes Other Than Income	2,268.9	2,758.2	489.3	17.7%
8b	California Corporate Franchise Tax	195.3	17.2	(178.2)	-1038.8%
9b	Federal Income Tax	927.0	1,675.0	748.0	44.7%
10b	Total Operating Expenses	48,497.3	51,866.2	3,368.9	6.5%
11b	Net Operating Revenues	11,217.3	15,385.8	4,168.5	27.1%
12b	Weighted Average Rate Base	149,964	205,692.0	55,728.2	27.1%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**3,762.7**	**11,300.1**	**7,537.4**	**66.7%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	62,387.0	64,621.0	2,234.0	3.5%
2	Operating Expenses:*				
3	Operation & Maintenance	28,886.0	29,463.7	577.7	2.0%
4	Administrative & General	1,427.7	1,456.2	28.6	2.0%
5	Payroll	3,082.8	3,144.4	61.7	2.0%
6	G.O. Prorated Expenses	6,239.0	6,363.8	124.8	2.0%
7	Depreciation Expense	6,439.1	6,567.9	128.8	2.0%
8	Taxes Other Than Income	2,433.1	2,481.8	48.7	2.0%
9	California Corporate Franchise Tax	261.0	261.04	0.0	0.0%
10	Federal Income Tax	1,137.1	1,137.15	0.0	0.0%
11	Total Operating Expenses	49,905.8	50,875.9	970.2	1.9%
12	Net Operating Revenues	12,481.2	13,745.1	1,263.9	9.2%
13	Weighted Average Rate Base	166,860.8	183,757.8	16,897.0	9.2%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***0.0***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	248.6	248.6	0.0	0.0%
2a	Business	349.6	349.6	0.0	0.0%
3a	Multiple Family	590.8	590.8	0.0	0.0%
4a	Industrial	980.0	980.0	0.0	0.0%
5a	Public Authority	905.9	905.9	0.0	0.0%
6a	Other	573.6	573.6	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	248.6	248.6	0.0	0.0%
2b	Business	349.6	349.6	0.0	0.0%
3b	Multiple Family	590.8	590.8	0.0	0.0%
4b	Industrial	980.0	980.0	0.0	0.0%
5b	Public Authority	882.0	882.0	0.0	0.0%
6b	Other	545.7	545.7	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	16,929	16,929	0	0%
2a	Business	1,204	1,204	0	0%
3a	Multiple Family	252	252	0	0%
4a	Industrial	1	1	0	0%
5a	Public Authority	147	147	0	0%
6a	Other	39	39	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	18,571	18,571	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	393	393	0	0%
12a	Public Fire Protection	25	25	0	0%
13a	Total Number of Unmetered Connections	418	418	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	18,989	18,989	0	0%
15a	Excluding Fire Protection	18,571	18,571	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	16,924	16,924	0	0%
2b	Business	1,189	1,189	0	0%
3b	Multiple Family	278	278	0	0%
4b	Industrial	1	1	0	0%
5b	Public Authority	151	151	0	0%
6b	Other	41	41	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	18,584	18,584	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	401	401	0	0%
12b	Public Fire Protection	25	25	0	0%
13b	Total Number of Unmetered Connections	426	426	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	19,010	19,010	0	0%
15b	Excluding Fire Protection	18,584	18,584	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	4,209.1	4,209.1	0.0	0.0%
2a	Business	420.8	420.8	0.0	0.0%
3a	Multiple Family	148.6	148.6	0.0	0.0%
4a	Industrial	1.0	1.0	0.0	0.0%
5a	Public Authority	133.3	133.3	0.0	0.0%
6a	Other	22.4	22.4	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	4,935.1	4,935.1	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	4,935.1	4,935.1	0.0	0.0%
12a	*Unaccounted For Water Rate*	*5.4%*	*5.4%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	280.8	280.8	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**5,215.9**	**5,215.9**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	11,974.1	11,974.1	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	0.0	0.0	0.0	0.0%
17a	Purchased Water	5,069.5	5,069.5	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	146.4	146.4	0.0	0.0%
19a	**Total Supply ***	**5,215.9**	**5,215.9**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	4,207.8	4,207.8	0.0	0.0%
2b	Business	415.8	415.8	0.0	0.0%
3b	Multiple Family	164.1	164.1	0.0	0.0%
4b	Industrial	1.0	1.0	0.0	0.0%
5b	Public Authority	133.3	133.3	0.0	0.0%
6b	Other	22.4	22.4	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	4,944.3	4,944.3	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	4,944.3	4,944.3	0.0	0.0%
12b	*Unaccounted For Water Rate*	*5.4%*	*5.4%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	281.1	281.1	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**5,225.3**	**5,225.3**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	11,995.8	11,995.8	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	0.0	0.0	0.0	0.0%
17b	Purchased Water	5,079.0	5,079.0	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	146.4	146.4	0.0	0.0%
19b	**Total Supply ***	**5,225.3**	**5,225.3**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	35,373.6	35,373.6	0.0	0.0%
2a	Business	3,533.5	3,533.5	0.0	0.0%
3a	Multiple Family	1,247.8	1,247.8	0.0	0.0%
4a	Industrial	8.2	8.2	0.0	0.0%
5a	Public Authority	1,119.0	1,119.0	0.0	0.0%
6a	Other	187.9	187.9	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	41,469.9	41,469.9	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	14,150.1	14,150.1	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	14,150.1	14,150.1	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	248.0	248.0	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	83.8	83.8	0.0	0.0%
16a	Total Other Revenues	331.8	331.8	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	55,951.9	55,951.9	0.0	0.0%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	36,055.0	39,304.7	3,249.7	8.3%
2b	Business	3,559.4	3,880.2	320.8	8.3%
3b	Multiple Family	1,404.8	1,531.4	126.6	8.3%
4b	Industrial	8.4	9.1	0.8	8.3%
5b	Public Authority	1,140.9	1,243.7	102.8	8.3%
6b	Other	191.5	208.8	17.3	8.3%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	42,359.9	46,178.0	3,818.0	8.3%
	Unmetered Revenues:				
10b	Service Charge	17,123.6	20,858.9	3,735.3	17.9%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	17,123.6	20,858.9	3,735.3	17.9%
	Other Revenues:				
13b	Private Fire Protection	271.9	271.9	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	84.4	84.4	0.0	0.0%
16b	Total Other Revenues	356.3	356.3	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	59,839.9	67,393.2	7,553.3	11.2%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	23,588.0	23,588.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	1,045.5	1,045.5	0.0	0.0%
4	Purchased Chemicals	49.1	49.1	0.0	0.0%
5	Payroll	1,606.0	1,606.0	0.0	0.0%
6	Postage	62.3	58.7	(3.5)	-6.0%
7	Transportation	199.0	199.0	0.0	0.0%
	Purchased Services:				
8	Source of Supply	111.1	111.1	0.0	0.0%
9	Pumping	311.3	311.3	0.0	0.0%
10	Water Treatment	183.5	183.5	0.0	0.0%
11	Transmission & Distribution	469.6	469.6	0.0	0.0%
12	Customer Accounting	314.8	314.8	0.0	0.0%
13	Conservation	597.4	628.9	31.4	5.0%
14	Total Operations Exp. excluding Uncollectibles	28,537.4	28,565.3	27.9	0.1%
	Maintenance Expenses:				
15	Payroll	913.7	913.7	0.0	0.0%
16	Transportation	102.2	102.2	0.0	0.0%
17	Stores	77.1	77.1	0.0	0.0%
18	Contracted Maintenance	1,540.3	1,540.3	0.0	0.0%
19	Total Maintenance Expenses	2,633.2	2,633.2	0.0	0.0%
	At Present Rates				
20	Operating Revenues	55,951.9	55,951.9	0.0	0.0%
21	*Uncollectible Rate*	0.0567%	0.0567%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	31.7	31.7	0.0	0.0%
23	Total O&M Expenses including Uncollectibles	31,202.4	31,230.3	27.9	0.1%
	At Proposed Rates				
25	Operating Revenues	59,714.6	67,252.0	7,537.4	11.2%
26	*Uncollectible Rate*	0.0567%	0.0567%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	33.9	38.2	4.3	11.2%
28	Total O&M Expenses including Uncollectibles	31,204.5	31,236.7	32.2	0.1%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	23,626.8	23,626.8	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	1,098.5	1,098.5	0.0	0.0%
4	Purchased Chemicals	50.3	50.3	0.0	0.0%
5	Payroll	1,659.0	1,659.0	0.0	0.0%
6	Postage	62.4	58.9	(3.5)	-6.0%
7	Transportation	204.0	204.0	0.0	0.0%
	Purchased Services:				
8	Source of Supply	113.9	113.9	0.0	0.0%
9	Pumping	318.0	318.0	0.0	0.0%
10	Water Treatment	187.0	187.0	0.0	0.0%
11	Transmission & Distribution	481.4	481.4	0.0	0.0%
12	Customer Accounting	322.7	322.7	0.0	0.0%
13	Conservation	628.9	628.9	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	28,752.8	28,749.3	(3.5)	0.0%
	Maintenance Expenses:				
15	Payroll	943.8	943.8	0.0	0.0%
16	Transportation	104.7	104.7	0.0	0.0%
17	Stores	79.1	79.1	0.0	0.0%
18	Contracted Maintenance	1,572.9	1,572.9	0.0	0.0%
19	Total Maintenance Expenses	2,700.5	2,700.5	0.0	0.0%
	At Present Rates				
20	Operating Revenues	59,839.9	67,393.2	7,553.3	11.2%
21	*Uncollectible Rate*	0.0567%	0.0567%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	34.0	38.2	4.3	11.2%
23	Total O&M Expenses including Uncollectibles	31,487.3	31,488.1	0.8	0.0%
	At Proposed Rates				
25	Operating Revenues	62,387.0	72,217.9	9,831.0	13.6%
26	*Uncollectible Rate*	0.0567%	0.0567%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	35.4	41.0	5.6	13.6%
28	Total O&M Expenses including Uncollectibles	31,488.8	31,490.8	2.0	0.0%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	464.7	464.7	0.0	0.0%
2a	Benefits	941.9	978.2	36.3	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	204.8	204.8	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(13.6)	(13.6)	0.0	0.0%
6a	Workers' Compensation	40.9	44.2	3.4	7.6%
7a	Non-Specifics	65.0	57.3	(7.7)	-13.5%
8a	Subtotal	1,703.7	1,735.6	31.9	1.8%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	111.9	186.2	74.3	39.9%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(0.2)	(0.2)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	1,815.4	1,921.6	106.2	5.5%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	480.0	480.0	0.0	0.0%
2b	Benefits	1,023.7	1,056.4	32.8	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	204.8	204.8	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(14.0)	(14.0)	0.0	0.0%
6b	Workers' Compensation	41.9	47.3	5.4	11.3%
7b	Non-Specifics	60.6	60.6	0.0	0.0%
8b	Subtotal	1,797.0	1,835.1	38.1	2.1%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	110.9	185.5	74.5	40.2%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(0.2)	(0.2)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	1,907.7	2,020.3	112.6	5.6%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	1,512.0	1,932.8	420.8	21.8%
2a	Payroll Taxes	214.3	214.3	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	55,920.1	55,920.1	0.0	0.0%
4a	*Effective Local Franchise Tax Rate*	*0.819%*	*0.819%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	458.1	458.1	0.0	0.0%
5a1	Business License-Present Rates	50.3	50.3	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	2,234.7	2,655.5	420.8	15.8%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	59,680.7	67,213.8	7,533.1	11.2%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.819%*	*-25.521%*	*-31.2%*
9a	Franchise Taxes-Proposed Rates	488.9	550.6	61.7	11.2%
9a1	Business License-Proposed Rates	53.7	60.4	6.7	11.2%
10a	Total Taxes Other Than Income, At Proposed Rates	2,268.9	2,758.2	489.3	17.7%

Escalation Year 2024 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	1,644.9	2,270.9	626.0	27.6%
2b	Payroll Taxes	221.4	221.4	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	59,805.9	67,355.0	7,549.0	11.2%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.819%*	*-25.521%*	*-31.2%*
5b	Franchise Taxes-Present Rates	489.9	551.8	61.8	11.2%
5b1	Business License-Present Rates	53.8	60.6	6.8	11.2%
6b	Total Taxes Other Than Income, At Present Rates	2,410.0	3,104.6	694.6	22.4%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	62,351.6	72,177.0	9,825.4	13.6%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.819%*	*-25.521%*	*-31.2%*
9b	Franchise Taxes-Proposed Rates	510.8	591.3	80.5	13.6%
9b1	Business License-Proposed Rates	56.1	64.9	8.8	13.6%
10b	Total Taxes Other Than Income, At Proposed Rates	2,433.1	3,148.4	715.3	22.7%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	55,951.9	55,951.9	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	31,170.6	31,198.6	27.9	0.1%
3	Uncollectibles Expense	31.7	31.7	0.0	0.0%
4	A&G Expenses	1,815.4	1,921.6	106.2	5.5%
5	G.O. Prorated Expenses	6,268.2	6,885.1	616.9	9.0%
6	G.O. Book Depreciation (to be excluded)	(695.2)	(883.6)	(188.4)	21.3%
7	Transportation Deprec. Expense (to be excluded)	(91.6)	(156.4)	(64.8)	41.4%
8	Taxes On Other Than Income	2,234.7	2,655.5	420.8	15.8%
8a	Non-deductible Meals	(24.7)	(25.0)	(0.3)	1.2%
9	Interest Expense	3,769.2	5,191.3	1,422.0	27.4%
10	Total Common Deductions	44,478.4	46,818.8	2,340.4	5.0%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	12,542.0	19,388.2	6,846.2	35.3%
12	Tax Depreciation - G.O.	448.1	741.9	293.7	39.6%
13	Subtotal	12,990.2	20,130.1	7,139.9	35.5%
14	Total State Deductions, incl. Common Deductions	57,468.6	66,948.9	9,480.3	14.2%
	Federal Tax Deductions				
16	Book Depreciation - District	5,817.9	7,372.4	1,554.5	21.1%
17	Book Depreciation - G.O.	695.2	883.6	188.4	21.3%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(134.1)	(972.1)	(838.1)	86.2%
20	Subtotal	6,379.1	7,283.9	904.8	12.4%
21	Total Fed. Deductions, incl. Common Deductions	50,857.5	54,102.6	3,245.2	6.0%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(1,516.7)	(10,997.0)	(9,480.3)	86.2%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(134.1)	(972.1)	(838.1)	86.2%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	5,094.4	1,849.2	(3,245.2)	-175.5%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	1,069.8	388.3	(3,245.2)	-175.5%
28	Adjustment to FIT, Regulatory Liability	(856.2)	(855.7)	0.5	-0.1%
29	Total FIT, with Adjustment	213.6	(467.3)	(681.0)	145.7%
30	Total Income Taxes for Revenues at Present Rates	79.6	(1,439.5)	(1,519.0)	105.5%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	59,714.6	67,252.0	7,537.4	11.2%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	31,170.6	31,198.6	27.9	0.1%
3	Uncollectibles Expense	33.9	38.2	4.3	11.2%
4	A&G Expenses	1,815.4	1,921.6	106.2	5.5%
5	G.O. Prorated Expenses	6,268.2	6,885.1	616.9	9.0%
6	G.O. Book Depreciation (to be excluded)	(695.2)	(883.6)	(188.4)	21.3%
7	Transportation Deprec. Expense (to be excluded)	(91.6)	(156.4)	(64.8)	41.4%
8	Taxes On Other Than Income	2,268.9	2,758.2	489.3	17.7%
8a	Non-deductible Meals	(24.7)	(25.0)	(0.3)	1.2%
9	Interest Expense	3,769.2	5,191.3	1,422.0	27.4%
10	Total Common Deductions	44,514.7	46,927.8	2,413.1	5.1%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	12,542.0	19,388.2	6,846.2	35.3%
12	Tax Depreciation - G.O.	448.1	741.9	293.7	39.6%
13	Subtotal	12,990.2	20,130.1	7,139.9	35.5%
14	Total State Deductions, incl. Common Deductions	57,504.9	67,057.9	9,553.0	14.2%
	Federal Tax Deductions				
16	Book Depreciation - District	5,817.9	7,372.4	1,554.5	21.1%
17	Book Depreciation - G.O.	695.2	883.6	188.4	21.3%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	195.3	17.2	(178.2)	-1038.8%
20	Subtotal	6,708.5	8,273.2	1,564.7	18.9%
21	Total Fed. Deductions, incl. Common Deductions	51,223.2	55,201.0	3,977.8	7.2%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	2,209.7	194.0	(2,015.7)	-1038.8%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	195.3	17.2	(178.2)	-1038.8%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	8,491.4	12,051.0	3,559.6	29.5%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	1,783.2	2,530.7	747.5	29.5%
28	Adjustment to FIT, Regulatory Liability	(856.2)	(855.7)	0.5	-0.1%
29	Total FIT, with Adjustment	927.0	1,675.0	748.0	44.7%
30	Total Income Taxes for Revenues at Proposed Rates	1,122.3	1,692.2	569.8	33.7%

TABLE 7-1
UTILITY PLANT IN SERVICE

Test Year 2023 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	253,895.2	306,369.9	52,474.6	17.1%
2a	Adjustments	42.5	42.5	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	22,601.0	43,226.8	20,625.9	47.7%
4a	Advances	0.0	0.0	0.0	0.0%
5a	Contributions	894.1	894.1	0.0	0.0%
6a	Total Gross Additions	23,495.1	44,120.9	20,625.9	46.7%
8a	Retirements	703.7	703.7	0.0	0.0%
9a	Net Additions	24,198.7	44,824.6	20,625.9	46.0%
10a	Plant in Service - End of Year	278,136.4	351,236.9	73,100.5	20.8%
11a	*Plant Weighting Factor*	*32.98%*	*32.98%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	261,875.6	321,152.3	59,276.7	18.5%

Escalation Year 2024 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	278,136.4	351,236.9	73,100.5	20.8%
2b	Adjustments	38.3	38.3	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	20,327.6	28,234.6	7,907.0	28.0%
4b	Advances	0.0	0.0	0.0	0.0%
5b	Contributions	894.1	894.1	0.0	0.0%
6b	Total Gross Additions	21,221.7	29,128.7	7,907.0	27.1%
8b	Retirements	754.2	754.2	0.0	0.0%
9b	Net Additions	21,975.8	29,882.9	7,907.0	26.5%
10b	Plant in Service - End of Year	300,150.5	381,158.1	81,007.5	21.3%
11b	*Plant Weighting Factor*	*32.98%*	*32.98%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	285,383.7	361,091.8	75,708.1	21.0%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Depreciation Reserve - Beginning of Year	78,650.3	79,404.5	754.2	0.9%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(64.1)	(102.0)	(37.9)	37.2%
3a	Contributed Plant	(450.8)	(451.8)	(1.0)	0.2%
4a	Depreciation Accrual	6,332.836	7,926.2	1,593.3	20.1%
5a	Total Accruals	5,817.9	7,372.4	1,554.5	21.1%
	Retirements				
6a	Net Retirements	(703.660)	(703.7)	0.0	0.0%
8a	Total Retirement	(703.7)	(703.7)	0.0	0.0%
9a	Net Additions	5,629	7,222.5	1,593.3	22.1%
7a	Carry Forward Adjustment	0.0	(304.9)	(304.9)	100.0%
10a	Depreciation Reserve - End of Year	84,279.5	86,322.1	2,042.6	2.4%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	81,464.9	82,710.8	1,245.9	1.5%
13a	*Deprec. expense for summary of earnings calc.*	5,817.9	7,372.4	1,554.5	21.1%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Depreciation Reserve - Beginning of Year	84,279.5	86,322.1	2,042.6	2.4%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(64.1)	(102.8)	(38.7)	37.7%
3b	Contributed Plant	(475.7)	(476.8)	(1.1)	0.2%
4b	Depreciation Accrual	6,978.8	9,075.9	2,097.0	23.1%
5b	Total Accruals	6,439.1	8,496.3	2,057.2	24.2%
	Retirements and Adjustments:				
6b	Net Retirements	(754.2)	(754.2)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(754.2)	(754.2)	0.0	
					0.0%
9b	Net Additions	6,224.6	8,321.7	2,097.0	25.2%
10b	Depreciation Reserve - End of Year	90,504.2	94,643.8	4,139.6	4.4%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	87,391.8	90,482.9	3,091.1	3.4%
13b	* *Deprec. expense for summary of earnings calc.*	6,439.1	8,496.3	2,057.2	24.2%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	261,875.6	321,152.3	59,276.7	18.5%
3	Weighted Average Depreciation Reserve	(81,464.9)	(82,710.8)	(1,245.9)	1.5%
4	Net Utility Plant	180,410.7	238,441.5	58,030.8	24.3%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	11,478.5	11,484.6	6.1	0.1%
5	Advances in Construction	774.0	774.0	0.0	0.0%
6	Reserve for Amortization of Intangibles	1,561.4	1,633.3	71.9	4.4%
7	Deferred Taxes	24,944.5	30,122.1	5,177.5	17.2%
8	Unamortized Investment Tax Credits	61.6	61.6	0.0	0.0%
9	Total Deductions from Rate Base	38,820.1	44,075.7	5,255.5	11.9%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	353.7	353.7	0.0	0.0%
10a	Tank Painting	1,379.7	1,440.3	60.6	4.2%
11	Working Cash, Lead-Lag	1,586.3	1,921.6	335.4	17.5%
12	Amount Withheld from Employees	(17.8)	(18.2)	(0.4)	2.1%
13	Total Working Capital	3,301.9	3,697.4	395.5	10.7%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	1,058.9	1,058.9	0.0	0.0%
17	Total Additions to Rate Base	4,360.8	4,756.3	395.5	8.3%
18	Weighted Average Rate Base, District	145,951.4	199,122.2	53,170.8	26.7%
19	Weighted Average Rate Base, G.O. Allocation	4,012.5	6,569.8	2,557.4	38.9%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	149,963.8	205,692.0	55,728.2	27.1%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*146,661.963*	*201,994.6*	*55,332.6*	*27.4%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*3,769.2*	*5,191.3*	*1,422.0*	*27.4%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	285,383.7	361,091.8	75,708.1	21.0%
3	Weighted Average Depreciation Reserve	(87,391.8)	(90,482.9)	(3,091.1)	3.4%
4	Net Utility Plant	197,991.9	270,608.9	72,617.0	26.8%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	11,909.4	11,914.4	5.1	0.0%
5	Advances in Construction	704.3	704.3	0.0	0.0%
6	Reserve for Amortization of Intangibles	1,688.3	1,850.2	161.9	8.8%
7	Deferred Taxes	25,398.2	31,568.3	6,170.1	19.5%
8	Unamortized Investment Tax Credits	56.0	56.0	0.0	0.0%
9	Total Deductions from Rate Base	39,756.2	46,093.3	6,337.1	13.7%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	353.7	353.7	0.0	0.0%
10a	Tank Painting	1,372.2	1,664.9	292.7	17.6%
11	Working Cash, Lead-Lag	1,672.0	2,075.7	403.7	19.4%
12	Amount Withheld from Employees	(17.8)	(18.2)	(0.4)	2.1%
13	Total Working Capital	3,380.1	4,076.1	696.0	17.1%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	1,184.5	1,184.5	0.0	0.0%
17	Total Additions to Rate Base	4,564.6	5,260.6	696.0	13.2%
18	Weighted Average Rate Base, District	162,800.3	229,776.2	66,976.0	29.1%
19	Weighted Average Rate Base, G.O. Allocation	4,060.5	7,114.4	3,053.8	42.9%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	166,860.8	236,890.6	70,029.8	29.6%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*163,480.7*	*232,814.5*	*69,333.7*	*29.8%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*4,201.5*	*5,983.3*	*1,781.9*	*29.8%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	2,186.2	4,133.6	1,947.4
2. Test Year 2023 Increase (%)	8.7%	16.4%	7.7%
3. Escalation Year 2024 Increase (%)	1.2%	4.3%	3.1%
4. Escalation Year 2025 Increase (%)	2.0%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**25,226.2**	**25,226.2**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	4,385.7	4,413.9	28.2	0.6%
3a	Administrative & General	1,357.5	1,416.8	59.3	4.2%
4a	Payroll	3,946.7	3,946.7	0.0	0.0%
5a	General Office - *prorated expenses*	5,491.6	5,798.7	307.1	5.3%
6a	Depreciation Expense	5,701.5	6,123.6	422.1	6.9%
7a	Taxes Other Than Income	1,025.2	1,108.7	83.5	7.5%
8a	California Corporate Franchise Tax	104.3	(308.2)	(412.4)	133.8%
9a	Federal Income Tax	(237.0)	(401.0)	(164.0)	40.9%
10a	Total Operating Expenses	21,775.4	22,099.2	323.8	1.5%
11a	Net Operating Revenues	3,450.8	3,127.1	(323.8)	-10.4%
12a	Weighted Average Rate Base	67,145.2	81,532.3	14,387.1	17.6%
13a	***Return on Rate Base***	***5.14%***	***3.84%***	***-1.30%***	***-34.0%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	27,412.4	29,359.8	**1,947.4**	**6.6%**
	Operating Expenses:				
2b	Operation & Maintenance	4,389.6	4,421.3	31.7	0.7%
3b	Administrative & General	1,357.5	1,416.8	59.3	4.2%
4b	Payroll	3,946.7	3,946.7	0.0	0.0%
5b	General Office - *prorated expenses*	5,491.6	5,798.7	307.1	5.3%
6b	Depreciation Expense	5,701.5	6,123.6	422.1	6.9%
7b	Taxes Other Than Income	1,025.2	1,108.7	83.5	7.5%
8b	California Corporate Franchise Tax	297.2	56.6	(240.6)	-425.0%
9b	Federal Income Tax	180.8	388.9	208.1	53.5%
10b	Total Operating Expenses	22,390.0	23,261.2	871.3	3.7%
11b	Net Operating Revenues	5,022.5	6,098.6	1,076.2	17.6%
12b	Weighted Average Rate Base	67,145	81,532.3	14,387.1	17.6%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**2,186.2**	**4,133.6**	**1,947.4**	**47.1%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	28,052.2	28,600.8	548.6	1.9%
2	Operating Expenses:*				
3	Operation & Maintenance	4,485.6	4,575.3	89.7	2.0%
4	Administrative & General	1,467.3	1,496.7	29.3	2.0%
5	Payroll	4,076.9	4,158.5	81.5	2.0%
6	G.O. Prorated Expenses	5,466.0	5,575.3	109.3	2.0%
7	Depreciation Expense	5,892.9	6,010.7	117.9	2.0%
8	Taxes Other Than Income	1,039.4	1,060.1	20.8	2.0%
9	California Corporate Franchise Tax	311.4	311.44	0.0	0.0%
10	Federal Income Tax	190.2	190.17	0.0	0.0%
11	Total Operating Expenses	22,929.7	23,378.3	448.6	1.9%
12	Net Operating Revenues	5,122.5	5,222.5	100.0	1.9%
13	Weighted Average Rate Base	68,482.3	69,819.4	1,337.1	1.9%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***0.0***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	194.1	194.1	0.0	0.0%
2a	Business	611.2	611.2	0.0	0.0%
3a	Multiple Family	1,150.5	1,150.5	0.0	0.0%
4a	Industrial	1,100.9	1,100.9	0.0	0.0%
5a	Public Authority	851.0	851.0	0.0	0.0%
6a	Other	570.5	570.5	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	194.1	194.1	0.0	0.0%
2b	Business	611.2	611.2	0.0	0.0%
3b	Multiple Family	1,150.5	1,150.5	0.0	0.0%
4b	Industrial	1,158.8	1,158.8	0.0	0.0%
5b	Public Authority	852.4	852.4	0.0	0.0%
6b	Other	555.1	555.1	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	26,551	26,551	0	0%
2a	Business	3,134	3,134	0	0%
3a	Multiple Family	1,080	1,080	0	0%
4a	Industrial	20	20	0	0%
5a	Public Authority	427	427	0	0%
6a	Other	36	36	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	31,248	31,248	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	540	540	0	0%
12a	Public Fire Protection	59	59	0	0%
13a	Total Number of Unmetered Connections	599	599	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	31,847	31,847	0	0%
15a	Excluding Fire Protection	31,248	31,248	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	26,889	26,889	0	0%
2b	Business	3,154	3,154	0	0%
3b	Multiple Family	1,098	1,098	0	0%
4b	Industrial	19	19	0	0%
5b	Public Authority	426	426	0	0%
6b	Other	37	37	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	31,623	31,623	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	554	554	0	0%
12b	Public Fire Protection	60	60	0	0%
13b	Total Number of Unmetered Connections	614	614	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	32,237	32,237	0	0%
15b	Excluding Fire Protection	31,623	31,623	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	5,154.3	5,154.3	0.0	0.0%
2a	Business	1,915.4	1,915.4	0.0	0.0%
3a	Multiple Family	1,242.4	1,242.4	0.0	0.0%
4a	Industrial	22.0	22.0	0.0	0.0%
5a	Public Authority	363.5	363.5	0.0	0.0%
6a	Other	20.5	20.5	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	8,718.1	8,718.1	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	8,718.1	8,718.1	0.0	0.0%
12a	*Unaccounted For Water Rate*	*7.5%*	*7.5%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	705.5	705.5	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**9,423.6**	**9,423.6**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	21,633.7	21,633.7	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	9,423.6	9,423.6	0.0	0.0%
17a	Purchased Water	0.0	0.0	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**9,423.6**	**9,423.6**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	5,219.9	5,219.9	0.0	0.0%
2b	Business	1,927.8	1,927.8	0.0	0.0%
3b	Multiple Family	1,262.8	1,262.8	0.0	0.0%
4b	Industrial	22.0	22.0	0.0	0.0%
5b	Public Authority	363.5	363.5	0.0	0.0%
6b	Other	20.5	20.5	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	8,816.5	8,816.5	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	8,816.5	8,816.5	0.0	0.0%
12b	*Unaccounted For Water Rate*	*7.5%*	*7.5%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	714.2	714.2	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**9,530.7**	**9,530.7**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	21,879.6	21,879.6	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	9,530.7	9,530.7	0.0	0.0%
17b	Purchased Water	0.0	0.0	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**9,530.7**	**9,530.7**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	9,667.3	9,667.3	0.0	0.0%
2a	Business	3,727.7	3,727.7	0.0	0.0%
3a	Multiple Family	2,418.0	2,418.0	0.0	0.0%
4a	Industrial	42.9	42.9	0.0	0.0%
5a	Public Authority	707.4	707.4	0.0	0.0%
6a	Other	40.0	40.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	16,603.1	16,603.1	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	8,180.4	8,180.4	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	8,180.4	8,180.4	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	347.9	347.9	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	94.7	94.7	0.0	0.0%
16a	Total Other Revenues	442.7	442.7	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	25,226.2	25,226.2	0.0	0.0%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	9,761.3	9,177.3	(584.0)	-6.4%
2b	Business	3,740.7	3,516.5	(224.2)	-6.4%
3b	Multiple Family	2,450.4	2,303.5	(146.9)	-6.4%
4b	Industrial	42.7	40.2	(2.6)	-6.4%
5b	Public Authority	705.3	663.0	(42.3)	-6.4%
6b	Other	39.9	37.5	(2.4)	-6.4%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	16,740.2	15,737.9	(1,002.3)	-6.4%
	Unmetered Revenues:				
10b	Service Charge	10,506.4	13,477.5	2,971.1	22.0%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	10,506.4	13,477.5	2,971.1	22.0%
	Other Revenues:				
13b	Private Fire Protection	383.7	383.7	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	95.9	95.9	0.0	0.0%
16b	Total Other Revenues	479.7	479.7	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	27,726.3	29,695.2	1,968.8	6.6%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	1,993.1	1,993.1	0.0	0.0%
4	Purchased Chemicals	134.2	134.2	0.0	0.0%
5	Payroll	2,433.5	2,433.5	0.0	0.0%
6	Postage	100.9	95.2	(5.7)	-6.0%
7	Transportation	228.6	241.4	12.8	5.3%
	Purchased Services:				
8	Source of Supply	93.9	93.9	0.0	0.0%
9	Pumping	160.4	160.4	0.0	0.0%
10	Water Treatment	197.0	197.0	0.0	0.0%
11	Transmission & Distribution	185.5	185.5	0.0	0.0%
12	Customer Accounting	386.8	386.8	0.0	0.0%
13	Conservation	315.2	331.8	16.6	5.0%
14	Total Operations Exp. excluding Uncollectibles	6,229.0	6,252.7	23.7	0.4%
	Maintenance Expenses:				
15	Payroll	800.6	800.6	0.0	0.0%
16	Transportation	58.4	62.9	4.5	7.2%
17	Stores	86.9	86.9	0.0	0.0%
18	Contracted Maintenance	399.8	399.8	0.0	0.0%
19	Total Maintenance Expenses	1,345.6	1,350.2	4.5	0.3%
	At Present Rates				
20	Operating Revenues	25,226.2	25,226.2	0.0	0.0%
21	*Uncollectible Rate*	0.1788%	0.1788%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	45.1	45.1	0.0	0.0%
23	Total O&M Expenses including Uncollectibles	7,619.8	7,648.0	28.2	0.4%
	At Proposed Rates				
25	Operating Revenues	27,412.4	29,359.8	1,947.4	6.6%
26	*Uncollectible Rate*	0.1788%	0.1788%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	49.0	52.5	3.5	6.6%
28	Total O&M Expenses including Uncollectibles	7,623.7	7,655.3	31.7	0.4%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	2,026.2	2,026.2	0.0	0.0%
4	Purchased Chemicals	139.2	139.2	0.0	0.0%
5	Payroll	2,513.8	2,513.8	0.0	0.0%
6	Postage	101.8	96.0	(5.8)	-6.0%
7	Transportation	234.3	260.6	26.2	10.1%
	Purchased Services:				
8	Source of Supply	93.9	93.9	0.0	0.0%
9	Pumping	164.4	164.4	0.0	0.0%
10	Water Treatment	201.6	201.6	0.0	0.0%
11	Transmission & Distribution	190.2	190.2	0.0	0.0%
12	Customer Accounting	396.6	396.6	0.0	0.0%
13	Conservation	331.8	331.8	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	6,393.6	6,414.1	20.5	0.3%
	Maintenance Expenses:				
15	Payroll	827.0	827.0	0.0	0.0%
16	Transportation	59.9	69.1	9.3	13.4%
17	Stores	89.0	89.0	0.0	0.0%
18	Contracted Maintenance	406.7	406.7	0.0	0.0%
19	Total Maintenance Expenses	1,382.7	1,391.9	9.3	0.7%
	At Present Rates				
20	Operating Revenues	27,726.3	29,695.2	1,968.8	6.6%
21	*Uncollectible Rate*	0.1788%	0.1788%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	49.6	53.1	3.5	6.6%
23	Total O&M Expenses including Uncollectibles	7,825.8	7,859.1	33.3	0.4%
	At Proposed Rates				
25	Operating Revenues	28,052.2	30,978.1	2,925.9	9.4%
26	*Uncollectible Rate*	0.1788%	0.1788%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	50.2	55.4	5.2	9.4%
28	Total O&M Expenses including Uncollectibles	7,826.4	7,861.4	35.0	0.4%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	712.6	712.6	0.0	0.0%
2a	Benefits	1,245.6	1,293.6	48.0	3.7%
3a	Transportation Expenses	0.6	0.6	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	18.3	18.3	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(143.9)	(143.9)	0.0	0.0%
6a	Workers' Compensation	57.0	58.5	1.5	2.6%
7a	Non-Specifics	140.4	131.8	(8.6)	-6.6%
8a	Subtotal	2,030.6	2,071.5	40.9	2.0%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	41.2	59.7	18.5	30.9%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(1.8)	(1.8)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	2,070.1	2,129.4	59.3	2.8%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	736.1	736.1	0.0	0.0%
2b	Benefits	1,353.8	1,397.1	43.3	3.1%
3b	Transportation Expenses	0.6	0.6	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	18.3	18.3	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(148.6)	(148.6)	0.0	0.0%
6b	Workers' Compensation	58.4	62.5	4.1	6.5%
7b	Non-Specifics	130.2	130.2	0.0	0.0%
8b	Subtotal	2,148.7	2,196.1	47.4	2.2%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	56.6	71.6	15.1	21.0%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(1.8)	(1.8)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	2,203.5	2,265.9	62.5	2.8%

TABLE 5-1
TAXES OTHER THAN INCOME

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	708.0	791.6	83.5	10.6%
2a	Payroll Taxes	283.9	283.9	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	25,181.1	25,181.1	0.0	0.0%
4a	*Effective Local Franchise Tax Rate*	*0.000%*	*0.000%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5a1	Business License-Present Rates	33.2	33.2	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	1,025.2	1,108.7	83.5	7.5%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	27,363.4	29,307.3	1,943.9	6.6%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9a	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9a1	Business License-Proposed Rates	33.2	33.2	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	1,025.2	1,108.7	83.5	7.5%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	712.4	852.4	140.0	16.4%
2b	Payroll Taxes	293.3	293.3	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	27,676.7	29,642.1	1,965.3	6.6%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
5b	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5b1	Business License-Present Rates	33.6	33.6	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	1,039.4	1,179.4	140.0	11.9%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	28,002.0	30,922.7	2,920.7	9.4%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9b	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9b1	Business License-Proposed Rates	33.6	33.6	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	1,039.4	1,179.4	140.0	11.9%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	25,226.2	25,226.2	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	7,574.7	7,602.9	28.2	0.4%
3	Uncollectibles Expense	45.1	45.1	0.0	0.0%
4	A&G Expenses	2,070.1	2,129.4	59.3	2.8%
5	G.O. Prorated Expenses	5,491.6	5,798.7	307.1	5.3%
6	G.O. Book Depreciation (to be excluded)	(609.1)	(744.2)	(135.1)	18.2%
7	Transportation Deprec. Expense (to be excluded)	(118.8)	(193.9)	(75.0)	38.7%
8	Taxes On Other Than Income	1,025.2	1,108.7	83.5	7.5%
8a	Non-deductible Meals	(25.8)	(25.5)	0.2	-0.9%
9	Interest Expense	1,658.5	2,024.7	366.2	18.1%
10	Total Common Deductions	17,111.4	17,745.8	634.4	3.6%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	6,542.7	10,341.5	3,798.8	36.7%
12	Tax Depreciation - G.O.	392.6	624.8	232.2	37.2%
13	Subtotal	6,935.3	10,966.3	4,031.0	36.8%
14	Total State Deductions, incl. Common Deductions	24,046.7	28,712.1	4,665.4	16.2%
	Federal Tax Deductions				
16	Book Depreciation - District	5,701.5	6,123.6	422.1	6.9%
17	Book Depreciation - G.O.	609.1	744.2	135.1	18.2%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	104.3	(308.2)	(412.4)	133.8%
20	Subtotal	6,414.8	6,559.6	144.8	2.2%
21	Total Fed. Deductions, incl. Common Deductions	23,526.3	24,305.5	779.2	3.2%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	1,179.5	(3,485.9)	(4,665.4)	133.8%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	104.3	(308.2)	(412.4)	133.8%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	1,699.9	920.8	(779.2)	-84.6%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	357.0	193.4	(779.2)	-84.6%
28	Adjustment to FIT, Regulatory Liability	(594.0)	(594.4)	(0.4)	0.1%
29	Total FIT, with Adjustment	(237.0)	(401.0)	(164.0)	40.9%
30	Total Income Taxes for Revenues at Present Rates	(132.8)	(709.2)	(576.4)	81.3%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	27,412.4	29,359.8	1,947.4	6.6%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	7,574.7	7,602.9	28.2	0.4%
3	Uncollectibles Expense	49.0	52.5	3.5	6.6%
4	A&G Expenses	2,070.1	2,129.4	59.3	2.8%
5	G.O. Prorated Expenses	5,491.6	5,798.7	307.1	5.3%
6	G.O. Book Depreciation (to be excluded)	(609.1)	(744.2)	(135.1)	18.2%
7	Transportation Deprec. Expense (to be excluded)	(118.8)	(193.9)	(75.0)	38.7%
8	Taxes On Other Than Income	1,025.2	1,108.7	83.5	7.5%
8a	Non-deductible Meals	(25.8)	(25.5)	0.2	-0.9%
9	Interest Expense	1,658.5	2,024.7	366.2	18.1%
10	Total Common Deductions	17,115.3	17,753.2	637.9	3.6%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	6,542.7	10,341.5	3,798.8	36.7%
12	Tax Depreciation - G.O.	392.6	624.8	232.2	37.2%
13	Subtotal	6,935.3	10,966.3	4,031.0	36.8%
14	Total State Deductions, incl. Common Deductions	24,050.6	28,719.5	4,668.9	16.3%
	Federal Tax Deductions				
16	Book Depreciation - District	5,701.5	6,123.6	422.1	6.9%
17	Book Depreciation - G.O.	609.1	744.2	135.1	18.2%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	297.2	56.6	(240.6)	-425.0%
20	Subtotal	6,607.8	6,924.4	316.6	4.6%
21	Total Fed. Deductions, incl. Common Deductions	23,723.1	24,677.6	954.5	3.9%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	3,361.8	640.3	(2,721.5)	-425.0%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	297.2	56.6	(240.6)	-425.0%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	3,689.3	4,682.2	992.9	21.2%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	774.8	983.3	208.5	21.2%
28	Adjustment to FIT, Regulatory Liability	(594.0)	(594.4)	(0.4)	0.1%
29	Total FIT, with Adjustment	180.8	388.9	208.1	53.5%
30	Total Income Taxes for Revenues at Proposed Rates	477.9	445.5	(32.4)	-7.3%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	209,074.0	220,356.1	11,282.1	5.1%
2a	Adjustments	30.7	30.7	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	3,881.8	9,996.2	6,114.4	61.2%
4a	Advances	2,175.6	2,175.6	0.0	0.0%
5a	Contributions	1,027.1	1,027.1	0.0	0.0%
6a	Total Gross Additions	7,084.5	13,198.9	6,114.4	46.3%
8a	Retirements	736.5	736.5	0.0	0.0%
9a	Net Additions	7,821.0	13,935.4	6,114.4	43.9%
10a	Plant in Service - End of Year	216,925.8	234,322.3	17,396.5	7.4%
11a	*Plant Weighting Factor*	*42.68%*	*42.68%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	212,412.2	226,304.0	13,891.8	6.1%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	216,925.8	234,322.3	17,396.5	7.4%
2b	Adjustments	26.3	26.3	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	4,086.3	10,663.9	6,577.5	61.7%
4b	Advances	2,175.6	2,175.6	0.0	0.0%
5b	Contributions	1,027.1	1,027.1	0.0	0.0%
6b	Total Gross Additions	7,289.0	13,866.5	6,577.5	47.4%
8b	Retirements	834.4	834.4	0.0	0.0%
9b	Net Additions	8,123.4	14,700.9	6,577.5	44.7%
10b	Plant in Service - End of Year	225,075.5	249,049.5	23,974.0	9.6%
11b	*Plant Weighting Factor*	*42.68%*	*42.68%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	220,393.0	240,596.9	20,203.9	8.4%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Depreciation Reserve - Beginning of Year	80,933.8	81,147.7	213.8	0.3%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(94.7)	(148.0)	(53.3)	36.0%
3a	Contributed Plant	(767.3)	(771.3)	(4.0)	0.5%
4a	Depreciation Accrual	6,563.488	7,042.9	479.4	6.8%
5a	Total Accruals	5,701.5	6,123.6	422.1	6.9%
	Retirements				
6a	Net Retirements	(736.507)	(736.5)	0.0	0.0%
8a	Total Retirement	(736.5)	(736.5)	0.0	0.0%
9a	Net Additions	5,827	6,306.4	479.4	7.6%
7a	Carry Forward Adjustment	0.0	(97.7)	(97.7)	100.0%
10a	Depreciation Reserve - End of Year	86,760.8	87,356.4	595.6	0.7%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	83,847.3	84,203.2	355.8	0.4%
13a	*Deprec. expense for summary of earnings calc.*	5,701.5	6,123.6	422.1	6.9%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Depreciation Reserve - Beginning of Year	86,760.8	87,356.4	595.6	0.7%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(98.0)	(152.8)	(54.8)	35.9%
3b	Contributed Plant	(798.9)	(804.0)	(5.1)	0.6%
4b	Depreciation Accrual	6,789.8	7,476.0	686.2	9.2%
5b	Total Accruals	5,892.9	6,519.1	626.3	9.6%
	Retirements and Adjustments:				
6b	Net Retirements	(834.4)	(834.4)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(834.4)	(834.4)	0.0	
					0.0%
9b	Net Additions	5,955.4	6,641.6	686.2	10.3%
10b	Depreciation Reserve - End of Year	92,716.2	93,998.0	1,281.7	1.4%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	89,738.5	90,677.2	938.7	1.0%
13b	* *Deprec. expense for summary of earnings calc.*	5,892.9	6,519.1	626.3	9.6%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	212,412.2	226,304.0	13,891.8	6.1%
3	Weighted Average Depreciation Reserve	(83,847.3)	(84,203.2)	(355.8)	0.4%
4	Net Utility Plant	128,564.9	142,100.9	13,536.0	9.5%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	13,556.7	13,550.2	(6.5)	0.0%
5	Advances in Construction	38,089.9	38,089.9	0.0	0.0%
6	Reserve for Amortization of Intangibles	707.5	724.7	17.2	2.4%
7	Deferred Taxes	15,384.9	16,678.6	1,293.7	7.8%
8	Unamortized Investment Tax Credits	188.8	188.8	0.0	0.0%
9	Total Deductions from Rate Base	67,927.8	69,232.2	1,304.3	1.9%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	279.9	279.9	0.0	0.0%
10a	Tank Painting	240.9	240.9	0.0	0.0%
11	Working Cash, Lead-Lag	2,108.4	2,245.8	137.4	6.1%
12	Amount Withheld from Employees	(15.6)	(15.3)	0.3	-1.8%
13	Total Working Capital	2,613.6	2,751.3	137.7	5.0%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	379.3	379.3	0.0	0.0%
17	Total Additions to Rate Base	2,992.8	3,130.5	137.7	4.4%
18	Weighted Average Rate Base, District	63,629.9	75,999.2	12,369.3	16.3%
19	Weighted Average Rate Base, G.O. Allocation	3,515.3	5,533.1	2,017.8	36.5%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	67,145.2	81,532.3	14,387.1	17.6%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*64,531.652*	*78,781.1*	*14,249.4*	*18.1%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*1,658.5*	*2,024.7*	*366.2*	*18.1%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	220,393.0	240,596.9	20,203.9	8.4%
3	Weighted Average Depreciation Reserve	(89,738.5)	(90,677.2)	(938.7)	1.0%
4	Net Utility Plant	130,654.5	149,919.7	19,265.2	12.9%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	13,800.7	13,789.7	(11.1)	-0.1%
5	Advances in Construction	39,204.5	39,204.5	0.0	0.0%
6	Reserve for Amortization of Intangibles	770.0	816.6	46.6	5.7%
7	Deferred Taxes	14,887.1	16,857.4	1,970.4	11.7%
8	Unamortized Investment Tax Credits	187.3	187.3	0.0	0.0%
9	Total Deductions from Rate Base	68,849.6	70,855.4	2,005.9	2.8%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	279.9	279.9	0.0	0.0%
10a	Tank Painting	210.0	210.0	0.0	0.0%
11	Working Cash, Lead-Lag	2,156.4	2,349.9	193.6	8.2%
12	Amount Withheld from Employees	(15.6)	(15.3)	0.3	-1.8%
13	Total Working Capital	2,630.7	2,824.5	193.8	6.9%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	489.3	489.3	0.0	0.0%
17	Total Additions to Rate Base	3,120.0	3,313.8	193.8	5.8%
18	Weighted Average Rate Base, District	64,924.9	82,378.1	17,453.2	21.2%
19	Weighted Average Rate Base, G.O. Allocation	3,557.4	5,991.7	2,434.3	40.6%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	68,482.3	88,369.8	19,887.5	22.5%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*65,851.6*	*85,545.2*	*19,693.6*	*23.0%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*1,692.4*	*2,198.5*	*506.1*	*23.0%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	2,366.0	2,586.6	220.6
2. Test Year 2023 Increase (%)	57.6%	63.0%	5.4%
3. Escalation Year 2024 Increase (%)	37.0%	37.7%	0.7%
4. Escalation Year 2025 Increase (%)	1.5%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**4,106.4**	**4,106.4**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	863.7	862.5	(1.1)	-0.1%
3a	Administrative & General	834.2	841.4	7.3	0.9%
4a	Payroll	636.9	636.9	0.0	0.0%
5a	General Office - *prorated expenses*	843.1	881.1	38.0	4.3%
6a	Depreciation Expense	963.4	1,017.0	53.6	5.3%
7a	Taxes Other Than Income	296.9	310.5	13.5	4.4%
8a	California Corporate Franchise Tax	(88.7)	(139.3)	(50.5)	36.3%
9a	Federal Income Tax	(209.4)	(229.4)	(19.9)	8.7%
10a	Total Operating Expenses	4,140.0	4,180.8	40.8	1.0%
11a	Net Operating Revenues	(33.6)	(74.4)	(40.8)	54.8%
12a	Weighted Average Rate Base	22,252.5	23,839.5	1,587.0	6.7%
13a	***Return on Rate Base***	***-0.15%***	***-0.31%***	***-0.16%***	***51.6%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	6,472.4	6,693.0	**220.6**	**3.3%**
	Operating Expenses:				
2b	Operation & Maintenance	871.7	871.4	(0.4)	0.0%
3b	Administrative & General	834.2	841.4	7.3	0.9%
4b	Payroll	636.9	636.9	0.0	0.0%
5b	General Office - *prorated expenses*	843.1	881.1	38.0	4.3%
6b	Depreciation Expense	963.4	1,017.0	53.6	5.3%
7b	Taxes Other Than Income	296.9	310.5	13.5	4.4%
8b	California Corporate Franchise Tax	119.7	88.6	(31.1)	-35.1%
9b	Federal Income Tax	242.0	264.1	22.2	8.4%
10b	Total Operating Expenses	4,807.9	4,911.0	103.1	2.1%
11b	Net Operating Revenues	1,664.5	1,782.0	117.5	6.6%
12b	Weighted Average Rate Base	22,252	23,839.5	1,587.0	6.7%
13b	***Return on Rate Base***	***7.48%***	***7.47%***	***-0.01%***	***-0.1%***
14	**Increase in Operating Revenues (1b - 1a)**	**2,366.0**	**2,586.6**	**220.6**	**8.5%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	6,599.0	6,698.0	99.0	1.5%
2	Operating Expenses:*				
3	Operation & Maintenance	898.0	915.9	18.0	2.0%
4	Administrative & General	885.5	903.2	17.7	2.0%
5	Payroll	657.9	671.1	13.2	2.0%
6	G.O. Prorated Expenses	839.2	856.0	16.8	2.0%
7	Depreciation Expense	983.5	1,003.2	19.7	2.0%
8	Taxes Other Than Income	296.6	302.5	5.9	2.0%
9	California Corporate Franchise Tax	122.7	122.71	0.0	0.0%
10	Federal Income Tax	243.4	243.38	0.0	0.0%
11	Total Operating Expenses	4,926.7	5,018.0	91.2	1.8%
12	Net Operating Revenues	1,672.3	1,680.0	7.8	0.5%
13	Weighted Average Rate Base	22,356.5	22,460.5	104.0	0.5%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***0.0***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	131.7	131.7	0.0	0.0%
2a	Business	232.2	232.2	0.0	0.0%
3a	Multiple Family	1,365.9	1,365.9	0.0	0.0%
4a	Industrial	45.9	45.9	0.0	0.0%
5a	Public Authority	503.7	503.7	0.0	0.0%
6a	Other	0.0	0.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	131.7	131.7	0.0	0.0%
2b	Business	232.2	232.2	0.0	0.0%
3b	Multiple Family	1,365.9	1,365.9	0.0	0.0%
4b	Industrial	45.9	45.9	0.0	0.0%
5b	Public Authority	494.6	494.6	0.0	0.0%
6b	Other	0.0	0.0	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	2,906	2,906	0	0%
2a	Business	153	153	0	0%
3a	Multiple Family	28	28	0	0%
4a	Industrial	3	3	0	0%
5a	Public Authority	33	33	0	0%
6a	Other	0	0	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	3,122	3,122	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	34	34	0	0%
12a	Public Fire Protection	7	7	0	0%
13a	Total Number of Unmetered Connections	41	41	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	3,163	3,163	0	0%
15a	Excluding Fire Protection	3,122	3,122	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	2,942	2,942	0	0%
2b	Business	152	152	0	0%
3b	Multiple Family	28	28	0	0%
4b	Industrial	3	3	0	0%
5b	Public Authority	33	33	0	0%
6b	Other	0	0	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	3,158	3,158	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	34	34	0	0%
12b	Public Fire Protection	7	7	0	0%
13b	Total Number of Unmetered Connections	41	41	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	3,199	3,199	0	0%
15b	Excluding Fire Protection	3,158	3,158	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	382.7	382.7	0.0	0.0%
2a	Business	35.4	35.4	0.0	0.0%
3a	Multiple Family	37.7	37.7	0.0	0.0%
4a	Industrial	0.1	0.1	0.0	0.0%
5a	Public Authority	16.4	16.4	0.0	0.0%
6a	Other	3.1	3.1	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	475.5	475.5	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	475.5	475.5	0.0	0.0%
12a	*Unaccounted For Water Rate*	*19.5%*	*19.5%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	115.0	115.0	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**590.5**	**590.5**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	1,355.6	1,355.6	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	590.5	590.5	0.0	0.0%
17a	Purchased Water	0.0	0.0	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**590.5**	**590.5**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	387.5	387.5	0.0	0.0%
2b	Business	35.3	35.3	0.0	0.0%
3b	Multiple Family	38.0	38.0	0.0	0.0%
4b	Industrial	0.1	0.1	0.0	0.0%
5b	Public Authority	16.4	16.4	0.0	0.0%
6b	Other	3.1	3.1	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	480.5	480.5	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	480.5	480.5	0.0	0.0%
12b	*Unaccounted For Water Rate*	*19.5%*	*19.5%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	116.3	116.3	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**596.8**	**596.8**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	1,370.0	1,370.0	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	596.8	596.8	0.0	0.0%
17b	Purchased Water	0.0	0.0	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**596.8**	**596.8**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	2,024.9	2,024.9	0.0	0.0%
2a	Business	237.5	237.5	0.0	0.0%
3a	Multiple Family	252.7	252.7	0.0	0.0%
4a	Industrial	0.9	0.9	0.0	0.0%
5a	Public Authority	110.0	110.0	0.0	0.0%
6a	Other	21.0	21.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	2,647.0	2,647.0	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	1,435.4	1,435.4	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	1,435.4	1,435.4	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	23.3	23.3	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	0.7	0.7	0.0	0.0%
16a	Total Other Revenues	24.0	24.0	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	4,106.4	4,106.4	0.0	0.0%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	2,192.3	1,995.5	(196.8)	-9.9%
2b	Business	253.3	230.6	(22.8)	-9.9%
3b	Multiple Family	272.5	248.0	(24.5)	-9.9%
4b	Industrial	1.0	0.9	(0.1)	-9.9%
5b	Public Authority	117.6	107.0	(10.6)	-9.9%
6b	Other	22.5	20.4	(2.0)	-9.9%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	2,859.1	2,602.4	(256.7)	-9.9%
	Unmetered Revenues:				
10b	Service Charge	1,932.9	2,413.1	480.2	19.9%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	1,932.9	2,413.1	480.2	19.9%
	Other Revenues:				
13b	Private Fire Protection	25.0	25.0	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	0.7	0.7	0.0	0.0%
16b	Total Other Revenues	25.7	25.7	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	4,817.8	5,041.2	223.4	4.4%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	163.7	163.7	0.0	0.0%
4	Purchased Chemicals	12.3	12.3	0.0	0.0%
5	Payroll	417.6	417.6	0.0	0.0%
6	Postage	9.8	9.2	(0.6)	-6.0%
7	Transportation	50.6	50.6	0.0	0.0%
	Purchased Services:				
8	Source of Supply	13.0	13.0	0.0	0.0%
9	Pumping	17.6	17.6	0.0	0.0%
10	Water Treatment	298.6	298.6	0.0	0.0%
11	Transmission & Distribution	73.2	73.2	0.0	0.0%
12	Customer Accounting	62.4	62.4	0.0	0.0%
13	Conservation	40.7	42.9	2.1	5.0%
14	Total Operations Exp. excluding Uncollectibles	1,159.5	1,161.1	1.6	0.1%
	Maintenance Expenses:				
15	Payroll	89.5	89.5	0.0	0.0%
16	Transportation	21.0	21.0	0.0	0.0%
17	Stores	3.8	3.8	0.0	0.0%
18	Contracted Maintenance	82.9	82.9	0.0	0.0%
19	Total Maintenance Expenses	197.3	197.3	0.0	0.0%
	At Present Rates				
20	Operating Revenues	4,106.4	4,106.4	0.0	0.0%
21	*Uncollectible Rate*	0.3409%	0.2744%	*-0.0665%*	*-24.2%*
22	Uncollectibles Expense	14.0	11.3	(2.7)	-24.2%
23	Total O&M Expenses including Uncollectibles	1,370.8	1,369.6	(1.1)	-0.1%
	At Proposed Rates				
25	Operating Revenues	6,472.4	6,693.0	220.6	3.3%
26	*Uncollectible Rate*	0.3409%	0.3409%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	22.1	20.1	(2.0)	-9.9%
28	Total O&M Expenses including Uncollectibles	1,378.9	1,378.5	(0.4)	0.0%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	171.7	171.7	0.0	0.0%
4	Purchased Chemicals	12.8	12.8	0.0	0.0%
5	Payroll	431.4	431.4	0.0	0.0%
6	Postage	10.0	9.4	(0.6)	-6.0%
7	Transportation	51.9	51.9	0.0	0.0%
	Purchased Services:				
8	Source of Supply	13.0	13.0	0.0	0.0%
9	Pumping	18.0	18.0	0.0	0.0%
10	Water Treatment	305.8	305.8	0.0	0.0%
11	Transmission & Distribution	75.0	75.0	0.0	0.0%
12	Customer Accounting	64.0	64.0	0.0	0.0%
13	Conservation	42.9	42.9	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	1,196.3	1,195.8	(0.6)	0.0%
	Maintenance Expenses:				
15	Payroll	92.5	92.5	0.0	0.0%
16	Transportation	21.5	21.5	0.0	0.0%
17	Stores	3.9	3.9	0.0	0.0%
18	Contracted Maintenance	85.0	85.0	0.0	0.0%
19	Total Maintenance Expenses	203.0	203.0	0.0	0.0%
	At Present Rates				
20	Operating Revenues	4,817.8	5,041.2	223.4	4.4%
21	*Uncollectible Rate*	0.3409%	0.2744%	*-6.6497%*	*-24.2%*
22	Uncollectibles Expense	16.4	13.8	(2.6)	-18.7%
23	Total O&M Expenses including Uncollectibles	1,415.7	1,412.6	(3.2)	-0.2%
	At Proposed Rates				
25	Operating Revenues	6,599.0	6,942.1	343.1	4.9%
26	*Uncollectible Rate*	0.3409%	0.2744%	*-6.6497%*	*-24.2%*
27	Uncollectibles Expense	22.5	19.0	(3.4)	-18.1%
28	Total O&M Expenses including Uncollectibles	1,421.8	1,417.8	(4.0)	-0.3%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Administrative & General Expenses:				
1a	Payroll	129.8	129.8	0.0	0.0%
2a	Benefits	201.0	208.8	7.7	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	(3.7)	(3.7)	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(18.7)	(18.7)	0.0	0.0%
6a	Workers' Compensation	8.0	9.4	1.5	15.7%
7a	Non-Specifics	44.4	40.9	(3.6)	-8.7%
8a	Subtotal	360.7	366.4	5.7	1.5%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	603.9	605.5	1.6	0.3%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(0.6)	(0.6)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	964.0	971.2	7.3	0.7%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Administrative & General Expenses:				
1b	Payroll	134.1	134.1	0.0	0.0%
2b	Benefits	218.5	225.5	7.0	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	(3.7)	(3.7)	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(19.4)	(19.4)	0.0	0.0%
6b	Workers' Compensation	8.2	10.1	1.9	19.1%
7b	Non-Specifics	41.3	41.3	0.0	0.0%
8b	Subtotal	378.9	387.8	8.9	2.3%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	641.4	648.7	7.4	1.1%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(0.6)	(0.6)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	1,019.6	1,035.9	16.3	1.6%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Ad Valorem Taxes	251.2	264.7	13.5	5.1%
2a	Payroll Taxes	45.8	45.8	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	4,092.4	4,095.1	2.7	0.1%
4a	*Effective Local Franchise Tax Rate*	*0.000%*	*0.000%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5a1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	296.9	310.5	13.5	4.4%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	6,450.3	6,672.9	222.5	3.3%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9a	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9a1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	296.9	310.5	13.5	4.4%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Ad Valorem Taxes	249.3	265.0	15.7	5.9%
2b	Payroll Taxes	47.3	47.3	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	4,801.4	5,027.4	226.0	4.5%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
5b	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5b1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	296.6	312.3	15.7	5.0%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	6,576.5	6,923.1	346.6	5.0%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9b	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9b1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	296.6	312.3	15.7	5.0%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	4,106.4	4,106.4	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	1,356.8	1,358.4	1.6	0.1%
3	Uncollectibles Expense	14.0	11.3	(2.7)	-24.2%
4	A&G Expenses	964.0	971.2	7.3	0.7%
5	G.O. Prorated Expenses	843.1	881.1	38.0	4.3%
6	G.O. Book Depreciation (to be excluded)	(93.5)	(113.1)	(19.6)	17.3%
7	Transportation Deprec. Expense (to be excluded)	(8.8)	(15.5)	(6.7)	43.3%
8	Taxes On Other Than Income	296.9	310.5	13.5	4.4%
8a	Non-deductible Meals	(4.9)	(4.8)	0.1	-1.1%
9	Interest Expense	559.9	600.3	40.3	6.7%
10	Total Common Deductions	3,927.6	3,999.4	71.8	1.8%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	1,122.3	1,587.3	465.0	29.3%
12	Tax Depreciation - G.O.	60.3	94.9	34.7	36.5%
13	Subtotal	1,182.6	1,682.2	499.7	29.7%
14	Total State Deductions, incl. Common Deductions	5,110.2	5,681.7	571.5	10.1%
	Federal Tax Deductions				
16	Book Depreciation - District	963.4	1,017.0	53.6	5.3%
17	Book Depreciation - G.O.	93.5	113.1	19.6	17.3%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(88.7)	(139.3)	(50.5)	36.3%
20	Subtotal	968.2	990.8	22.6	2.3%
21	Total Fed. Deductions, incl. Common Deductions	4,895.8	4,990.2	94.4	1.9%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(1,003.8)	(1,575.2)	(571.5)	36.3%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(88.7)	(139.3)	(50.5)	36.3%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	(789.3)	(883.8)	(94.4)	10.7%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	(165.8)	(185.6)	(94.4)	10.7%
28	Adjustment to FIT, Regulatory Liability	(43.7)	(43.8)	(0.1)	0.2%
29	Total FIT, with Adjustment	(209.4)	(229.4)	(19.9)	8.7%
30	Total Income Taxes for Revenues at Present Rates	(298.2)	(368.6)	(70.4)	19.1%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	6,472.4	6,693.0	220.6	3.3%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	1,356.8	1,358.4	1.6	0.1%
3	Uncollectibles Expense	22.1	20.1	(2.0)	-9.9%
4	A&G Expenses	964.0	971.2	7.3	0.7%
5	G.O. Prorated Expenses	843.1	881.1	38.0	4.3%
6	G.O. Book Depreciation (to be excluded)	(93.5)	(113.1)	(19.6)	17.3%
7	Transportation Deprec. Expense (to be excluded)	(8.8)	(15.5)	(6.7)	43.3%
8	Taxes On Other Than Income	296.9	310.5	13.5	4.4%
8a	Non-deductible Meals	(4.9)	(4.8)	0.1	-1.1%
9	Interest Expense	559.9	600.3	40.3	6.7%
10	Total Common Deductions	3,935.6	4,008.2	72.6	1.8%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	1,122.3	1,587.3	465.0	29.3%
12	Tax Depreciation - G.O.	60.3	94.9	34.7	36.5%
13	Subtotal	1,182.6	1,682.2	499.7	29.7%
14	Total State Deductions, incl. Common Deductions	5,118.2	5,690.5	572.2	10.1%
	Federal Tax Deductions				
16	Book Depreciation - District	963.4	1,017.0	53.6	5.3%
17	Book Depreciation - G.O.	93.5	113.1	19.6	17.3%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	119.7	88.6	(31.1)	-35.1%
20	Subtotal	1,176.6	1,218.7	42.1	3.5%
21	Total Fed. Deductions, incl. Common Deductions	5,112.3	5,226.9	114.6	2.2%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	1,354.2	1,002.5	(351.7)	-35.1%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	119.7	88.6	(31.1)	-35.1%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	1,360.1	1,466.1	105.9	7.2%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	285.6	307.9	22.2	7.2%
28	Adjustment to FIT, Regulatory Liability	(43.7)	(43.8)	(0.1)	0.2%
29	Total FIT, with Adjustment	242.0	264.1	22.2	8.4%
30	Total Income Taxes for Revenues at Proposed Rates	361.7	352.7	(8.9)	-2.5%

TABLE 7-1
UTILITY PLANT IN SERVICE

Test Year 2023 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	34,868.9	36,085.0	1,216.1	3.4%
2a	Adjustments	2.2	2.2	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	820.3	1,588.4	768.1	48.4%
4a	Advances	227.4	227.4	0.0	0.0%
5a	Contributions	6.3	6.3	0.0	0.0%
6a	Total Gross Additions	1,053.9	1,822.1	768.1	42.2%
8a	Retirements	93.7	93.7	0.0	0.0%
9a	Net Additions	1,147.6	1,915.8	768.1	40.1%
10a	Plant in Service - End of Year	36,018.7	38,002.9	1,984.2	5.2%
11a	*Plant Weighting Factor*	*29.24%*	*29.24%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	35,204.5	36,645.2	1,440.7	3.9%

Escalation Year 2024 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	36,018.7	38,002.9	1,984.2	5.2%
2b	Adjustments	2.0	2.0	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	368.3	1,052.6	684.3	65.0%
4b	Advances	227.4	227.4	0.0	0.0%
5b	Contributions	6.3	6.3	0.0	0.0%
6b	Total Gross Additions	601.9	1,286.2	684.3	53.2%
8b	Retirements	93.7	93.7	0.0	0.0%
9b	Net Additions	695.6	1,379.9	684.3	49.6%
10b	Plant in Service - End of Year	36,716.3	39,384.8	2,668.5	6.8%
11b	*Plant Weighting Factor*	*29.24%*	*29.24%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	36,222.1	38,406.4	2,184.3	5.7%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Depreciation Reserve - Beginning of Year	8,888.7	8,949.4	60.7	0.7%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(5.1)	(8.5)	(3.4)	40.4%
3a	Contributed Plant	(18.0)	(18.2)	(0.1)	0.7%
4a	Depreciation Accrual	986.493	1,043.6	57.1	5.5%
5a	Total Accruals	963.4	1,017.0	53.6	5.3%
	Retirements				
6a	Net Retirements	(93.702)	(93.7)	0.0	0.0%
8a	Total Retirement	(93.7)	(93.7)	0.0	0.0%
9a	Net Additions	893	949.9	57.1	6.0%
7a	Carry Forward Adjustment	0.0	(12.7)	(12.7)	100.0%
10a	Depreciation Reserve - End of Year	9,781.5	9,886.6	105.1	1.1%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	9,335.1	9,411.6	76.6	0.8%
13a	*Deprec. expense for summary of earnings calc.*	963.4	1,017.0	53.6	5.3%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Depreciation Reserve - Beginning of Year	9,781.5	9,886.6	105.1	1.1%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(5.1)	(8.6)	(3.6)	41.5%
3b	Contributed Plant	(18.2)	(18.2)	(0.1)	0.4%
4b	Depreciation Accrual	1,006.7	1,085.1	78.4	7.2%
5b	Total Accruals	983.5	1,058.3	74.8	7.1%
	Retirements and Adjustments:				
6b	Net Retirements	(93.7)	(93.7)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(93.7)	(93.7)	0.0	0.0%
9b	Net Additions	913.0	991.4	78.4	7.9%
10b	Depreciation Reserve - End of Year	10,694.5	10,878.0	183.5	1.7%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	10,238.0	10,382.3	144.3	1.4%
13b	* *Deprec. expense for summary of earnings calc.*	983.5	1,058.3	74.8	7.1%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	35,204.5	36,645.2	1,440.7	3.9%
3	Weighted Average Depreciation Reserve	(9,335.1)	(9,411.6)	(76.6)	0.8%
4	Net Utility Plant	25,869.4	27,233.5	1,364.2	5.0%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	272.7	272.4	(0.3)	-0.1%
5	Advances in Construction	2,205.7	2,205.7	0.0	0.0%
6	Reserve for Amortization of Intangibles	436.5	439.8	3.3	0.8%
7	Deferred Taxes	1,711.2	1,803.9	92.7	5.1%
8	Unamortized Investment Tax Credits	4.1	4.1	0.0	0.0%
9	Total Deductions from Rate Base	4,630.2	4,725.9	95.7	2.0%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	74.0	74.0	0.0	0.0%
10a	Tank Painting	0.0	0.0	0.0	0.0%
11	Working Cash, Lead-Lag	393.6	411.0	17.4	4.2%
12	Amount Withheld from Employees	(2.4)	(2.3)	0.1	-2.9%
13	Total Working Capital	465.1	482.6	17.5	3.6%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	8.5	8.5	0.0	0.0%
17	Total Additions to Rate Base	473.6	491.1	17.5	3.6%
18	Weighted Average Rate Base, District	21,712.8	22,998.7	1,285.9	5.6%
19	Weighted Average Rate Base, G.O. Allocation	539.7	840.8	301.1	35.8%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	22,252.5	23,839.5	1,587.0	6.7%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*21,787.362*	*23,356.9*	*1,569.5*	*6.7%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*559.9*	*600.3*	*40.3*	*6.7%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	36,222.1	38,406.4	2,184.3	5.7%
3	Weighted Average Depreciation Reserve	(10,238.0)	(10,382.3)	(144.3)	1.4%
4	Net Utility Plant	25,984.1	28,024.1	2,040.0	7.3%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	260.9	260.4	(0.4)	-0.2%
5	Advances in Construction	2,442.6	2,442.6	0.0	0.0%
6	Reserve for Amortization of Intangibles	457.3	467.0	9.7	2.1%
7	Deferred Taxes	1,693.7	1,870.2	176.5	9.4%
8	Unamortized Investment Tax Credits	3.6	3.6	0.0	0.0%
9	Total Deductions from Rate Base	4,858.0	5,043.8	185.9	3.7%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	74.0	74.0	0.0	0.0%
10a	Tank Painting	196.6	196.6	0.0	0.0%
11	Working Cash, Lead-Lag	406.6	431.8	25.3	5.9%
12	Amount Withheld from Employees	(2.4)	(2.3)	0.1	-2.9%
13	Total Working Capital	674.8	700.1	25.4	3.6%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	9.4	9.4	0.0	0.0%
17	Total Additions to Rate Base	684.2	709.6	25.4	3.6%
18	Weighted Average Rate Base, District	21,810.3	23,689.8	1,879.5	7.9%
19	Weighted Average Rate Base, G.O. Allocation	546.2	910.5	364.3	40.0%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	22,356.5	24,600.3	2,243.8	9.1%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*21,681.7*	*23,900.2*	*2,218.4*	*9.3%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*557.2*	*614.2*	*57.0*	*9.3%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	8,775.5	11,826.6	3,051.1
2. Test Year 2023 Increase (%)	12.8%	16.6%	3.8%
3. Escalation Year 2024 Increase (%)	-0.5%	4.6%	5.1%
4. Escalation Year 2025 Increase (%)	1.8%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**68,765.7**	**71,233.1**	**2,467.5**	**3.5%**
	Operating Expenses:				
2a	Operation & Maintenance	49,899.1	49,954.2	55.1	0.1%
3a	Administrative & General	613.4	727.5	114.1	15.7%
4a	Payroll	3,637.5	3,637.5	0.0	0.0%
5a	General Office - *prorated expenses*	8,209.6	8,934.4	724.9	8.1%
6a	Depreciation Expense	4,653.3	5,590.3	937.0	16.8%
7a	Taxes Other Than Income	1,544.2	1,816.8	272.6	15.0%
8a	California Corporate Franchise Tax	(217.7)	(830.3)	(612.6)	73.8%
9a	Federal Income Tax	(912.6)	(926.0)	(13.3)	1.4%
10a	Total Operating Expenses	67,426.8	68,904.5	1,477.7	2.1%
11a	Net Operating Revenues	1,338.9	2,328.7	989.8	42.5%
12a	Weighted Average Rate Base	102,202.9	144,746.5	42,543.7	29.4%
13a	***Return on Rate Base***	***1.31%***	***1.61%***	***0.30%***	***18.6%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	77,541.2	83,059.8	**5,518.6**	**6.6%**
	Operating Expenses:				
2b	Operation & Maintenance	49,912.0	49,971.7	59.6	0.1%
3b	Administrative & General	613.4	727.5	114.1	15.7%
4b	Payroll	3,637.5	3,637.5	0.0	0.0%
5b	General Office - *prorated expenses*	8,209.6	8,934.4	724.9	8.1%
6b	Depreciation Expense	4,653.3	5,590.3	937.0	16.8%
7b	Taxes Other Than Income	1,550.6	1,825.4	274.8	15.1%
8b	California Corporate Franchise Tax	556.3	212.8	(343.5)	-161.4%
9b	Federal Income Tax	763.6	1,333.1	569.5	42.7%
10b	Total Operating Expenses	69,896.4	72,232.7	2,336.3	3.2%
11b	Net Operating Revenues	7,644.8	10,827.0	3,182.3	29.4%
12b	Weighted Average Rate Base	102,203	144,746.5	42,543.7	29.4%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**8,775.5**	**11,826.6**	**3,051.1**	**25.8%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	77,342.4	78,736.5	1,394.1	1.8%
2	Operating Expenses:*				
3	Operation & Maintenance	49,475.5	50,465.0	989.5	2.0%
4	Administrative & General	688.0	701.8	13.8	2.0%
5	Payroll	3,747.2	3,822.1	74.9	2.0%
6	G.O. Prorated Expenses	8,171.3	8,334.7	163.4	2.0%
7	Depreciation Expense	4,730.8	4,825.4	94.6	2.0%
8	Taxes Other Than Income	1,552.2	1,583.2	31.0	2.0%
9	California Corporate Franchise Tax	547.0	547.03	0.0	0.0%
10	Federal Income Tax	758.8	758.77	0.0	0.0%
11	Total Operating Expenses	69,670.8	71,038.1	1,367.3	1.9%
12	Net Operating Revenues	7,671.6	7,698.4	26.8	0.3%
13	Weighted Average Rate Base	102,561.3	102,919.7	358.4	0.3%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***(0.0)***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	120.2	120.2	0.0	0.0%
2a	Business	867.4	867.4	0.0	0.0%
3a	Multiple Family	1,356.9	1,356.9	0.0	0.0%
4a	Industrial	31,917.2	31,917.2	0.0	0.0%
5a	Public Authority	1,845.3	1,845.3	0.0	0.0%
6a	Other	299.5	299.5	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	16,766.3	23,751.6	6,985.3	29.4%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	120.2	120.2	0.0	0.0%
2b	Business	867.4	867.4	0.0	0.0%
3b	Multiple Family	1,356.9	1,356.9	0.0	0.0%
4b	Industrial	32,135.8	32,135.8	0.0	0.0%
5b	Public Authority	1,883.2	1,883.2	0.0	0.0%
6b	Other	292.5	292.5	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	15,581.2	21,937.2	6,356.0	29.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	29,120	29,120	0	0%
2a	Business	2,810	2,810	0	0%
3a	Multiple Family	752	752	0	0%
4a	Industrial	147	147	0	0%
5a	Public Authority	237	237	0	0%
6a	Other	42	42	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	101	101	0	0%
9a	Total Number of Metered Connections	33,209	33,209	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	1,246	1,246	0	0%
12a	Public Fire Protection	4	4	0	0%
13a	Total Number of Unmetered Connections	1,250	1,250	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	34,459	34,459	0	0%
15a	Excluding Fire Protection	33,209	33,209	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	29,169	29,169	0	0%
2b	Business	2,803	2,803	0	0%
3b	Multiple Family	752	752	0	0%
4b	Industrial	146	146	0	0%
5b	Public Authority	232	232	0	0%
6b	Other	43	43	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	111	111	0	0%
9b	Total Number of Metered Connections	33,256	33,256	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	1,256	1,256	0	0%
12b	Public Fire Protection	4	4	0	0%
13b	Total Number of Unmetered Connections	1,260	1,260	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	34,516	34,516	0	0%
15b	Excluding Fire Protection	33,256	33,256	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	3,500.9	3,500.9	0.0	0.0%
2a	Business	2,437.5	2,437.5	0.0	0.0%
3a	Multiple Family	1,020.0	1,020.0	0.0	0.0%
4a	Industrial	4,691.8	4,691.8	0.0	0.0%
5a	Public Authority	436.9	436.9	0.0	0.0%
6a	Other	12.6	12.6	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	1,693.4	2,398.9	705.5	29.4%
9a	Total Metered Connections' Sales	13,793.1	14,498.6	705.5	4.9%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	13,793.1	14,498.6	705.5	4.9%
12a	*Unaccounted For Water Rate*	*4.8%*	*4.6%*	*-0.2%*	*-4.9%*
13a	Unaccounted For Water (UAF)	1,401.3	695.8	(705.5)	-101.4%
14a	**Total Requirement (Sales + UAF) ***	**15,194.3**	**15,194.3**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	34,881.7	34,881.7	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	2,415.6	2,415.6	0.0	0.0%
17a	Purchased Water	10,379.9	10,379.9	0.0	0.0%
18a	Surface Supply	2,398.9	2,398.9	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**15,194.3**	**15,194.3**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	3,506.7	3,506.7	0.0	0.0%
2b	Business	2,431.1	2,431.1	0.0	0.0%
3b	Multiple Family	1,020.9	1,020.9	0.0	0.0%
4b	Industrial	4,691.8	4,691.8	0.0	0.0%
5b	Public Authority	436.9	436.9	0.0	0.0%
6b	Other	12.6	12.6	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	1,729.5	2,435.0	705.5	29.0%
9b	Total Metered Connections' Sales	13,829.6	14,535.1	705.5	4.9%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	13,829.6	14,535.1	705.5	4.9%
12b	*Unaccounted For Water Rate*	*4.8%*	*4.6%*	*-0.2%*	*-4.9%*
13b	Unaccounted For Water	1,402.2	696.7	(705.5)	-101.3%
14b	**Total Requirement (Sales + UAF) ***	**15,231.8**	**15,231.8**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	34,967.7	34,967.7	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	2,656.9	2,656.9	0.0	0.0%
17b	Purchased Water	10,139.9	10,139.9	0.0	0.0%
18b	Surface Supply	2,435.0	2,435.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**15,231.8**	**15,231.8**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	12,006.5	12,006.5	0.0	0.0%
2a	Business	9,613.1	9,613.1	0.0	0.0%
3a	Multiple Family	4,022.8	4,022.8	0.0	0.0%
4a	Industrial	18,504.1	18,504.1	0.0	0.0%
5a	Public Authority	1,723.2	1,723.2	0.0	0.0%
6a	Other	49.6	49.6	0.0	0.0%
7a	Irrigation	5,922.5	8,390.0	2,467.5	29.4%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	51,841.8	54,309.3	2,467.5	4.5%
	Unmetered Revenues:				
10a	Service Charge	15,750.8	15,750.8	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	15,750.8	15,750.8	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	1,044.5	1,044.5	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	128.5	128.5	0.0	0.0%
16a	Total Other Revenues	1,173.0	1,173.0	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	68,765.7	71,233.1	2,467.5	3.5%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	14,911.8	13,318.5	(1,593.3)	-12.0%
2b	Business	11,872.8	10,624.7	(1,248.1)	-11.7%
3b	Multiple Family	4,986.0	4,461.9	(524.1)	-11.7%
4b	Industrial	22,914.0	20,505.2	(2,408.8)	-11.7%
5b	Public Authority	2,133.9	1,909.6	(224.3)	-11.7%
6b	Other	61.4	55.0	(6.5)	-11.7%
7b	Irrigation	6,968.2	9,810.7	2,842.5	29.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	63,848.1	60,685.5	(3,162.6)	-5.2%
	Unmetered Revenues:				
10b	Service Charge	12,610.3	21,309.4	8,699.2	40.8%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	12,610.3	21,309.4	8,699.2	40.8%
	Other Revenues:				
13b	Private Fire Protection	1,132.8	1,132.8	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	127.6	127.6	0.0	0.0%
16b	Total Other Revenues	1,260.4	1,260.4	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	77,718.8	83,255.4	5,536.6	6.7%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	42,851.5	42,851.5	0.0	0.0%
2	Groundwater Charges	2,146.1	2,146.1	0.0	0.0%
3	Purchased Power	1,056.2	1,056.2	0.0	0.0%
4	Purchased Chemicals	143.6	143.6	0.0	0.0%
5	Payroll	1,941.9	1,941.9	0.0	0.0%
6	Postage	112.1	105.7	(6.3)	-6.0%
7	Transportation	314.2	314.2	0.0	0.0%
	Purchased Services:				
8	Source of Supply	21.8	32.2	10.4	32.3%
9	Pumping	135.3	135.3	0.0	0.0%
10	Water Treatment	301.8	301.8	0.0	0.0%
11	Transmission & Distribution	205.3	205.3	0.0	0.0%
12	Customer Accounting	556.7	556.7	0.0	0.0%
13	Conservation	901.0	948.4	47.4	5.0%
14	Total Operations Exp. excluding Uncollectibles	50,687.4	50,738.8	51.5	0.1%
	Maintenance Expenses:				
15	Payroll	903.4	903.4	0.0	0.0%
16	Transportation	154.3	154.3	0.0	0.0%
17	Stores	102.0	102.0	0.0	0.0%
18	Contracted Maintenance	795.7	795.7	0.0	0.0%
19	Total Maintenance Expenses	1,955.5	1,955.5	0.0	0.0%
	At Present Rates				
20	Operating Revenues	68,765.7	71,233.1	2,467.5	3.5%
21	*Uncollectible Rate*	0.1476%	0.1476%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	101.5	105.1	3.6	3.5%
23	Total O&M Expenses including Uncollectibles	52,744.4	52,799.5	55.1	0.1%
	At Proposed Rates				
25	Operating Revenues	77,541.2	83,059.8	5,518.6	6.6%
26	*Uncollectible Rate*	0.1476%	0.1476%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	114.5	122.6	8.1	6.6%
28	Total O&M Expenses including Uncollectibles	52,757.4	52,817.0	59.6	0.1%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	42,174.3	42,174.3	0.0	0.0%
2	Groundwater Charges	2,357.8	2,357.8	0.0	0.0%
3	Purchased Power	1,056.2	1,056.2	0.0	0.0%
4	Purchased Chemicals	161.9	161.9	0.0	0.0%
5	Payroll	2,005.9	2,005.9	0.0	0.0%
6	Postage	112.3	106.0	(6.4)	-6.0%
7	Transportation	322.1	322.1	0.0	0.0%
	Purchased Services:				
8	Source of Supply	22.3	33.0	10.7	32.3%
9	Pumping	138.7	138.7	0.0	0.0%
10	Water Treatment	307.7	307.7	0.0	0.0%
11	Transmission & Distribution	210.5	210.5	0.0	0.0%
12	Customer Accounting	570.7	570.7	0.0	0.0%
13	Conservation	948.4	948.4	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	50,388.9	50,393.2	4.3	0.0%
	Maintenance Expenses:				
15	Payroll	933.3	933.3	0.0	0.0%
16	Transportation	158.2	158.2	0.0	0.0%
17	Stores	104.6	104.6	0.0	0.0%
18	Contracted Maintenance	715.5	715.5	0.0	0.0%
19	Total Maintenance Expenses	1,911.6	1,911.6	0.0	0.0%
	At Present Rates				
20	Operating Revenues	77,718.8	83,255.4	5,536.6	6.7%
21	*Uncollectible Rate*	0.1476%	0.1476%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	114.7	122.9	8.2	6.7%
23	Total O&M Expenses including Uncollectibles	52,415.2	52,427.7	12.5	0.0%
	At Proposed Rates				
25	Operating Revenues	77,342.4	87,060.1	9,717.7	11.2%
26	*Uncollectible Rate*	0.1476%	0.1476%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	114.2	128.5	14.3	11.2%
28	Total O&M Expenses including Uncollectibles	52,414.7	52,433.3	18.6	0.0%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	792.2	792.2	0.0	0.0%
2a	Benefits	1,150.2	1,194.5	44.3	3.7%
3a	Transportation Expenses	0.1	0.1	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	331.4	331.4	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(456.0)	(318.9)	137.1	-43.0%
6a	Workers' Compensation	42.2	54.0	11.8	21.9%
7a	Non-Specifics	1,508.4	1,425.6	(82.7)	-5.8%
8a	Subtotal	3,368.5	3,479.0	110.5	3.2%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	18.6	22.2	3.6	16.2%
9aa	Acquisition Synergies	(1,978.6)	(1,978.6)	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(2.9)	(2.9)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	1,405.6	1,519.7	114.1	7.5%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	808.0	808.0	0.0	0.0%
2b	Benefits	1,250.0	1,290.0	40.0	3.1%
3b	Transportation Expenses	0.1	0.1	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	331.4	331.4	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(468.1)	(329.4)	138.7	-42.1%
6b	Workers' Compensation	43.3	57.7	14.5	25.0%
7b	Non-Specifics	1,445.9	1,445.9	0.0	0.0%
8b	Subtotal	3,410.6	3,603.7	193.2	5.4%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	4.3	7.8	3.5	45.0%
9bb	Acquisition Synergies	(1,915.9)	(1,915.9)	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(3.0)	(3.0)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	1,496.0	1,692.7	196.7	11.6%

TABLE 5-1
TAXES OTHER THAN INCOME

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	1,185.3	1,455.8	270.5	18.6%
2a	Payroll Taxes	304.8	305.1	0.3	0.1%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	68,664.2	71,128.0	2,463.8	3.5%
4a	*Effective Local Franchise Tax Rate*	*0.073%*	*0.073%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	49.9	51.7	1.8	3.5%
5a1	Business License-Present Rates	4.2	4.2	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	1,544.2	1,816.8	272.6	15.0%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	77,426.7	82,937.2	5,510.4	6.6%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.073%*	*-100.168%*	*-1377.5%*
9a	Franchise Taxes-Proposed Rates	56.3	60.3	4.0	6.6%
9a1	Business License-Proposed Rates	4.2	4.2	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	1,550.6	1,825.4	274.8	15.1%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	1,178.5	1,685.6	507.1	30.1%
2b	Payroll Taxes	313.3	313.6	0.3	0.1%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	77,604.1	83,132.5	5,528.4	6.7%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.073%*	*-100.168%*	*-1377.5%*
5b	Franchise Taxes-Present Rates	56.4	60.5	4.0	6.7%
5b1	Business License-Present Rates	4.2	4.2	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	1,552.5	2,063.9	511.5	24.8%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	77,228.2	86,931.6	9,703.4	11.2%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.073%*	*-100.168%*	*-1377.5%*
9b	Franchise Taxes-Proposed Rates	56.2	63.2	7.1	11.2%
9b1	Business License-Proposed Rates	4.2	4.2	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	1,552.2	2,066.7	514.5	24.9%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	68,765.7	71,233.1	2,467.5	3.5%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	52,642.9	52,694.4	51.5	0.1%
3	Uncollectibles Expense	101.5	105.1	3.6	3.5%
4	A&G Expenses	1,405.6	1,519.7	114.1	7.5%
5	G.O. Prorated Expenses	8,209.6	8,934.4	724.9	8.1%
6	G.O. Book Depreciation (to be excluded)	(910.5)	(1,146.6)	(236.1)	20.6%
7	Transportation Deprec. Expense (to be excluded)	95.8	52.8	(43.1)	-81.6%
8	Taxes On Other Than Income	1,544.2	1,816.8	272.6	15.0%
8a	Non-deductible Meals	(20.0)	(20.2)	(0.2)	1.1%
9	Interest Expense	2,513.2	3,598.3	1,085.1	30.2%
10	Total Common Deductions	65,582.3	67,554.7	1,972.4	2.9%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	4,854.1	11,758.0	6,903.9	58.7%
12	Tax Depreciation - G.O.	792.4	1,313.4	521.1	39.7%
13	Subtotal	5,646.4	13,071.5	7,425.0	56.8%
14	Total State Deductions, incl. Common Deductions	71,228.7	80,626.2	9,397.4	11.7%
	Federal Tax Deductions				
16	Book Depreciation - District	4,653.3	5,590.3	937.0	16.8%
17	Book Depreciation - G.O.	910.5	1,146.6	236.1	20.6%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(217.7)	(830.3)	(612.6)	73.8%
20	Subtotal	5,346.1	5,906.5	560.4	9.5%
21	Total Fed. Deductions, incl. Common Deductions	70,928.4	73,461.3	2,532.8	3.4%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(2,463.1)	(9,393.0)	(6,929.9)	73.8%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(217.7)	(830.3)	(612.6)	73.8%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	(2,162.8)	(2,228.1)	(65.3)	2.9%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	(454.2)	(467.9)	(65.3)	2.9%
28	Adjustment to FIT, Regulatory Liability	(458.4)	(458.0)	0.4	-0.1%
29	Total FIT, with Adjustment	(912.6)	(926.0)	(13.3)	1.4%
30	Total Income Taxes for Revenues at Present Rates	(1,130.4)	(1,756.3)	(625.9)	35.6%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	77,541.2	83,059.8	5,518.6	6.6%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	52,642.9	52,694.4	51.5	0.1%
3	Uncollectibles Expense	114.5	122.6	8.1	6.6%
4	A&G Expenses	1,405.6	1,519.7	114.1	7.5%
5	G.O. Prorated Expenses	8,209.6	8,934.4	724.9	8.1%
6	G.O. Book Depreciation (to be excluded)	(910.5)	(1,146.6)	(236.1)	20.6%
7	Transportation Deprec. Expense (to be excluded)	95.8	52.8	(43.1)	-81.6%
8	Taxes On Other Than Income	1,550.6	1,825.4	274.8	15.1%
8a	Non-deductible Meals	(20.0)	(20.2)	(0.2)	1.1%
9	Interest Expense	2,513.2	3,598.3	1,085.1	30.2%
10	Total Common Deductions	65,601.6	67,580.8	1,979.1	2.9%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	4,854.1	11,758.0	6,903.9	58.7%
12	Tax Depreciation - G.O.	792.4	1,313.4	521.1	39.7%
13	Subtotal	5,646.4	13,071.5	7,425.0	56.8%
14	Total State Deductions, incl. Common Deductions	71,248.1	80,652.2	9,404.1	11.7%
	Federal Tax Deductions				
16	Book Depreciation - District	4,653.3	5,590.3	937.0	16.8%
17	Book Depreciation - G.O.	910.5	1,146.6	236.1	20.6%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	556.3	212.8	(343.5)	-161.4%
20	Subtotal	6,120.2	6,949.7	829.5	11.9%
21	Total Fed. Deductions, incl. Common Deductions	71,721.8	74,530.5	2,808.7	3.8%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	6,293.1	2,407.6	(3,885.6)	-161.4%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	556.3	212.8	(343.5)	-161.4%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	5,819.4	8,529.3	2,709.9	31.8%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	1,222.1	1,791.2	569.1	31.8%
28	Adjustment to FIT, Regulatory Liability	(458.4)	(458.0)	0.4	-0.1%
29	Total FIT, with Adjustment	763.6	1,333.1	569.5	42.7%
30	Total Income Taxes for Revenues at Proposed Rates	1,320.0	1,545.9	226.0	14.6%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	195,827.9	225,313.0	29,485.1	13.1%
2a	Adjustments	0.0	0.0	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	1,695.5	37,198.1	35,502.6	95.4%
4a	Advances	103.8	103.8	0.0	0.0%
5a	Contributions	1,534.8	1,534.8	0.0	0.0%
6a	Total Gross Additions	3,334.1	38,836.7	35,502.6	91.4%
8a	Retirements	937.7	937.7	0.0	0.0%
9a	Net Additions	4,271.8	39,774.4	35,502.6	89.3%
10a	Plant in Service - End of Year	200,099.7	265,087.4	64,987.7	24.5%
11a	*Plant Weighting Factor*	*36.91%*	*36.91%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	197,404.8	239,994.7	42,589.9	17.7%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	200,099.7	265,087.4	64,987.7	24.5%
2b	Adjustments	0.0	0.0	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	3,928.5	27,441.5	23,513.0	85.7%
4b	Advances	103.8	103.8	0.0	0.0%
5b	Contributions	1,534.8	1,534.8	0.0	0.0%
6b	Total Gross Additions	5,567.1	29,080.1	23,513.0	80.9%
8b	Retirements	937.7	937.7	0.0	0.0%
9b	Net Additions	6,504.8	30,017.8	23,513.0	78.3%
10b	Plant in Service - End of Year	206,604.5	295,105.2	88,500.7	30.0%
11b	*Plant Weighting Factor*	*36.91%*	*36.91%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	202,500.8	276,167.7	73,666.9	26.7%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Depreciation Reserve - Beginning of Year	78,027.9	78,508.9	481.1	0.6%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	147.1	149.1	2.0	1.3%
3a	Contributed Plant	(604.4)	(617.3)	(13.0)	2.1%
4a	Depreciation Accrual	5,110.618	6,058.5	947.9	15.6%
5a	Total Accruals	4,653.3	5,590.3	937.0	16.8%
	Retirements				
6a	Net Retirements	(937.724)	(937.7)	0.0	0.0%
8a	Total Retirement	(937.7)	(937.7)	0.0	0.0%
9a	Net Additions	4,173	5,120.8	947.9	18.5%
7a	Carry Forward Adjustment	0.0	(193.4)	(193.4)	100.0%
10a	Depreciation Reserve - End of Year	82,200.8	83,436.4	1,235.6	1.5%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	80,114.3	80,876.0	761.6	0.9%
13a	*Deprec. expense for summary of earnings calc.*	4,653.3	5,590.3	937.0	16.8%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Depreciation Reserve - Beginning of Year	82,200.8	83,436.4	1,235.6	1.5%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	147.1	149.6	2.5	1.7%
3b	Contributed Plant	(641.6)	(666.2)	(24.6)	3.7%
4b	Depreciation Accrual	5,225.3	7,068.7	1,843.4	26.1%
5b	Total Accruals	4,730.8	6,552.1	1,821.3	27.8%
	Retirements and Adjustments:				
6b	Net Retirements	(937.7)	(937.7)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(937.7)	(937.7)	0.0	
					0.0%
9b	Net Additions	4,287.6	6,131.0	1,843.4	30.1%
10b	Depreciation Reserve - End of Year	86,488.4	89,567.3	3,079.0	3.4%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	84,344.6	86,501.9	2,157.3	2.5%
13b	* *Deprec. expense for summary of earnings calc.*	4,730.8	6,552.1	1,821.3	27.8%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	197,404.8	239,994.7	42,589.9	17.7%
3	Weighted Average Depreciation Reserve	(80,114.3)	(80,876.0)	(761.6)	0.9%
4	Net Utility Plant	117,290.4	159,118.7	41,828.3	26.3%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	18,631.2	18,629.6	(1.7)	0.0%
5	Advances in Construction	2,340.5	2,340.5	0.0	0.0%
6	Reserve for Amortization of Intangibles	859.2	879.7	20.5	2.3%
7	Deferred Taxes	5,222.1	9,445.9	4,223.8	44.7%
8	Unamortized Investment Tax Credits	64.7	64.7	0.0	0.0%
9	Total Deductions from Rate Base	27,117.7	31,360.3	4,242.6	13.5%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	557.2	559.6	2.5	0.4%
10a	Tank Painting	1,482.8	1,482.8	0.0	0.0%
11	Working Cash, Lead-Lag	2,396.9	2,715.4	318.5	11.7%
12	Amount Withheld from Employees	(23.3)	(23.6)	(0.3)	1.2%
13	Total Working Capital	4,413.6	4,734.2	320.6	6.8%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	1,055.8	1,055.8	0.0	0.0%
17	Total Additions to Rate Base	5,469.4	5,790.0	320.6	5.5%
18	Weighted Average Rate Base, District	95,642.2	133,548.4	37,906.3	28.4%
19	Weighted Average Rate Base, G.O. Allocation	5,255.2	8,525.3	3,270.1	38.4%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	1,305.5	2,672.8	1,367.4	51.2%
20	Total Weighted Average Rate Base	102,202.9	144,746.5	42,543.7	29.4%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*97,789.268*	*140,012.3*	*42,223.1*	*30.2%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*2,513.2*	*3,598.3*	*1,085.1*	*30.2%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	202,500.8	276,167.7	73,666.9	26.7%
3	Weighted Average Depreciation Reserve	(84,344.6)	(86,501.9)	(2,157.3)	2.5%
4	Net Utility Plant	118,156.2	189,665.8	71,509.6	37.7%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	19,543.0	19,522.6	(20.4)	-0.1%
5	Advances in Construction	2,298.8	2,298.8	0.0	0.0%
6	Reserve for Amortization of Intangibles	890.9	935.0	44.2	4.7%
7	Deferred Taxes	4,884.2	10,287.3	5,403.2	52.5%
8	Unamortized Investment Tax Credits	56.4	56.4	0.0	0.0%
9	Total Deductions from Rate Base	27,673.3	33,100.2	5,426.9	16.4%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	557.2	559.6	2.5	0.4%
10a	Tank Painting	1,234.8	1,234.8	0.0	0.0%
11	Working Cash, Lead-Lag	2,420.2	2,932.9	512.7	17.5%
12	Amount Withheld from Employees	(23.3)	(23.6)	(0.3)	1.2%
13	Total Working Capital	4,188.8	4,703.7	514.9	10.9%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	1,215.5	1,215.5	0.0	0.0%
17	Total Additions to Rate Base	5,404.3	5,919.2	514.9	8.7%
18	Weighted Average Rate Base, District	95,887.3	162,484.9	66,597.6	41.0%
19	Weighted Average Rate Base, G.O. Allocation	5,318.2	9,231.9	3,913.7	42.4%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	1,355.8	2,827.6	1,471.8	52.0%
20	Total Weighted Average Rate Base	102,561.3	174,544.4	71,983.1	41.2%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*98,372.4*	*169,840.6*	*71,468.2*	*42.1%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*2,528.2*	*4,364.9*	*1,836.7*	*42.1%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	2,535.1	5,415.8	2,880.7
2. Test Year 2023 Increase (%)	6.8%	14.5%	7.7%
3. Escalation Year 2024 Increase (%)	1.4%	3.1%	1.7%
4. Escalation Year 2025 Increase (%)	1.8%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**37,339.0**	**37,310.3**	**(28.7)**	**-0.1%**
	Operating Expenses:				
2a	Operation & Maintenance	13,086.9	13,168.9	82.0	0.6%
3a	Administrative & General	985.8	1,221.0	235.2	19.3%
4a	Payroll	3,836.4	3,816.3	(20.1)	-0.5%
5a	General Office - *prorated expenses*	5,610.5	5,971.5	361.0	6.0%
6a	Depreciation Expense	4,348.7	4,857.5	508.8	10.5%
7a	Taxes Other Than Income	2,054.8	2,213.9	159.1	7.2%
8a	California Corporate Franchise Tax	286.3	(140.0)	(426.3)	304.5%
9a	Federal Income Tax	332.8	46.2	(286.7)	-621.0%
10a	Total Operating Expenses	30,542.2	31,155.2	613.0	2.0%
11a	Net Operating Revenues	6,796.8	6,155.1	(641.7)	-10.4%
12a	Weighted Average Rate Base	114,900.5	133,632.6	18,732.1	14.0%
13a	***Return on Rate Base***	***5.92%***	***4.61%***	***-1.31%***	***-28.4%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	39,874.1	42,726.1	**2,852.0**	**6.7%**
	Operating Expenses:				
2b	Operation & Maintenance	13,091.1	13,177.8	86.7	0.7%
3b	Administrative & General	985.8	1,221.0	235.2	19.3%
4b	Payroll	3,836.4	3,816.3	(20.1)	-0.5%
5b	General Office - *prorated expenses*	5,610.5	5,971.5	361.0	6.0%
6b	Depreciation Expense	4,348.7	4,857.5	508.8	10.5%
7b	Taxes Other Than Income	2,089.4	2,287.9	198.4	8.7%
8b	California Corporate Franchise Tax	506.9	331.4	(175.5)	-53.0%
9b	Federal Income Tax	810.7	1,067.1	256.4	24.0%
10b	Total Operating Expenses	31,279.5	32,730.4	1,450.9	4.4%
11b	Net Operating Revenues	8,594.6	9,995.7	1,401.2	14.0%
12b	Weighted Average Rate Base	114,901	133,632.6	18,732.1	14.0%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**2,535.1**	**5,415.8**	**2,880.7**	**53.2%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	40,459.7	41,205.6	745.9	1.8%
2	Operating Expenses:*				
3	Operation & Maintenance	13,172.8	13,436.3	263.5	2.0%
4	Administrative & General	1,073.3	1,094.7	21.5	2.0%
5	Payroll	3,963.0	4,042.2	79.3	2.0%
6	G.O. Prorated Expenses	5,584.4	5,696.1	111.7	2.0%
7	Depreciation Expense	4,469.8	4,559.2	89.4	2.0%
8	Taxes Other Than Income	2,119.9	2,162.3	42.4	2.0%
9	California Corporate Franchise Tax	514.4	514.37	0.0	0.0%
10	Federal Income Tax	829.4	829.40	0.0	0.0%
11	Total Operating Expenses	31,726.9	32,334.6	607.7	1.9%
12	Net Operating Revenues	8,732.8	8,871.0	138.2	1.6%
13	Weighted Average Rate Base	116,748.6	118,596.7	1,848.1	1.6%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***(0.0)***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	134.4	134.4	0.0	0.0%
2a	Business	369.9	369.9	0.0	0.0%
3a	Multiple Family	463.6	463.6	0.0	0.0%
4a	Industrial	4,043.7	4,043.7	0.0	0.0%
5a	Public Authority	1,269.4	1,269.4	0.0	0.0%
6a	Other	241.7	241.7	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	7,992.2	3,300.5	(4,691.7)	-142.2%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	134.4	134.4	0.0	0.0%
2b	Business	369.9	369.9	0.0	0.0%
3b	Multiple Family	463.6	463.6	0.0	0.0%
4b	Industrial	4,085.4	4,085.4	0.0	0.0%
5b	Public Authority	1,266.2	1,266.2	0.0	0.0%
6b	Other	241.7	241.7	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	7,992.2	3,300.5	(4,691.7)	-142.2%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	20,430	20,430	0	0%
2a	Business	4,568	4,568	0	0%
3a	Multiple Family	739	739	0	0%
4a	Industrial	98	98	0	0%
5a	Public Authority	358	358	0	0%
6a	Other	13	13	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	2	2	0	0%
9a	Total Number of Metered Connections	26,208	26,208	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	680	680	0	0%
12a	Public Fire Protection	43	43	0	0%
13a	Total Number of Unmetered Connections	723	723	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	26,931	26,931	0	0%
15a	Excluding Fire Protection	26,208	26,208	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	20,447	20,447	0	0%
2b	Business	4,562	4,562	0	0%
3b	Multiple Family	742	742	0	0%
4b	Industrial	97	97	0	0%
5b	Public Authority	359	359	0	0%
6b	Other	13	13	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	2	2	0	0%
9b	Total Number of Metered Connections	26,222	26,222	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	686	686	0	0%
12b	Public Fire Protection	43	43	0	0%
13b	Total Number of Unmetered Connections	729	729	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	26,951	26,951	0	0%
15b	Excluding Fire Protection	26,222	26,222	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	2,745.2	2,745.2	0.0	0.0%
2a	Business	1,689.7	1,689.7	0.0	0.0%
3a	Multiple Family	342.4	342.4	0.0	0.0%
4a	Industrial	396.3	396.3	0.0	0.0%
5a	Public Authority	454.4	454.4	0.0	0.0%
6a	Other	3.1	3.1	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	16.0	6.6	(9.4)	-142.2%
9a	Total Metered Connections' Sales	5,647.1	5,637.8	(9.4)	-0.2%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	5,647.1	5,637.8	(9.4)	-0.2%
12a	*Unaccounted For Water Rate*	*3.8%*	*3.9%*	*0.0%*	*0.2%*
13a	Unaccounted For Water (UAF)	216.6	226.0	9.4	4.2%
14a	**Total Requirement (Sales + UAF) ***	**5,863.8**	**5,863.8**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	13,461.5	13,461.5	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	4,515.3	4,515.3	0.0	0.0%
17a	Purchased Water	1,341.9	1,341.9	0.0	0.0%
18a	Surface Supply	6.6	6.6	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**5,863.8**	**5,863.8**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	2,747.4	2,747.4	0.0	0.0%
2b	Business	1,687.8	1,687.8	0.0	0.0%
3b	Multiple Family	343.8	343.8	0.0	0.0%
4b	Industrial	396.3	396.3	0.0	0.0%
5b	Public Authority	454.4	454.4	0.0	0.0%
6b	Other	3.1	3.1	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	16.0	6.6	(9.4)	-142.2%
9b	Total Metered Connections' Sales	5,648.9	5,639.5	(9.4)	-0.2%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	5,648.9	5,639.5	(9.4)	-0.2%
12b	*Unaccounted For Water Rate*	*3.8%*	*3.9%*	*0.0%*	*0.2%*
13b	Unaccounted For Water	216.8	226.2	9.4	4.1%
14b	**Total Requirement (Sales + UAF) ***	**5,865.7**	**5,865.7**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	13,465.8	13,465.8	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	4,527.5	4,527.5	0.0	0.0%
17b	Purchased Water	1,331.6	1,331.6	0.0	0.0%
18b	Surface Supply	6.6	6.6	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**5,865.7**	**5,865.7**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	12,451.7	12,451.7	0.0	0.0%
2a	Business	7,846.0	7,846.0	0.0	0.0%
3a	Multiple Family	1,589.7	1,589.7	0.0	0.0%
4a	Industrial	1,840.1	1,840.1	0.0	0.0%
5a	Public Authority	2,110.0	2,110.0	0.0	0.0%
6a	Other	14.6	14.6	0.0	0.0%
7a	Irrigation	48.9	20.2	(28.7)	-142.2%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	25,901.0	25,872.3	(28.7)	-0.1%
	Unmetered Revenues:				
10a	Service Charge	10,708.7	10,708.7	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	10,708.7	10,708.7	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	549.3	549.3	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	180.0	180.0	0.0	0.0%
16a	Total Other Revenues	729.3	729.3	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	37,339.0	37,310.3	(28.7)	-0.1%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	12,936.8	12,534.5	(402.3)	-3.2%
2b	Business	8,135.9	7,882.6	(253.3)	-3.2%
3b	Multiple Family	1,657.5	1,605.8	(51.6)	-3.2%
4b	Industrial	1,910.2	1,850.7	(59.5)	-3.2%
5b	Public Authority	2,190.5	2,122.3	(68.2)	-3.2%
6b	Other	15.1	14.7	(0.5)	-3.2%
7b	Irrigation	50.8	20.3	(30.5)	-150.3%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	26,896.9	26,030.9	(865.9)	-3.3%
	Unmetered Revenues:				
10b	Service Charge	12,218.0	15,936.4	3,718.4	23.3%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	12,218.0	15,936.4	3,718.4	23.3%
	Other Revenues:				
13b	Private Fire Protection	596.0	596.0	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	180.0	180.0	0.0	0.0%
16b	Total Other Revenues	776.0	776.0	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	39,890.9	42,743.4	2,852.5	6.7%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	3,713.3	3,713.3	0.0	0.0%
2	Groundwater Charges	3,993.5	3,993.5	0.0	0.0%
3	Purchased Power	1,502.1	1,502.1	0.0	0.0%
4	Purchased Chemicals	218.0	218.0	0.0	0.0%
5	Payroll	1,974.6	1,964.3	(10.3)	-0.5%
6	Postage	88.9	83.8	(5.0)	-6.0%
7	Transportation	278.4	278.4	0.0	0.0%
	Purchased Services:				
8	Source of Supply	322.6	388.2	65.7	16.9%
9	Pumping	72.7	72.7	0.0	0.0%
10	Water Treatment	695.4	695.4	0.0	0.0%
11	Transmission & Distribution	201.9	201.9	0.0	0.0%
12	Customer Accounting	418.9	418.9	0.0	0.0%
13	Conservation	406.6	428.0	21.4	5.0%
14	Total Operations Exp. excluding Uncollectibles	13,886.7	13,958.5	71.7	0.5%
	Maintenance Expenses:				
15	Payroll	1,079.7	1,074.1	(5.6)	-0.5%
16	Transportation	166.0	166.0	0.0	0.0%
17	Stores	74.6	74.6	0.0	0.0%
18	Contracted Maintenance	873.1	873.1	0.0	0.0%
19	Total Maintenance Expenses	2,193.4	2,187.7	(5.6)	-0.3%
	At Present Rates				
20	Operating Revenues	37,339.0	37,310.3	(28.7)	-0.1%
21	*Uncollectible Rate*	0.1637%	0.1637%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	61.1	61.1	(0.0)	-0.1%
23	Total O&M Expenses including Uncollectibles	16,141.2	16,207.3	66.0	0.4%
	At Proposed Rates				
25	Operating Revenues	39,874.1	42,726.1	2,852.0	6.7%
26	*Uncollectible Rate*	0.1637%	0.1637%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	65.3	69.9	4.7	6.7%
28	Total O&M Expenses including Uncollectibles	16,145.4	16,216.1	70.7	0.4%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	3,682.5	3,682.5	0.0	0.0%
2	Groundwater Charges	4,004.2	4,004.2	0.0	0.0%
3	Purchased Power	1,514.9	1,514.9	0.0	0.0%
4	Purchased Chemicals	224.1	224.1	0.0	0.0%
5	Payroll	2,039.7	2,029.1	(10.7)	-0.5%
6	Postage	89.1	84.0	(5.0)	-6.0%
7	Transportation	285.4	285.4	0.0	0.0%
	Purchased Services:				
8	Source of Supply	323.1	390.5	67.3	17.2%
9	Pumping	74.6	74.6	0.0	0.0%
10	Water Treatment	711.5	711.5	0.0	0.0%
11	Transmission & Distribution	207.0	207.0	0.0	0.0%
12	Customer Accounting	429.5	429.5	0.0	0.0%
13	Conservation	428.0	428.0	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	14,013.5	14,065.1	51.6	0.4%
	Maintenance Expenses:				
15	Payroll	1,115.4	1,109.5	(5.8)	-0.5%
16	Transportation	170.1	170.1	0.0	0.0%
17	Stores	76.5	76.5	0.0	0.0%
18	Contracted Maintenance	886.2	886.2	0.0	0.0%
19	Total Maintenance Expenses	2,248.2	2,242.3	(5.8)	-0.3%
	At Present Rates				
20	Operating Revenues	39,890.9	42,743.4	2,852.5	6.7%
21	*Uncollectible Rate*	0.1637%	0.1637%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	65.3	70.0	4.7	6.7%
23	Total O&M Expenses including Uncollectibles	16,327.0	16,377.4	50.5	0.3%
	At Proposed Rates				
25	Operating Revenues	40,459.7	44,073.0	3,613.3	8.2%
26	*Uncollectible Rate*	0.1637%	0.1637%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	66.2	72.1	5.9	8.2%
28	Total O&M Expenses including Uncollectibles	16,327.9	16,379.6	51.7	0.3%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	782.0	778.0	(4.1)	-0.5%
2a	Benefits	1,214.8	1,261.6	46.8	3.7%
3a	Transportation Expenses	12.9	12.9	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	0.9	0.9	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(410.9)	(219.9)	191.1	-86.9%
6a	Workers' Compensation	56.9	57.1	0.1	0.2%
7a	Non-Specifics	114.3	107.7	(6.6)	-6.1%
8a	Subtotal	1,770.9	1,998.2	227.3	11.4%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	0.2	3.9	3.8	96.1%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(3.2)	(3.2)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	1,767.9	1,998.9	231.1	11.6%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	807.9	803.6	(4.2)	-0.5%
2b	Benefits	1,320.3	1,362.5	42.2	3.1%
3b	Transportation Expenses	13.3	13.3	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	0.9	0.9	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(422.0)	(227.1)	194.9	-85.8%
6b	Workers' Compensation	58.4	61.0	2.6	4.3%
7b	Non-Specifics	105.7	105.7	0.0	0.0%
8b	Subtotal	1,884.3	2,119.8	235.5	11.1%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	0.1	3.8	3.8	98.3%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(3.2)	(3.2)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	1,881.1	2,120.4	239.3	11.3%

TABLE 5-1
TAXES OTHER THAN INCOME

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	1,267.5	1,428.4	160.9	11.3%
2a	Payroll Taxes	274.9	273.5	(1.4)	-0.5%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	37,277.9	37,249.2	(28.7)	-0.1%
4a	*Effective Local Franchise Tax Rate*	*1.368%*	*1.368%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	510.1	509.7	(0.4)	-0.1%
5a1	Business License-Present Rates	2.3	2.3	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	2,054.8	2,213.9	159.1	7.2%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	39,808.8	42,656.2	2,847.4	6.7%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*1.368%*	*29.396%*	*21.5%*
9a	Franchise Taxes-Proposed Rates	544.7	583.7	39.0	6.7%
9a1	Business License-Proposed Rates	2.3	2.3	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	2,089.4	2,287.9	198.4	8.7%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	1,280.9	1,483.6	202.7	13.7%
2b	Payroll Taxes	284.0	282.5	(1.5)	-0.5%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	39,825.6	42,673.5	2,847.8	6.7%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*1.368%*	*29.396%*	*21.5%*
5b	Franchise Taxes-Present Rates	545.0	583.9	39.0	6.7%
5b1	Business License-Present Rates	2.3	2.3	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	2,112.1	2,352.4	240.2	10.2%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	40,393.5	44,000.8	3,607.4	8.2%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*1.368%*	*29.396%*	*21.5%*
9b	Franchise Taxes-Proposed Rates	552.7	602.1	49.4	8.2%
9b1	Business License-Proposed Rates	2.3	2.3	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	2,119.9	2,370.5	250.6	10.6%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	37,339.0	37,310.3	(28.7)	-0.1%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	16,080.1	16,146.2	66.1	0.4%
3	Uncollectibles Expense	61.1	61.1	(0.0)	-0.1%
4	A&G Expenses	1,767.9	1,998.9	231.1	11.6%
5	G.O. Prorated Expenses	5,610.5	5,971.5	361.0	6.0%
6	G.O. Book Depreciation (to be excluded)	(622.3)	(766.4)	(144.1)	18.8%
7	Transportation Deprec. Expense (to be excluded)	(103.9)	(145.7)	(41.8)	28.7%
8	Taxes On Other Than Income	2,054.8	2,213.9	159.1	7.2%
8a	Non-deductible Meals	(24.4)	(24.2)	0.1	-0.5%
9	Interest Expense	2,860.9	3,338.3	477.4	14.3%
10	Total Common Deductions	27,684.7	28,793.5	1,108.8	3.9%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	6,015.0	9,457.1	3,442.1	36.4%
12	Tax Depreciation - G.O.	401.1	643.4	242.3	37.7%
13	Subtotal	6,416.1	10,100.5	3,684.4	36.5%
14	Total State Deductions, incl. Common Deductions	34,100.8	38,894.1	4,793.2	12.3%
	Federal Tax Deductions				
16	Book Depreciation - District	4,348.7	4,857.5	508.8	10.5%
17	Book Depreciation - G.O.	622.3	766.4	144.1	18.8%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	286.3	(140.0)	(426.3)	304.5%
20	Subtotal	5,257.2	5,483.8	226.6	4.1%
21	Total Fed. Deductions, incl. Common Deductions	32,941.9	34,277.3	1,335.4	3.9%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	3,238.2	(1,583.8)	(4,821.9)	304.5%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	286.3	(140.0)	(426.3)	304.5%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	4,397.1	3,032.9	(1,364.1)	-45.0%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	923.4	636.9	(1,364.1)	-45.0%
28	Adjustment to FIT, Regulatory Liability	(590.5)	(590.8)	(0.2)	0.0%
29	Total FIT, with Adjustment	332.8	46.2	(286.7)	-621.0%
30	Total Income Taxes for Revenues at Present Rates	619.1	(93.8)	(712.9)	759.7%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	39,874.1	42,726.1	2,852.0	6.7%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	16,080.1	16,146.2	66.1	0.4%
3	Uncollectibles Expense	65.3	69.9	4.7	6.7%
4	A&G Expenses	1,767.9	1,998.9	231.1	11.6%
5	G.O. Prorated Expenses	5,610.5	5,971.5	361.0	6.0%
6	G.O. Book Depreciation (to be excluded)	(622.3)	(766.4)	(144.1)	18.8%
7	Transportation Deprec. Expense (to be excluded)	(103.9)	(145.7)	(41.8)	28.7%
8	Taxes On Other Than Income	2,089.4	2,287.9	198.4	8.7%
8a	Non-deductible Meals	(24.4)	(24.2)	0.1	-0.5%
9	Interest Expense	2,860.9	3,338.3	477.4	14.3%
10	Total Common Deductions	27,723.5	28,876.4	1,152.9	4.0%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	6,015.0	9,457.1	3,442.1	36.4%
12	Tax Depreciation - G.O.	401.1	643.4	242.3	37.7%
13	Subtotal	6,416.1	10,100.5	3,684.4	36.5%
14	Total State Deductions, incl. Common Deductions	34,139.6	38,976.9	4,837.3	12.4%
	Federal Tax Deductions				
16	Book Depreciation - District	4,348.7	4,857.5	508.8	10.5%
17	Book Depreciation - G.O.	622.3	766.4	144.1	18.8%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	506.9	331.4	(175.5)	-53.0%
20	Subtotal	5,477.9	5,955.2	477.4	8.0%
21	Total Fed. Deductions, incl. Common Deductions	33,201.4	34,831.6	1,630.2	4.7%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	5,734.5	3,749.2	(1,985.3)	-53.0%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	506.9	331.4	(175.5)	-53.0%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	6,672.7	7,894.5	1,221.8	15.5%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	1,401.3	1,657.8	256.6	15.5%
28	Adjustment to FIT, Regulatory Liability	(590.5)	(590.8)	(0.2)	0.0%
29	Total FIT, with Adjustment	810.7	1,067.1	256.4	24.0%
30	Total Income Taxes for Revenues at Proposed Rates	1,317.7	1,398.5	80.9	5.8%

TABLE 7-1
UTILITY PLANT IN SERVICE

Test Year 2023 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	197,394.4	213,998.7	16,604.3	7.8%
2a	Adjustments	11.0	11.0	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	5,188.7	10,202.1	5,013.5	49.1%
4a	Advances	0.0	0.0	0.0	0.0%
5a	Contributions	864.9	864.9	0.0	0.0%
6a	Total Gross Additions	6,053.5	11,067.0	5,013.5	45.3%
8a	Retirements	446.3	446.3	0.0	0.0%
9a	Net Additions	6,499.8	11,513.3	5,013.5	43.5%
10a	Plant in Service - End of Year	203,905.2	225,523.0	21,617.8	9.6%
11a	*Plant Weighting Factor*	*41.16%*	*41.16%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	200,069.4	218,737.1	18,667.6	8.5%

Escalation Year 2024 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	203,905.2	225,523.0	21,617.8	9.6%
2b	Adjustments	8.1	8.1	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	5,350.3	10,403.4	5,053.2	48.6%
4b	Advances	0.0	0.0	0.0	0.0%
5b	Contributions	864.9	864.9	0.0	0.0%
6b	Total Gross Additions	6,215.1	11,268.3	5,053.2	44.8%
8b	Retirements	499.9	499.9	0.0	0.0%
9b	Net Additions	6,715.0	11,768.2	5,053.2	42.9%
10b	Plant in Service - End of Year	210,628.3	237,299.3	26,671.0	11.2%
11b	*Plant Weighting Factor*	*41.16%*	*41.16%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	206,668.8	230,366.3	23,697.5	10.3%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Depreciation Reserve - Beginning of Year	61,340.4	61,669.0	328.6	0.5%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(79.3)	(98.5)	(19.2)	19.5%
3a	Contributed Plant	(627.4)	(626.8)	0.6	-0.1%
4a	Depreciation Accrual	5,055.349	5,582.7	527.4	9.4%
5a	Total Accruals	4,348.7	4,857.5	508.8	10.5%
	Retirements				
6a	Net Retirements	(446.287)	(446.3)	0.0	0.0%
8a	Total Retirement	(446.3)	(446.3)	0.0	0.0%
9a	Net Additions	4,609	5,136.4	527.4	10.3%
7a	Carry Forward Adjustment	0.0	(100.7)	(100.7)	100.0%
10a	Depreciation Reserve - End of Year	65,949.5	66,704.7	755.2	1.1%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	63,645.0	64,136.5	491.5	0.8%
13a	*Deprec. expense for summary of earnings calc.*	4,348.7	4,857.5	508.8	10.5%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Depreciation Reserve - Beginning of Year	65,949.5	66,704.7	755.2	1.1%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(80.2)	(101.4)	(21.2)	20.9%
3b	Contributed Plant	(646.1)	(645.8)	0.3	0.0%
4b	Depreciation Accrual	5,196.1	5,840.4	644.3	11.0%
5b	Total Accruals	4,469.8	5,093.3	623.4	12.2%
	Retirements and Adjustments:				
6b	Net Retirements	(499.9)	(499.9)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(499.9)	(499.9)	0.0	
					0.0%
9b	Net Additions	4,696.3	5,340.6	644.3	12.1%
10b	Depreciation Reserve - End of Year	70,645.8	72,045.3	1,399.5	1.9%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	68,297.6	69,375.0	1,077.4	1.6%
13b	* *Deprec. expense for summary of earnings calc.*	4,469.8	5,093.3	623.4	12.2%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	200,069.4	218,737.1	18,667.6	8.5%
3	Weighted Average Depreciation Reserve	(63,645.0)	(64,136.5)	(491.5)	0.8%
4	Net Utility Plant	136,424.5	154,600.6	18,176.1	11.8%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	14,350.8	14,354.4	3.6	0.0%
5	Advances in Construction	33.6	33.6	0.0	0.0%
6	Reserve for Amortization of Intangibles	495.9	510.6	14.6	2.9%
7	Deferred Taxes	14,142.5	15,832.4	1,689.8	10.7%
8	Unamortized Investment Tax Credits	33.1	33.1	0.0	0.0%
9	Total Deductions from Rate Base	29,056.0	30,764.0	1,708.0	5.6%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	424.6	424.6	0.0	0.0%
10a	Tank Painting	1,724.6	1,724.6	0.0	0.0%
11	Working Cash, Lead-Lag	1,448.5	1,605.8	157.3	9.8%
12	Amount Withheld from Employees	(15.9)	(15.8)	0.2	-1.1%
13	Total Working Capital	3,581.8	3,739.2	157.5	4.2%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	358.8	358.8	0.0	0.0%
17	Total Additions to Rate Base	3,940.5	4,098.0	157.5	3.8%
18	Weighted Average Rate Base, District	111,309.0	127,934.6	16,625.5	13.0%
19	Weighted Average Rate Base, G.O. Allocation	3,591.5	5,698.0	2,106.6	37.0%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	114,900.5	133,632.6	18,732.1	14.0%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*111,318.746*	*129,893.4*	*18,574.6*	*14.3%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*2,860.9*	*3,338.3*	*477.4*	*14.3%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	206,668.8	230,366.3	23,697.5	10.3%
3	Weighted Average Depreciation Reserve	(68,297.6)	(69,375.0)	(1,077.4)	1.6%
4	Net Utility Plant	138,371.2	160,991.3	22,620.1	14.1%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	14,578.9	14,582.9	4.1	0.0%
5	Advances in Construction	26.0	26.0	0.0	0.0%
6	Reserve for Amortization of Intangibles	509.9	541.4	31.5	5.8%
7	Deferred Taxes	13,800.9	16,086.2	2,285.4	14.2%
8	Unamortized Investment Tax Credits	27.3	27.3	0.0	0.0%
9	Total Deductions from Rate Base	28,942.9	31,263.8	2,320.9	7.4%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	424.6	424.6	0.0	0.0%
10a	Tank Painting	1,371.4	1,371.4	0.0	0.0%
11	Working Cash, Lead-Lag	1,467.1	1,648.5	181.5	11.0%
12	Amount Withheld from Employees	(15.9)	(15.8)	0.2	-1.1%
13	Total Working Capital	3,247.2	3,428.8	181.6	5.3%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	438.6	438.6	0.0	0.0%
17	Total Additions to Rate Base	3,685.8	3,867.4	181.6	4.7%
18	Weighted Average Rate Base, District	113,114.1	133,594.9	20,480.8	15.3%
19	Weighted Average Rate Base, G.O. Allocation	3,634.5	6,170.3	2,535.8	41.1%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	116,748.6	139,765.2	23,016.6	16.5%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*113,501.4*	*136,336.4*	*22,835.0*	*16.7%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*2,917.0*	*3,503.8*	*586.9*	*16.7%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	3,361.3	5,452.0	2,090.7
2. Test Year 2023 Increase (%)	10.7%	17.2%	6.6%
3. Escalation Year 2024 Increase (%)	1.7%	4.5%	2.8%
4. Escalation Year 2025 Increase (%)	2.4%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**31,559.3**	**31,667.9**	**108.5**	**0.3%**
	Operating Expenses:				
2a	Operation & Maintenance	17,832.2	18,044.3	212.2	1.2%
3a	Administrative & General	1,155.3	1,154.1	(1.2)	-0.1%
4a	Payroll	2,137.5	2,137.5	0.0	0.0%
5a	General Office - *prorated expenses*	4,500.5	4,837.4	336.9	7.0%
6a	Depreciation Expense	3,654.5	4,055.4	400.9	9.9%
7a	Taxes Other Than Income	783.2	882.8	99.6	11.3%
8a	California Corporate Franchise Tax	(13.4)	(346.4)	(332.9)	96.1%
9a	Federal Income Tax	(437.9)	(637.0)	(199.1)	31.3%
10a	Total Operating Expenses	29,611.9	30,128.2	516.4	1.7%
11a	Net Operating Revenues	1,947.5	1,539.6	(407.8)	-26.5%
12a	Weighted Average Rate Base	58,359.7	72,976.3	14,616.7	20.0%
13a	***Return on Rate Base***	***3.34%***	***2.11%***	***-1.23%***	***-58.2%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	34,920.6	37,119.9	**2,199.3**	**5.9%**
	Operating Expenses:				
2b	Operation & Maintenance	17,834.7	18,048.5	213.7	1.2%
3b	Administrative & General	1,155.3	1,154.1	(1.2)	-0.1%
4b	Payroll	2,137.5	2,137.5	0.0	0.0%
5b	General Office - *prorated expenses*	4,500.5	4,837.4	336.9	7.0%
6b	Depreciation Expense	3,654.5	4,055.4	400.9	9.9%
7b	Taxes Other Than Income	784.6	885.1	100.5	11.4%
8b	California Corporate Franchise Tax	283.4	135.0	(148.3)	-109.8%
9b	Federal Income Tax	204.8	405.5	200.7	49.5%
10b	Total Operating Expenses	30,555.3	31,658.5	1,103.2	3.5%
11b	Net Operating Revenues	4,365.3	5,461.4	1,096.1	20.1%
12b	Weighted Average Rate Base	58,360	72,976.3	14,616.7	20.0%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.1%***
14	**Increase in Operating Revenues (1b - 1a)**	**3,361.3**	**5,452.0**	**2,090.7**	**38.3%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	35,562.7	36,421.8	859.1	2.4%
2	Operating Expenses:*				
3	Operation & Maintenance	17,910.1	18,268.3	358.2	2.0%
4	Administrative & General	1,161.7	1,184.9	23.2	2.0%
5	Payroll	2,201.6	2,245.7	44.0	2.0%
6	G.O. Prorated Expenses	4,479.5	4,569.1	89.6	2.0%
7	Depreciation Expense	3,839.9	3,916.7	76.8	2.0%
8	Taxes Other Than Income	824.9	841.4	16.5	2.0%
9	California Corporate Franchise Tax	291.8	291.85	0.0	0.0%
10	Federal Income Tax	237.2	237.20	0.0	0.0%
11	Total Operating Expenses	30,946.7	31,555.0	608.4	1.9%
12	Net Operating Revenues	4,616.1	4,866.8	250.7	5.2%
13	Weighted Average Rate Base	61,711.9	65,064.2	3,352.3	5.2%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***(0.0)***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	109.4	109.4	0.0	0.0%
2a	Business	302.2	302.2	0.0	0.0%
3a	Multiple Family	466.7	466.7	0.0	0.0%
4a	Industrial	8,883.4	8,883.4	0.0	0.0%
5a	Public Authority	465.7	465.7	0.0	0.0%
6a	Other	129.5	129.5	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	2,376.1	3,279.4	903.4	27.5%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	109.4	109.4	0.0	0.0%
2b	Business	302.2	302.2	0.0	0.0%
3b	Multiple Family	466.7	466.7	0.0	0.0%
4b	Industrial	8,883.4	8,883.4	0.0	0.0%
5b	Public Authority	467.3	467.3	0.0	0.0%
6b	Other	119.5	119.5	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	2,376.1	3,279.4	903.4	27.5%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	22,875	22,875	0	0%
2a	Business	1,795	1,795	0	0%
3a	Multiple Family	1,845	1,845	0	0%
4a	Industrial	24	24	0	0%
5a	Public Authority	354	354	0	0%
6a	Other	24	24	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	26	26	0	0%
9a	Total Number of Metered Connections	26,943	26,943	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	385	385	0	0%
12a	Public Fire Protection	32	32	0	0%
13a	Total Number of Unmetered Connections	417	417	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	27,360	27,360	0	0%
15a	Excluding Fire Protection	26,943	26,943	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	22,948	22,948	0	0%
2b	Business	1,790	1,790	0	0%
3b	Multiple Family	1,845	1,845	0	0%
4b	Industrial	24	24	0	0%
5b	Public Authority	352	352	0	0%
6b	Other	26	26	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	26	26	0	0%
9b	Total Number of Metered Connections	27,011	27,011	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	391	391	0	0%
12b	Public Fire Protection	32	32	0	0%
13b	Total Number of Unmetered Connections	423	423	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	27,434	27,434	0	0%
15b	Excluding Fire Protection	27,011	27,011	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Connections' Sales:				
1a	Residential	2,503.1	2,503.1	0.0	0.0%
2a	Business	542.5	542.5	0.0	0.0%
3a	Multiple Family	861.2	861.2	0.0	0.0%
4a	Industrial	213.2	213.2	0.0	0.0%
5a	Public Authority	164.6	164.6	0.0	0.0%
6a	Other	3.1	3.1	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	61.8	85.3	23.5	27.5%
9a	Total Metered Connections' Sales	4,349.4	4,372.9	23.5	0.5%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	4,349.4	4,372.9	23.5	0.5%
12a	*Unaccounted For Water Rate*	*5.7%*	*5.7%*	*0.0%*	*-0.5%*
13a	Unaccounted For Water (UAF)	287.6	264.1	(23.5)	-8.9%
14a	**Total Requirement (Sales + UAF) ***	**4,637.0**	**4,637.0**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	10,645.2	10,645.2	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	333.7	333.7	0.0	0.0%
17a	Purchased Water	4,218.1	4,218.1	0.0	0.0%
18a	Surface Supply	85.3	85.3	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**4,637.0**	**4,637.0**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Connections' Sales:				
1b	Residential	2,511.1	2,511.1	0.0	0.0%
2b	Business	540.9	540.9	0.0	0.0%
3b	Multiple Family	860.9	860.9	0.0	0.0%
4b	Industrial	213.2	213.2	0.0	0.0%
5b	Public Authority	164.6	164.6	0.0	0.0%
6b	Other	3.1	3.1	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	61.8	85.3	23.5	27.5%
9b	Total Metered Connections' Sales	4,355.6	4,379.0	23.5	0.5%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	4,355.6	4,379.0	23.5	0.5%
12b	*Unaccounted For Water Rate*	*5.7%*	*5.7%*	*0.0%*	*-0.5%*
13b	Unaccounted For Water	288.3	264.8	(23.5)	-8.9%
14b	**Total Requirement (Sales + UAF) ***	**4,643.9**	**4,643.9**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	10,660.9	10,660.9	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	334.6	334.6	0.0	0.0%
17b	Purchased Water	4,224.0	4,224.0	0.0	0.0%
18b	Surface Supply	85.3	85.3	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**4,643.9**	**4,643.9**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	11,869.0	11,869.0	0.0	0.0%
2a	Business	3,109.9	3,109.9	0.0	0.0%
3a	Multiple Family	4,937.2	4,937.2	0.0	0.0%
4a	Industrial	1,222.3	1,222.3	0.0	0.0%
5a	Public Authority	943.8	943.8	0.0	0.0%
6a	Other	17.8	17.8	0.0	0.0%
7a	Irrigation	285.5	394.0	108.5	27.5%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	22,385.5	22,494.1	108.5	0.5%
	Unmetered Revenues:				
10a	Service Charge	8,910.0	8,910.0	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	8,910.0	8,910.0	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	224.5	224.5	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	39.3	39.3	0.0	0.0%
16a	Total Other Revenues	263.8	263.8	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	31,559.3	31,667.9	108.5	0.3%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	14,137.6	12,719.6	(1,418.0)	-11.1%
2b	Business	3,681.2	3,311.2	(369.9)	-11.2%
3b	Multiple Family	5,859.5	5,270.6	(588.9)	-11.2%
4b	Industrial	1,451.1	1,305.2	(145.8)	-11.2%
5b	Public Authority	1,120.5	1,007.9	(112.6)	-11.2%
6b	Other	21.2	19.0	(2.1)	-11.2%
7b	Irrigation	339.8	421.4	81.6	19.4%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	26,610.7	24,055.0	(2,555.8)	-10.6%
	Unmetered Revenues:				
10b	Service Charge	8,078.2	12,839.6	4,761.3	37.1%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	8,078.2	12,839.6	4,761.3	37.1%
	Other Revenues:				
13b	Private Fire Protection	245.0	245.0	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	38.4	38.4	0.0	0.0%
16b	Total Other Revenues	283.4	283.4	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	34,972.4	37,178.0	2,205.6	5.9%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	14,565.6	14,565.6	0.0	0.0%
2	Groundwater Charges	311.6	311.6	0.0	0.0%
3	Purchased Power	472.4	472.4	0.0	0.0%
4	Purchased Chemicals	26.5	26.5	0.0	0.0%
5	Payroll	1,279.7	1,279.7	0.0	0.0%
6	Postage	88.5	83.5	(5.0)	-6.0%
7	Transportation	218.5	218.5	0.0	0.0%
	Purchased Services:				
8	Source of Supply	8.2	8.2	0.0	0.0%
9	Pumping	95.6	274.9	179.3	65.2%
10	Water Treatment	150.9	150.9	0.0	0.0%
11	Transmission & Distribution	153.8	153.8	0.0	0.0%
12	Customer Accounting	294.5	294.5	0.0	0.0%
13	Conservation	577.7	593.3	15.6	2.6%
14	Total Operations Exp. excluding Uncollectibles	18,243.8	18,433.7	189.9	1.0%
	Maintenance Expenses:				
15	Payroll	373.7	373.7	0.0	0.0%
16	Transportation	110.3	110.3	0.0	0.0%
17	Stores	85.6	85.6	0.0	0.0%
18	Contracted Maintenance	648.4	648.4	0.0	0.0%
19	Total Maintenance Expenses	1,218.0	1,218.0	0.0	0.0%
	At Present Rates				
20	Operating Revenues	31,559.3	31,667.9	108.5	0.3%
21	*Uncollectible Rate*	0.0756%	0.1456%	*0.0700%*	*48.1%*
22	Uncollectibles Expense	23.9	46.1	22.2	48.2%
23	Total O&M Expenses including Uncollectibles	19,485.6	19,697.8	212.2	1.1%
	At Proposed Rates				
25	Operating Revenues	34,920.6	37,119.9	2,199.3	5.9%
26	*Uncollectible Rate*	0.0756%	0.0756%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	26.4	50.2	23.8	47.4%
28	Total O&M Expenses including Uncollectibles	19,488.2	19,701.9	213.7	1.1%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	14,585.3	14,585.3	0.0	0.0%
2	Groundwater Charges	312.4	312.4	0.0	0.0%
3	Purchased Power	476.7	476.7	0.0	0.0%
4	Purchased Chemicals	27.3	27.3	0.0	0.0%
5	Payroll	1,322.0	1,322.0	0.0	0.0%
6	Postage	88.7	83.7	(5.0)	-6.0%
7	Transportation	224.0	224.0	0.0	0.0%
	Purchased Services:				
8	Source of Supply	8.4	8.4	0.0	0.0%
9	Pumping	98.0	277.3	179.3	64.7%
10	Water Treatment	153.3	153.3	0.0	0.0%
11	Transmission & Distribution	157.7	157.7	0.0	0.0%
12	Customer Accounting	301.9	301.9	0.0	0.0%
13	Conservation	593.3	593.3	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	18,349.1	18,523.4	174.3	0.9%
	Maintenance Expenses:				
15	Payroll	386.0	386.0	0.0	0.0%
16	Transportation	113.1	113.1	0.0	0.0%
17	Stores	87.7	87.7	0.0	0.0%
18	Contracted Maintenance	655.2	655.2	0.0	0.0%
19	Total Maintenance Expenses	1,242.1	1,242.1	0.0	0.0%
	At Present Rates				
20	Operating Revenues	34,972.4	37,178.0	2,205.6	5.9%
21	*Uncollectible Rate*	0.0756%	0.1456%	*6.9951%*	*48.1%*
22	Uncollectibles Expense	26.4	54.1	27.7	51.1%
23	Total O&M Expenses including Uncollectibles	19,617.6	19,819.5	202.0	1.0%
	At Proposed Rates				
25	Operating Revenues	35,562.7	38,864.3	3,301.6	8.5%
26	*Uncollectible Rate*	0.0756%	0.1456%	*6.9951%*	*48.1%*
27	Uncollectibles Expense	26.9	56.6	29.7	52.5%
28	Total O&M Expenses including Uncollectibles	19,618.0	19,822.0	204.0	1.0%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	484.1	484.1	0.0	0.0%
2a	Benefits	675.9	702.0	26.0	3.7%
3a	Transportation Expenses	0.1	0.1	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	86.9	86.9	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(234.4)	(234.4)	0.0	0.0%
6a	Workers' Compensation	24.6	31.8	7.1	22.4%
7a	Non-Specifics	596.9	545.4	(51.5)	-9.4%
8a	Subtotal	1,634.1	1,615.8	(18.3)	-1.1%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	6.2	23.3	17.1	73.5%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(0.9)	(0.9)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	1,639.4	1,638.2	(1.2)	-0.1%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	493.6	493.6	0.0	0.0%
2b	Benefits	734.6	758.1	23.5	3.1%
3b	Transportation Expenses	0.1	0.1	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	86.9	86.9	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(242.2)	(242.2)	0.0	0.0%
6b	Workers' Compensation	25.3	33.9	8.7	25.5%
7b	Non-Specifics	558.0	558.0	0.0	0.0%
8b	Subtotal	1,656.3	1,688.4	32.2	1.9%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	0.0	17.2	17.2	100.0%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(0.9)	(0.9)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	1,655.3	1,704.7	49.4	2.9%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	570.5	670.3	99.8	14.9%
2a	Payroll Taxes	177.2	176.9	(0.3)	-0.2%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	31,535.5	31,621.8	86.3	0.3%
4a	*Effective Local Franchise Tax Rate*	*0.042%*	*0.042%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	13.3	13.4	0.0	0.3%
5a1	Business License-Present Rates	22.2	22.2	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	783.2	882.8	99.6	11.3%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	34,894.2	37,069.7	2,175.4	5.9%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.042%*	*-103.213%*	*-2441.5%*
9a	Franchise Taxes-Proposed Rates	14.8	15.7	0.9	5.9%
9a1	Business License-Proposed Rates	22.2	22.2	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	784.6	885.1	100.5	11.4%

Escalation Year 2024 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	605.6	751.6	146.0	19.4%
2b	Payroll Taxes	182.1	181.8	(0.3)	-0.2%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	34,945.9	37,123.8	2,177.9	5.9%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.042%*	*-103.213%*	*-2441.5%*
5b	Franchise Taxes-Present Rates	14.8	15.7	0.9	5.9%
5b1	Business License-Present Rates	22.2	22.2	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	824.6	971.3	146.6	15.1%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	35,535.8	38,807.7	3,271.9	8.4%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.042%*	*-103.213%*	*-2441.5%*
9b	Franchise Taxes-Proposed Rates	15.0	16.4	1.4	8.4%
9b1	Business License-Proposed Rates	22.2	22.2	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	824.9	972.0	147.1	15.1%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	31,559.3	31,667.9	108.5	0.3%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	19,461.8	19,651.7	189.9	1.0%
3	Uncollectibles Expense	23.9	46.1	22.2	48.2%
4	A&G Expenses	1,639.4	1,638.2	(1.2)	-0.1%
5	G.O. Prorated Expenses	4,500.5	4,837.4	336.9	7.0%
6	G.O. Book Depreciation (to be excluded)	(499.2)	(620.8)	(121.7)	19.6%
7	Transportation Deprec. Expense (to be excluded)	(12.1)	(34.8)	(22.7)	65.2%
8	Taxes On Other Than Income	783.2	882.8	99.6	11.3%
8a	Non-deductible Meals	(11.0)	(11.0)	0.0	0.0%
9	Interest Expense	1,391.2	1,755.0	363.9	20.7%
10	Total Common Deductions	27,277.6	28,144.6	867.0	3.1%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	3,999.3	6,730.1	2,730.8	40.6%
12	Tax Depreciation - G.O.	434.4	711.1	276.8	38.9%
13	Subtotal	4,433.7	7,441.2	3,007.6	40.4%
14	Total State Deductions, incl. Common Deductions	31,711.3	35,585.9	3,874.6	10.9%
	Federal Tax Deductions				
16	Book Depreciation - District	3,654.5	4,055.4	400.9	9.9%
17	Book Depreciation - G.O.	499.2	620.8	121.7	19.6%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(13.4)	(346.4)	(332.9)	96.1%
20	Subtotal	4,140.2	4,329.9	189.7	4.4%
21	Total Fed. Deductions, incl. Common Deductions	31,417.9	32,474.5	1,056.7	3.3%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(152.0)	(3,918.0)	(3,766.0)	96.1%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(13.4)	(346.4)	(332.9)	96.1%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	141.5	(806.7)	(948.1)	117.5%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	29.7	(169.4)	(948.1)	117.5%
28	Adjustment to FIT, Regulatory Liability	(467.6)	(467.6)	(0.0)	0.0%
29	Total FIT, with Adjustment	(437.9)	(637.0)	(199.1)	31.3%
30	Total Income Taxes for Revenues at Present Rates	(451.3)	(983.4)	(532.0)	54.1%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	34,920.6	37,119.9	2,199.3	5.9%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	19,461.8	19,651.7	189.9	1.0%
3	Uncollectibles Expense	26.4	50.2	23.8	47.4%
4	A&G Expenses	1,639.4	1,638.2	(1.2)	-0.1%
5	G.O. Prorated Expenses	4,500.5	4,837.4	336.9	7.0%
6	G.O. Book Depreciation (to be excluded)	(499.2)	(620.8)	(121.7)	19.6%
7	Transportation Deprec. Expense (to be excluded)	(12.1)	(34.8)	(22.7)	65.2%
8	Taxes On Other Than Income	784.6	885.1	100.5	11.4%
8a	Non-deductible Meals	(11.0)	(11.0)	0.0	0.0%
9	Interest Expense	1,391.2	1,755.0	363.9	20.7%
10	Total Common Deductions	27,281.6	28,151.1	869.5	3.1%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	3,999.3	6,730.1	2,730.8	40.6%
12	Tax Depreciation - G.O.	434.4	711.1	276.8	38.9%
13	Subtotal	4,433.7	7,441.2	3,007.6	40.4%
14	Total State Deductions, incl. Common Deductions	31,715.3	35,592.3	3,877.0	10.9%
	Federal Tax Deductions				
16	Book Depreciation - District	3,654.5	4,055.4	400.9	9.9%
17	Book Depreciation - G.O.	499.2	620.8	121.7	19.6%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	283.4	135.0	(148.3)	-109.8%
20	Subtotal	4,437.0	4,811.3	374.3	7.8%
21	Total Fed. Deductions, incl. Common Deductions	31,718.6	32,962.4	1,243.7	3.8%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	3,205.4	1,527.6	(1,677.8)	-109.8%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	283.4	135.0	(148.3)	-109.8%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	3,202.0	4,157.5	955.5	23.0%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	672.4	873.1	200.7	23.0%
28	Adjustment to FIT, Regulatory Liability	(467.6)	(467.6)	(0.0)	0.0%
29	Total FIT, with Adjustment	204.8	405.5	200.7	49.5%
30	Total Income Taxes for Revenues at Proposed Rates	488.2	540.5	52.3	9.7%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	110,929.7	121,044.3	10,114.5	8.4%
2a	Adjustments	13.5	13.5	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	6,265.3	13,863.1	7,597.9	54.8%
4a	Advances	0.0	0.0	0.0	0.0%
5a	Contributions	146.7	146.7	0.0	0.0%
6a	Total Gross Additions	6,412.0	14,009.8	7,597.9	54.2%
8a	Retirements	353.1	353.1	0.0	0.0%
9a	Net Additions	6,765.1	14,362.9	7,597.9	52.9%
10a	Plant in Service - End of Year	117,708.3	135,420.7	17,712.4	13.1%
11a	*Plant Weighting Factor*	*42.17%*	*42.17%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	113,782.6	127,101.2	13,318.6	10.5%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	117,708.3	135,420.7	17,712.4	13.1%
2b	Adjustments	10.7	10.7	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	5,244.8	10,294.5	5,049.6	49.1%
4b	Advances	0.0	0.0	0.0	0.0%
5b	Contributions	146.7	146.7	0.0	0.0%
6b	Total Gross Additions	5,391.6	10,441.2	5,049.6	48.4%
8b	Retirements	353.1	353.1	0.0	0.0%
9b	Net Additions	5,744.7	10,794.3	5,049.6	46.8%
10b	Plant in Service - End of Year	123,463.7	146,225.7	22,762.0	15.6%
11b	*Plant Weighting Factor*	*42.17%*	*42.17%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	120,130.9	139,972.7	19,841.9	14.2%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Depreciation Reserve - Beginning of Year	49,141.4	49,364.2	222.8	0.5%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	16.0	17.4	1.4	8.1%
3a	Contributed Plant	(179.1)	(176.8)	2.3	-1.3%
4a	Depreciation Accrual	3,817.593	4,214.8	397.2	9.4%
5a	Total Accruals	3,654.5	4,055.4	400.9	9.9%
	Retirements				
6a	Net Retirements	(353.104)	(353.1)	0.0	0.0%
8a	Total Retirement	(353.1)	(353.1)	0.0	0.0%
9a	Net Additions	3,464	3,861.7	397.2	10.3%
7a	Carry Forward Adjustment	0.0	(105.9)	(105.9)	100.0%
10a	Depreciation Reserve - End of Year	52,605.9	53,120.0	514.2	1.0%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	50,873.6	51,189.2	315.5	0.6%
13a	*Deprec. expense for summary of earnings calc.*	3,654.5	4,055.4	400.9	9.9%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Depreciation Reserve - Beginning of Year	52,605.9	53,120.0	514.2	1.0%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	16.0	17.7	1.7	9.5%
3b	Contributed Plant	(182.0)	(181.3)	0.7	-0.4%
4b	Depreciation Accrual	4,005.9	4,694.2	688.4	14.7%
5b	Total Accruals	3,839.9	4,530.6	690.7	15.2%
	Retirements and Adjustments:				
6b	Net Retirements	(353.1)	(353.1)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(353.1)	(353.1)	0.0	
					0.0%
9b	Net Additions	3,652.8	4,341.1	688.4	15.9%
10b	Depreciation Reserve - End of Year	56,258.6	57,461.2	1,202.5	2.1%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	54,432.2	55,290.6	858.3	1.6%
13b	* *Deprec. expense for summary of earnings calc.*	3,839.9	4,530.6	690.7	15.2%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	113,782.6	127,101.2	13,318.6	10.5%
3	Weighted Average Depreciation Reserve	(50,873.6)	(51,189.2)	(315.5)	0.6%
4	Net Utility Plant	62,909.0	75,912.0	13,003.0	17.1%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	1,921.9	1,924.8	2.9	0.1%
5	Advances in Construction	172.6	172.6	0.0	0.0%
6	Reserve for Amortization of Intangibles	510.3	530.6	20.3	3.8%
7	Deferred Taxes	10,002.9	11,291.5	1,288.6	11.4%
8	Unamortized Investment Tax Credits	32.5	32.5	0.0	0.0%
9	Total Deductions from Rate Base	12,640.2	13,952.0	1,311.8	9.4%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	305.5	303.0	(2.5)	-0.8%
10a	Tank Painting	2,685.0	3,016.4	331.4	11.0%
11	Working Cash, Lead-Lag	1,251.4	1,381.5	130.0	9.4%
12	Amount Withheld from Employees	(12.8)	(12.8)	0.0	0.0%
13	Total Working Capital	4,229.1	4,688.1	459.0	9.8%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	265.2	265.2	0.0	0.0%
17	Total Additions to Rate Base	4,494.3	4,953.3	459.0	9.3%
18	Weighted Average Rate Base, District	54,763.1	66,913.3	12,150.2	18.2%
19	Weighted Average Rate Base, G.O. Allocation	2,880.9	4,615.8	1,735.0	37.6%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	715.7	1,447.2	731.5	50.5%
20	Total Weighted Average Rate Base	58,359.7	72,976.3	14,616.7	20.0%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*54,130.570*	*68,288.3*	*14,157.7*	*20.7%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*1,391.2*	*1,755.0*	*363.9*	*20.7%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	120,130.9	139,972.7	19,841.9	14.2%
3	Weighted Average Depreciation Reserve	(54,432.2)	(55,290.6)	(858.3)	1.6%
4	Net Utility Plant	65,698.6	84,682.1	18,983.5	22.4%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	1,888.1	1,892.4	4.4	0.2%
5	Advances in Construction	160.0	160.0	0.0	0.0%
6	Reserve for Amortization of Intangibles	524.5	572.7	48.2	8.4%
7	Deferred Taxes	9,569.0	11,319.2	1,750.2	15.5%
8	Unamortized Investment Tax Credits	27.6	27.6	0.0	0.0%
9	Total Deductions from Rate Base	12,169.1	13,971.8	1,802.7	12.9%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	305.5	303.0	(2.5)	-0.8%
10a	Tank Painting	2,662.4	2,993.8	331.4	11.1%
11	Working Cash, Lead-Lag	1,286.4	1,476.9	190.5	12.9%
12	Amount Withheld from Employees	(12.8)	(12.8)	0.0	0.0%
13	Total Working Capital	4,241.5	4,761.0	519.5	10.9%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	282.2	282.2	0.0	0.0%
17	Total Additions to Rate Base	4,523.7	5,043.2	519.5	10.3%
18	Weighted Average Rate Base, District	58,053.3	75,753.5	17,700.2	23.4%
19	Weighted Average Rate Base, G.O. Allocation	2,915.4	4,998.4	2,083.0	41.7%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	743.3	1,530.9	787.7	51.5%
20	Total Weighted Average Rate Base	61,711.9	82,282.9	20,570.9	25.0%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*57,470.4*	*77,521.9*	*20,051.5*	*25.9%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*1,477.0*	*1,992.3*	*515.3*	*25.9%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	668.8	1,044.3	375.5
2. Test Year 2023 Increase (%)	9.7%	15.1%	5.4%
3. Escalation Year 2024 Increase (%)	1.2%	5.4%	4.2%
4. Escalation Year 2025 Increase (%)	1.6%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**6,910.5**	**6,910.5**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	1,526.3	1,538.6	12.3	0.8%
3a	Administrative & General	526.5	540.7	14.2	2.6%
4a	Payroll	1,002.3	1,002.3	0.0	0.0%
5a	General Office - *prorated expenses*	1,129.0	1,195.8	66.8	5.6%
6a	Depreciation Expense	1,105.5	1,165.8	60.3	5.2%
7a	Taxes Other Than Income	349.8	370.0	20.2	5.5%
8a	California Corporate Franchise Tax	62.4	(70.6)	(132.9)	188.3%
9a	Federal Income Tax	83.4	63.0	(20.4)	-32.4%
10a	Total Operating Expenses	5,785.2	5,805.7	20.5	0.4%
11a	Net Operating Revenues	1,125.4	1,104.8	(20.5)	-1.9%
12a	Weighted Average Rate Base	21,341.3	24,585.6	3,244.2	13.2%
13a	***Return on Rate Base***	***5.27%***	***4.49%***	***-0.78%***	***-17.3%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	7,579.3	7,954.8	**375.5**	**4.7%**
	Operating Expenses:				
2b	Operation & Maintenance	1,535.4	1,552.8	17.4	1.1%
3b	Administrative & General	526.5	540.7	14.2	2.6%
4b	Payroll	1,002.3	1,002.3	0.0	0.0%
5b	General Office - *prorated expenses*	1,129.0	1,195.8	66.8	5.6%
6b	Depreciation Expense	1,105.5	1,165.8	60.3	5.2%
7b	Taxes Other Than Income	355.6	379.0	23.4	6.2%
8b	California Corporate Franchise Tax	120.2	19.7	(100.5)	-510.2%
9b	Federal Income Tax	208.6	258.5	49.9	19.3%
10b	Total Operating Expenses	5,983.0	6,114.6	131.6	2.2%
11b	Net Operating Revenues	1,596.3	1,840.2	243.9	13.3%
12b	Weighted Average Rate Base	21,341	24,585.6	3,244.2	13.2%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.1%***
14	**Increase in Operating Revenues (1b - 1a)**	**668.8**	**1,044.3**	**375.5**	**36.0%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	7,725.1	7,849.4	124.3	1.6%
2	Operating Expenses:*				
3	Operation & Maintenance	1,564.4	1,595.7	31.3	2.0%
4	Administrative & General	555.2	566.3	11.1	2.0%
5	Payroll	1,035.3	1,056.0	20.7	2.0%
6	G.O. Prorated Expenses	1,123.8	1,146.2	22.5	2.0%
7	Depreciation Expense	1,132.2	1,154.8	22.6	2.0%
8	Taxes Other Than Income	376.6	384.1	7.5	2.0%
9	California Corporate Franchise Tax	124.3	124.25	0.0	0.0%
10	Federal Income Tax	208.5	208.53	0.0	0.0%
11	Total Operating Expenses	6,120.2	6,236.0	115.7	1.9%
12	Net Operating Revenues	1,604.9	1,613.5	8.6	0.5%
13	Weighted Average Rate Base	21,455.8	21,570.2	114.4	0.5%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***(0.0)***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	55.6	55.6	0.0	0.0%
2a	Business	222.6	222.6	0.0	0.0%
3a	Multiple Family	232.1	232.1	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	407.7	407.7	0.0	0.0%
6a	Other	28.7	28.7	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	55.6	55.6	0.0	0.0%
2b	Business	222.6	222.6	0.0	0.0%
3b	Multiple Family	232.1	232.1	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	407.7	407.7	0.0	0.0%
6b	Other	28.7	28.7	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	3,955	3,955	0	0%
2a	Business	111	111	0	0%
3a	Multiple Family	7	7	0	0%
4a	Industrial	0	0	0	0%
5a	Public Authority	16	16	0	0%
6a	Other	2	2	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	4,091	4,091	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	4	4	0	0%
12a	Public Fire Protection	0	0	0	0%
13a	Total Number of Unmetered Connections	4	4	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	4,095	4,095	0	0%
15a	Excluding Fire Protection	4,091	4,091	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	3,984	3,984	0	0%
2b	Business	112	112	0	0%
3b	Multiple Family	7	7	0	0%
4b	Industrial	0	0	0	0%
5b	Public Authority	16	16	0	0%
6b	Other	2	2	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	4,121	4,121	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	4	4	0	0%
12b	Public Fire Protection	0	0	0	0%
13b	Total Number of Unmetered Connections	4	4	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	4,125	4,125	0	0%
15b	Excluding Fire Protection	4,121	4,121	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	219.8	219.8	0.0	0.0%
2a	Business	24.8	24.8	0.0	0.0%
3a	Multiple Family	1.6	1.6	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	6.5	6.5	0.0	0.0%
6a	Other	0.1	0.1	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	252.8	252.8	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	252.8	252.8	0.0	0.0%
12a	*Unaccounted For Water Rate*	*26.9%*	*26.9%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	92.9	92.9	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**345.7**	**345.7**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	793.6	793.6	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	275.8	275.8	0.0	0.0%
17a	Purchased Water	0.0	0.0	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	69.9	69.9	0.0	0.0%
19a	**Total Supply ***	**345.7**	**345.7**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	221.4	221.4	0.0	0.0%
2b	Business	25.0	25.0	0.0	0.0%
3b	Multiple Family	1.6	1.6	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	6.5	6.5	0.0	0.0%
6b	Other	0.1	0.1	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	254.6	254.6	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	254.6	254.6	0.0	0.0%
12b	*Unaccounted For Water Rate*	*26.9%*	*26.9%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	93.6	93.6	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**348.2**	**348.2**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	799.3	799.3	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	275.8	275.8	0.0	0.0%
17b	Purchased Water	0.0	0.0	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	72.4	72.4	0.0	0.0%
19b	**Total Supply ***	**348.2**	**348.2**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	3,622.6	3,622.6	0.0	0.0%
2a	Business	408.6	408.6	0.0	0.0%
3a	Multiple Family	26.8	26.8	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	107.5	107.5	0.0	0.0%
6a	Other	0.9	0.9	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	4,166.5	4,166.5	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	2,739.5	2,739.5	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	2,739.5	2,739.5	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	2.4	2.4	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	2.1	2.1	0.0	0.0%
16a	Total Other Revenues	4.5	4.5	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	6,910.5	6,910.5	0.0	0.0%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	4,060.7	4,385.5	324.8	7.4%
2b	Business	458.8	495.5	36.7	7.4%
3b	Multiple Family	29.8	32.2	2.4	7.4%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	119.7	129.2	9.6	7.4%
6b	Other	1.1	1.1	0.1	7.4%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	4,670.0	5,043.5	373.5	7.4%
	Unmetered Revenues:				
10b	Service Charge	2,959.1	2,963.8	4.7	0.2%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	2,959.1	2,963.8	4.7	0.2%
	Other Revenues:				
13b	Private Fire Protection	2.5	2.5	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	2.2	2.2	0.0	0.0%
16b	Total Other Revenues	4.7	4.7	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	7,633.8	8,012.0	378.1	4.7%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	14.3	14.3	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	283.5	283.5	0.0	0.0%
4	Purchased Chemicals	121.9	121.9	0.0	0.0%
5	Payroll	748.0	748.0	0.0	0.0%
6	Postage	14.0	13.2	(0.8)	-6.0%
7	Transportation	92.6	92.6	0.0	0.0%
	Purchased Services:				
8	Source of Supply	(0.0)	0.3	0.3	100.0%
9	Pumping	38.0	38.0	0.0	0.0%
10	Water Treatment	215.3	215.3	0.0	0.0%
11	Transmission & Distribution	177.3	177.3	0.0	0.0%
12	Customer Accounting	140.8	140.8	0.0	0.0%
13	Conservation	46.3	47.8	1.6	3.3%
14	Total Operations Exp. excluding Uncollectibles	1,891.9	1,893.0	1.1	0.1%
	Maintenance Expenses:				
15	Payroll	86.9	86.9	0.0	0.0%
16	Transportation	2.0	2.0	0.0	0.0%
17	Stores	1.0	1.0	0.0	0.0%
18	Contracted Maintenance	285.5	285.5	0.0	0.0%
19	Total Maintenance Expenses	375.5	375.5	0.0	0.0%
	At Present Rates				
20	Operating Revenues	6,910.5	6,910.5	0.0	0.0%
21	*Uncollectible Rate*	1.3574%	1.5192%	*0.1618%*	*10.7%*
22	Uncollectibles Expense	93.8	105.0	11.2	10.7%
23	Total O&M Expenses including Uncollectibles	2,361.2	2,373.5	12.3	0.5%
	At Proposed Rates				
25	Operating Revenues	7,579.3	7,954.8	375.5	4.7%
26	*Uncollectible Rate*	1.3574%	1.3574%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	102.9	119.2	16.3	13.7%
28	Total O&M Expenses including Uncollectibles	2,370.3	2,387.7	17.4	0.7%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	14.8	14.8	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	283.2	283.2	0.0	0.0%
4	Purchased Chemicals	125.9	125.9	0.0	0.0%
5	Payroll	772.7	772.7	0.0	0.0%
6	Postage	14.2	13.4	(0.8)	-6.0%
7	Transportation	94.9	94.9	0.0	0.0%
	Purchased Services:				
8	Source of Supply	(0.0)	0.4	0.4	100.0%
9	Pumping	39.0	39.0	0.0	0.0%
10	Water Treatment	220.3	220.3	0.0	0.0%
11	Transmission & Distribution	181.8	181.8	0.0	0.0%
12	Customer Accounting	144.4	144.4	0.0	0.0%
13	Conservation	47.8	47.8	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	1,938.9	1,938.5	(0.5)	0.0%
	Maintenance Expenses:				
15	Payroll	89.7	89.7	0.0	0.0%
16	Transportation	2.1	2.1	0.0	0.0%
17	Stores	1.1	1.1	0.0	0.0%
18	Contracted Maintenance	290.2	290.2	0.0	0.0%
19	Total Maintenance Expenses	383.1	383.1	0.0	0.0%
	At Present Rates				
20	Operating Revenues	7,633.8	8,012.0	378.1	4.7%
21	*Uncollectible Rate*	1.3573%	1.5192%	*16.1908%*	*10.7%*
22	Uncollectibles Expense	103.6	121.7	18.1	14.9%
23	Total O&M Expenses including Uncollectibles	2,425.6	2,443.3	17.7	0.7%
	At Proposed Rates				
25	Operating Revenues	7,725.1	8,445.6	720.5	8.5%
26	*Uncollectible Rate*	1.3574%	1.5192%	*16.1849%*	*10.7%*
27	Uncollectibles Expense	104.9	128.3	23.5	18.3%
28	Total O&M Expenses including Uncollectibles	2,426.8	2,449.8	23.0	0.9%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	167.4	167.4	0.0	0.0%
2a	Benefits	316.3	328.5	12.2	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	235.7	235.7	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(3.7)	(3.7)	0.0	0.0%
6a	Workers' Compensation	15.2	14.9	(0.3)	-2.0%
7a	Non-Specifics	28.8	28.4	(0.5)	-1.6%
8a	Subtotal	759.7	771.1	11.4	1.5%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	0.0	2.9	2.9	100.0%
9aa	Acquisition Synergies	(65.8)	(65.8)	(0.0)	0.1%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(0.0)	(0.0)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	693.9	708.1	14.2	2.0%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	172.9	172.9	0.0	0.0%
2b	Benefits	343.8	354.8	11.0	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	235.7	235.7	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(3.8)	(3.8)	0.0	0.0%
6b	Workers' Compensation	15.5	15.9	0.3	2.1%
7b	Non-Specifics	26.5	26.5	0.0	0.0%
8b	Subtotal	790.7	802.0	11.3	1.4%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	0.0	2.9	2.9	100.0%
9bb	Acquisition Synergies	(62.5)	(62.6)	(0.0)	0.1%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(0.0)	(0.0)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	728.1	742.3	14.2	1.9%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Ad Valorem Taxes	218.3	238.6	20.3	8.5%
2a	Payroll Taxes	71.9	71.9	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	6,816.7	6,805.5	(11.2)	-0.2%
4a	*Effective Local Franchise Tax Rate*	*0.875%*	*0.875%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	59.6	59.5	(0.1)	-0.2%
5a1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	349.8	370.0	20.2	5.5%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	7,476.5	7,835.6	359.2	4.6%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.875%*	*-19.989%*	*-22.9%*
9a	Franchise Taxes-Proposed Rates	65.4	68.5	3.1	4.6%
9a1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	355.6	379.0	23.4	6.2%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Ad Valorem Taxes	235.6	264.4	28.8	10.9%
2b	Payroll Taxes	74.3	74.3	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	7,530.2	7,890.3	360.0	4.6%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.875%*	*-19.989%*	*-22.9%*
5b	Franchise Taxes-Present Rates	65.8	69.0	3.2	4.6%
5b1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	375.8	407.7	31.9	7.8%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	7,620.3	8,317.3	697.0	8.4%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.875%*	*-19.989%*	*-22.9%*
9b	Franchise Taxes-Proposed Rates	66.6	72.7	6.1	8.4%
9b1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	376.6	411.4	34.9	8.5%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	6,910.5	6,910.5	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	2,267.4	2,268.5	1.1	0.0%
3	Uncollectibles Expense	93.8	105.0	11.2	10.7%
4	A&G Expenses	693.9	708.1	14.2	2.0%
5	G.O. Prorated Expenses	1,129.0	1,195.8	66.8	5.6%
6	G.O. Book Depreciation (to be excluded)	(125.2)	(153.5)	(28.2)	18.4%
7	Transportation Deprec. Expense (to be excluded)	(23.4)	(50.0)	(26.7)	53.3%
8	Taxes On Other Than Income	349.8	370.0	20.2	5.5%
8a	Non-deductible Meals	(5.4)	(5.4)	0.0	-0.7%
9	Interest Expense	522.2	604.7	82.5	13.6%
10	Total Common Deductions	4,902.1	5,043.3	141.1	2.8%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	1,222.3	2,536.7	1,314.4	51.8%
12	Tax Depreciation - G.O.	80.7	128.8	48.1	37.4%
13	Subtotal	1,303.0	2,665.6	1,362.5	51.1%
14	Total State Deductions, incl. Common Deductions	6,205.2	7,708.9	1,503.7	19.5%
	Federal Tax Deductions				
16	Book Depreciation - District	1,105.5	1,165.8	60.3	5.2%
17	Book Depreciation - G.O.	125.2	153.5	28.2	18.4%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	62.4	(70.6)	(132.9)	188.3%
20	Subtotal	1,293.1	1,248.7	(44.4)	-3.6%
21	Total Fed. Deductions, incl. Common Deductions	6,195.2	6,292.0	96.8	1.5%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	705.3	(798.3)	(1,503.7)	188.3%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	62.4	(70.6)	(132.9)	188.3%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	715.3	618.5	(96.8)	-15.6%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	150.2	129.9	(96.8)	-15.6%
28	Adjustment to FIT, Regulatory Liability	(66.8)	(66.9)	(0.1)	0.1%
29	Total FIT, with Adjustment	83.4	63.0	(20.4)	-32.4%
30	Total Income Taxes for Revenues at Present Rates	145.7	(7.6)	(153.3)	2022.9%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	7,579.3	7,954.8	375.5	4.7%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	2,267.4	2,268.5	1.1	0.0%
3	Uncollectibles Expense	102.9	119.2	16.3	13.7%
4	A&G Expenses	693.9	708.1	14.2	2.0%
5	G.O. Prorated Expenses	1,129.0	1,195.8	66.8	5.6%
6	G.O. Book Depreciation (to be excluded)	(125.2)	(153.5)	(28.2)	18.4%
7	Transportation Deprec. Expense (to be excluded)	(23.4)	(50.0)	(26.7)	53.3%
8	Taxes On Other Than Income	355.6	379.0	23.4	6.2%
8a	Non-deductible Meals	(5.4)	(5.4)	0.0	-0.7%
9	Interest Expense	522.2	604.7	82.5	13.6%
10	Total Common Deductions	4,917.0	5,066.4	149.5	2.9%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	1,222.3	2,536.7	1,314.4	51.8%
12	Tax Depreciation - G.O.	80.7	128.8	48.1	37.4%
13	Subtotal	1,303.0	2,665.6	1,362.5	51.1%
14	Total State Deductions, incl. Common Deductions	6,220.0	7,732.0	1,512.0	19.6%
	Federal Tax Deductions				
16	Book Depreciation - District	1,105.5	1,165.8	60.3	5.2%
17	Book Depreciation - G.O.	125.2	153.5	28.2	18.4%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	120.2	19.7	(100.5)	-510.2%
20	Subtotal	1,350.9	1,339.0	(11.9)	-0.9%
21	Total Fed. Deductions, incl. Common Deductions	6,267.9	6,405.4	137.5	2.1%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	1,359.3	222.8	(1,136.6)	-510.2%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	120.2	19.7	(100.5)	-510.2%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	1,311.5	1,549.4	237.9	15.4%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	275.4	325.4	50.0	15.4%
28	Adjustment to FIT, Regulatory Liability	(66.8)	(66.9)	(0.1)	0.1%
29	Total FIT, with Adjustment	208.6	258.5	49.9	19.3%
30	Total Income Taxes for Revenues at Proposed Rates	328.7	278.2	(50.6)	-18.2%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	38,826.1	40,389.0	1,562.9	3.9%
2a	Adjustments	0.0	0.0	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	855.7	3,532.4	2,676.8	75.8%
4a	Advances	0.0	0.0	0.0	0.0%
5a	Contributions	26.5	26.5	0.0	0.0%
6a	Total Gross Additions	882.1	3,558.9	2,676.8	75.2%
8a	Retirements	123.9	123.9	0.0	0.0%
9a	Net Additions	1,006.0	3,682.8	2,676.8	72.7%
10a	Plant in Service - End of Year	39,832.1	44,071.8	4,239.7	9.6%
11a	*Plant Weighting Factor*	*57.21%*	*57.21%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	39,401.6	42,495.9	3,094.3	7.3%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	39,832.1	44,071.8	4,239.7	9.6%
2b	Adjustments	0.0	0.0	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	1,186.5	2,252.4	1,065.8	47.3%
4b	Advances	0.0	0.0	0.0	0.0%
5b	Contributions	26.5	26.5	0.0	0.0%
6b	Total Gross Additions	1,213.0	2,278.8	1,065.8	46.8%
8b	Retirements	152.7	152.7	0.0	0.0%
9b	Net Additions	1,365.7	2,431.6	1,065.8	43.8%
10b	Plant in Service - End of Year	41,197.9	46,503.4	5,305.5	11.4%
11b	*Plant Weighting Factor*	*57.21%*	*57.21%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	40,613.5	45,462.9	4,849.5	10.7%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1a	Depreciation Reserve - Beginning of Year	17,464.2	17,538.9	74.8	0.4%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(18.4)	(40.6)	(22.2)	54.7%
3a	Contributed Plant	(29.5)	(29.7)	(0.3)	1.0%
4a	Depreciation Accrual	1,153.370	1,236.2	82.8	6.7%
5a	Total Accruals	1,105.5	1,165.8	60.3	5.2%
	Retirements				
6a	Net Retirements	(123.877)	(123.9)	0.0	0.0%
8a	Total Retirement	(123.9)	(123.9)	0.0	0.0%
9a	Net Additions	1,029	1,112.3	82.8	7.4%
7a	Carry Forward Adjustment	0.0	(30.5)	(30.5)	100.0%
10a	Depreciation Reserve - End of Year	18,493.7	18,620.8	127.1	0.7%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	17,978.9	18,064.6	85.7	0.5%
13a	*Deprec. expense for summary of earnings calc.*	1,105.5	1,165.8	60.3	5.2%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1b	Depreciation Reserve - Beginning of Year	18,493.7	18,620.8	127.1	0.7%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(18.4)	(40.9)	(22.5)	55.0%
3b	Contributed Plant	(30.1)	(30.3)	(0.2)	0.6%
4b	Depreciation Accrual	1,180.7	1,337.5	156.8	11.7%
5b	Total Accruals	1,132.2	1,266.3	134.1	10.6%
	Retirements and Adjustments:				
6b	Net Retirements	(152.7)	(152.7)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(152.7)	(152.7)	0.0	
					0.0%
9b	Net Additions	1,027.9	1,184.7	156.8	13.2%
10b	Depreciation Reserve - End of Year	19,521.6	19,805.5	283.9	1.4%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	19,007.7	19,213.1	205.5	1.1%
13b	* *Deprec. expense for summary of earnings calc.*	1,132.2	1,266.3	134.1	10.6%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	39,401.6	42,495.9	3,094.3	7.3%
3	Weighted Average Depreciation Reserve	(17,978.9)	(18,064.6)	(85.7)	0.5%
4	Net Utility Plant	21,422.7	24,431.3	3,008.6	12.3%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	503.0	503.3	0.3	0.1%
5	Advances in Construction	6.5	6.5	0.0	0.0%
6	Reserve for Amortization of Intangibles	114.9	120.9	6.0	4.9%
7	Deferred Taxes	1,247.9	1,457.9	210.0	14.4%
8	Unamortized Investment Tax Credits	0.3	0.3	0.0	0.0%
9	Total Deductions from Rate Base	1,872.5	2,088.7	216.3	10.4%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	16.7	16.7	0.0	0.0%
10a	Tank Painting	508.8	508.8	0.0	0.0%
11	Working Cash, Lead-Lag	499.2	532.8	33.6	6.3%
12	Amount Withheld from Employees	(3.2)	(3.2)	0.0	-1.5%
13	Total Working Capital	1,021.6	1,055.2	33.6	3.2%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	46.8	46.8	0.0	0.0%
17	Total Additions to Rate Base	1,068.4	1,102.0	33.6	3.0%
18	Weighted Average Rate Base, District	20,618.6	23,444.6	2,825.9	12.1%
19	Weighted Average Rate Base, G.O. Allocation	722.7	1,141.0	418.3	36.7%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	21,341.3	24,585.6	3,244.2	13.2%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*20,319.754*	*23,530.4*	*3,210.6*	*13.6%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*522.2*	*604.7*	*82.5*	*13.6%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	40,613.5	45,462.9	4,849.5	10.7%
3	Weighted Average Depreciation Reserve	(19,007.7)	(19,213.1)	(205.5)	1.1%
4	Net Utility Plant	21,605.8	26,249.8	4,644.0	17.7%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	499.6	499.7	0.1	0.0%
5	Advances in Construction	6.1	6.1	0.0	0.0%
6	Reserve for Amortization of Intangibles	117.7	129.1	11.4	8.9%
7	Deferred Taxes	1,233.4	1,625.1	391.7	24.1%
8	Unamortized Investment Tax Credits	0.0	0.0	0.0	0.0%
9	Total Deductions from Rate Base	1,856.8	2,260.0	403.2	17.8%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	16.7	16.7	0.0	0.0%
10a	Tank Painting	407.7	407.7	0.0	0.0%
11	Working Cash, Lead-Lag	508.1	544.7	36.6	6.7%
12	Amount Withheld from Employees	(3.2)	(3.2)	0.0	-1.5%
13	Total Working Capital	929.3	966.0	36.7	3.8%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	46.1	46.1	0.0	0.0%
17	Total Additions to Rate Base	975.4	1,012.1	36.7	3.6%
18	Weighted Average Rate Base, District	20,724.4	25,001.8	4,277.4	17.1%
19	Weighted Average Rate Base, G.O. Allocation	731.4	1,235.6	504.2	40.8%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	21,455.8	26,237.4	4,781.7	18.2%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*20,526.5*	*25,271.4*	*4,745.0*	*18.8%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*527.5*	*649.5*	*121.9*	*18.8%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	1,728.3	6,020.0	4,291.7
2. Test Year 2023 Increase (%)	3.3%	11.6%	8.3%
3. Escalation Year 2024 Increase (%)	2.3%	4.8%	2.5%
4. Escalation Year 2025 Increase (%)	2.7%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**52,888.6**	**52,019.7**	**(868.9)**	**-1.7%**
	Operating Expenses:				
2a	Operation & Maintenance	32,141.0	32,138.9	(2.1)	0.0%
3a	Administrative & General	1,762.6	1,790.4	27.7	1.5%
4a	Payroll	3,168.5	3,168.5	0.0	0.0%
5a	General Office - *prorated expenses*	6,261.7	6,633.8	372.1	5.6%
6a	Depreciation Expense	3,364.7	3,987.7	623.0	15.6%
7a	Taxes Other Than Income	1,620.5	1,838.7	218.2	11.9%
8a	California Corporate Franchise Tax	187.1	(512.4)	(699.5)	136.5%
9a	Federal Income Tax	99.7	(333.4)	(433.1)	129.9%
10a	Total Operating Expenses	48,605.8	48,712.2	106.4	0.2%
11a	Net Operating Revenues	4,282.8	3,307.5	(975.3)	-29.5%
12a	Weighted Average Rate Base	73,697.5	101,457.6	27,760.1	27.4%
13a	***Return on Rate Base***	***5.81%***	***3.26%***	***-2.55%***	***-78.3%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	54,616.9	58,039.7	**3,422.8**	**5.9%**
	Operating Expenses:				
2b	Operation & Maintenance	32,143.4	32,147.4	3.9	0.0%
3b	Administrative & General	1,762.6	1,790.4	27.7	1.5%
4b	Payroll	3,168.5	3,168.5	0.0	0.0%
5b	General Office - *prorated expenses*	6,261.7	6,633.8	372.1	5.6%
6b	Depreciation Expense	3,364.7	3,987.7	623.0	15.6%
7b	Taxes Other Than Income	1,638.8	1,902.1	263.4	13.8%
8b	California Corporate Franchise Tax	338.0	13.4	(324.6)	-2419.4%
9b	Federal Income Tax	426.6	805.3	378.7	47.0%
10b	Total Operating Expenses	49,104.3	50,448.6	1,344.2	2.7%
11b	Net Operating Revenues	5,512.6	7,591.2	2,078.6	27.4%
12b	Weighted Average Rate Base	73,697	101,457.6	27,760.1	27.4%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**1,728.3**	**6,020.0**	**4,291.7**	**71.3%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	55,932.6	57,460.0	1,527.4	2.7%
2	Operating Expenses:*				
3	Operation & Maintenance	32,389.2	33,037.0	647.8	2.0%
4	Administrative & General	1,789.8	1,825.5	35.8	2.0%
5	Payroll	3,265.5	3,330.8	65.3	2.0%
6	G.O. Prorated Expenses	6,232.5	6,357.2	124.7	2.0%
7	Depreciation Expense	3,580.4	3,652.0	71.6	2.0%
8	Taxes Other Than Income	1,712.7	1,747.0	34.3	2.0%
9	California Corporate Franchise Tax	369.3	369.32	0.0	0.0%
10	Federal Income Tax	531.7	531.74	0.0	0.0%
11	Total Operating Expenses	49,871.1	50,850.5	979.4	1.9%
12	Net Operating Revenues	6,061.5	6,609.5	548.0	8.3%
13	Weighted Average Rate Base	81,029.9	88,362.4	7,332.5	8.3%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***(0.0)***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	226.4	234.1	7.7	3.3%
2a	Business	1,245.5	1,304.4	58.9	4.5%
3a	Multiple Family	1,055.9	1,078.7	22.8	2.1%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	1,049.7	1,105.3	55.6	5.0%
6a	Other	302.6	302.6	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	226.3	234.1	7.7	3.3%
2b	Business	1,245.3	1,304.3	59.0	4.5%
3b	Multiple Family	1,056.0	1,078.8	22.8	2.1%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	1,054.1	1,110.2	56.0	5.0%
6b	Other	302.6	302.6	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	25,625	24,353	(1,272)	-5%
2a	Business	738	705	(33)	-5%
3a	Multiple Family	236	231	(5)	-2%
4a	Industrial	0	0	0	0%
5a	Public Authority	278	264	(14)	-5%
6a	Other	26	26	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	26,904	25,580	(1,324)	-5%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	199	199	0	0%
12a	Public Fire Protection	7	7	0	0%
13a	Total Number of Unmetered Connections	206	206	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	27,110	25,786	(1,324)	-5%
15a	Excluding Fire Protection	26,904	25,580	(1,324)	-5%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	25,662	24,385	(1,277)	-5%
2b	Business	738	705	(33)	-5%
3b	Multiple Family	237	232	(5)	-2%
4b	Industrial	0	0	0	0%
5b	Public Authority	277	263	(14)	-5%
6b	Other	26	26	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	26,941	25,611	(1,329)	-5%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	202	202	0	0%
12b	Public Fire Protection	7	7	0	0%
13b	Total Number of Unmetered Connections	209	209	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	27,150	25,820	(1,329)	-5%
15b	Excluding Fire Protection	26,941	25,611	(1,329)	-5%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Connections' Sales:				
1a	Residential	5,801.1	5,700.9	(100.2)	-1.8%
2a	Business	919.4	919.4	0.0	0.0%
3a	Multiple Family	249.6	249.6	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	292.3	292.3	0.0	0.0%
6a	Other	7.9	7.9	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	7,270.3	7,170.1	(100.2)	-1.4%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	7,270.3	7,170.1	(100.2)	-1.4%
12a	*Unaccounted For Water Rate*	*23.3%*	*19.4%*	*-3.9%*	*-19.8%*
13a	Unaccounted For Water (UAF)	454.0	554.1	100.2	18.1%
14a	**Total Requirement (Sales + UAF) ***	**7,724.2**	**7,724.2**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	17,732.5	17,732.5	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	193.9	193.9	0.0	0.0%
17a	Purchased Water	7,530.4	7,530.4	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**7,724.2**	**7,724.2**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Connections' Sales:				
1b	Residential	5,808.6	5,708.0	(100.5)	-1.8%
2b	Business	919.4	919.4	0.0	0.0%
3b	Multiple Family	250.1	250.1	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	292.3	292.3	0.0	0.0%
6b	Other	7.9	7.9	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	7,278.3	7,177.7	(100.5)	-1.4%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	7,278.3	7,177.7	(100.5)	-1.4%
12b	*Unaccounted For Water Rate*	*23.3%*	*19.4%*	*-3.9%*	*-19.8%*
13b	Unaccounted For Water	454.3	554.9	100.5	18.1%
14b	**Total Requirement (Sales + UAF) ***	**7,732.6**	**7,732.6**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	17,751.8	17,751.8	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	193.9	193.9	0.0	0.0%
17b	Purchased Water	7,538.8	7,538.8	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**7,732.6**	**7,732.6**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	30,170.4	29,716.0	(454.4)	-1.5%
2a	Business	5,134.8	5,134.8	0.0	0.0%
3a	Multiple Family	1,394.1	1,394.1	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	1,632.5	1,632.5	0.0	0.0%
6a	Other	43.9	43.9	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	38,375.7	37,921.4	(454.4)	-1.2%
	Unmetered Revenues:				
10a	Service Charge	14,291.7	13,877.2	(414.5)	-3.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	14,291.7	13,877.2	(414.5)	-3.0%
	Other Revenues:				
13a	Private Fire Protection	127.6	127.6	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	93.6	93.6	0.0	0.0%
16a	Total Other Revenues	221.2	221.2	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	52,888.6	52,019.7	(868.9)	-1.7%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	34,569.4	34,248.5	(320.9)	-0.9%
2b	Business	5,875.9	5,910.5	34.7	0.6%
3b	Multiple Family	1,598.7	1,608.1	9.4	0.6%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	1,868.1	1,879.1	11.0	0.6%
6b	Other	50.3	50.6	0.3	0.6%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	43,962.4	43,696.8	(265.5)	-0.6%
	Unmetered Revenues:				
10b	Service Charge	10,482.7	14,172.2	3,689.5	26.0%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	10,482.7	14,172.2	3,689.5	26.0%
	Other Revenues:				
13b	Private Fire Protection	139.3	139.3	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	94.1	94.1	0.0	0.0%
16b	Total Other Revenues	233.4	233.4	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	54,678.5	58,102.4	3,424.0	5.9%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	25,466.8	25,466.8	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	3,349.4	3,349.4	0.0	0.0%
4	Purchased Chemicals	2.9	2.9	0.0	0.0%
5	Payroll	1,900.1	1,900.1	0.0	0.0%
6	Postage	93.0	79.3	(13.6)	-17.2%
7	Transportation	263.4	263.4	0.0	0.0%
	Purchased Services:				
8	Source of Supply	1.2	2.0	0.8	39.0%
9	Pumping	153.2	153.2	0.0	0.0%
10	Water Treatment	215.6	215.6	0.0	0.0%
11	Transmission & Distribution	330.9	330.9	0.0	0.0%
12	Customer Accounting	482.4	482.4	0.0	0.0%
13	Conservation	642.6	662.6	20.0	3.0%
14	Total Operations Exp. excluding Uncollectibles	32,901.5	32,908.6	7.1	0.0%
	Maintenance Expenses:				
15	Payroll	600.4	600.4	0.0	0.0%
16	Transportation	120.8	120.8	0.0	0.0%
17	Stores	147.5	147.5	0.0	0.0%
18	Contracted Maintenance	798.7	798.7	0.0	0.0%
19	Total Maintenance Expenses	1,667.5	1,667.5	0.0	0.0%
	At Present Rates				
20	Operating Revenues	52,888.6	52,019.7	(868.9)	-1.7%
21	*Uncollectible Rate*	0.1372%	0.1218%	*-0.0154%*	*-12.6%*
22	Uncollectibles Expense	72.6	63.4	(9.2)	-14.5%
23	Total O&M Expenses including Uncollectibles	34,641.5	34,639.4	(2.1)	0.0%
	At Proposed Rates				
25	Operating Revenues	54,616.9	58,039.7	3,422.8	5.9%
26	*Uncollectible Rate*	0.1399%	0.1399%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	75.0	71.8	(3.2)	-4.5%
28	Total O&M Expenses including Uncollectibles	34,643.9	34,647.9	3.9	0.0%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	25,492.7	25,492.7	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	3,497.7	3,497.7	0.0	0.0%
4	Purchased Chemicals	3.0	3.0	0.0	0.0%
5	Payroll	1,962.8	1,962.8	0.0	0.0%
6	Postage	84.2	79.4	(4.8)	-6.0%
7	Transportation	270.0	270.0	0.0	0.0%
	Purchased Services:				
8	Source of Supply	1.2	2.0	0.8	39.0%
9	Pumping	157.0	157.0	0.0	0.0%
10	Water Treatment	219.5	219.5	0.0	0.0%
11	Transmission & Distribution	339.3	339.3	0.0	0.0%
12	Customer Accounting	494.5	494.5	0.0	0.0%
13	Conservation	662.6	662.6	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	33,184.6	33,180.6	(4.0)	0.0%
	Maintenance Expenses:				
15	Payroll	620.2	620.2	0.0	0.0%
16	Transportation	123.8	123.8	0.0	0.0%
17	Stores	151.2	151.2	0.0	0.0%
18	Contracted Maintenance	816.2	816.2	0.0	0.0%
19	Total Maintenance Expenses	1,711.6	1,711.6	0.0	0.0%
	At Present Rates				
20	Operating Revenues	54,678.5	58,102.4	3,424.0	5.9%
21	*Uncollectible Rate*	0.1358%	0.1227%	*-1.3133%*	*-10.7%*
22	Uncollectibles Expense	74.3	71.3	(3.0)	-4.2%
23	Total O&M Expenses including Uncollectibles	34,970.5	34,963.5	(7.0)	0.0%
	At Proposed Rates				
25	Operating Revenues	55,932.6	60,902.2	4,969.7	8.2%
26	*Uncollectible Rate*	0.1399%	0.1892%	*4.9317%*	*26.1%*
27	Uncollectibles Expense	76.0	76.6	0.6	0.7%
28	Total O&M Expenses including Uncollectibles	34,972.2	34,968.8	(3.4)	0.0%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	668.0	668.0	0.0	0.0%
2a	Benefits	1,001.6	1,040.2	38.6	3.7%
3a	Transportation Expenses	0.1	0.1	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	313.5	313.5	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(263.2)	(263.2)	0.0	0.0%
6a	Workers' Compensation	36.3	47.0	10.7	22.8%
7a	Non-Specifics	712.9	649.8	(63.2)	-9.7%
8a	Subtotal	2,469.2	2,455.3	(13.9)	-0.6%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	7.7	49.3	41.6	84.3%
9aa	Acquisition Synergies	(44.0)	(44.0)	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(2.2)	(2.2)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	2,430.7	2,458.4	27.7	1.1%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	682.4	682.4	0.0	0.0%
2b	Benefits	1,088.5	1,123.4	34.8	3.1%
3b	Transportation Expenses	0.1	0.1	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	313.5	313.5	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(271.9)	(271.9)	0.0	0.0%
6b	Workers' Compensation	37.2	50.3	13.0	25.9%
7b	Non-Specifics	666.3	666.3	0.0	0.0%
8b	Subtotal	2,516.2	2,564.0	47.8	1.9%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	0.0	41.6	41.6	100.0%
9bb	Acquisition Synergies	(41.7)	(41.7)	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(2.3)	(2.3)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	2,472.2	2,561.6	89.4	3.5%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	806.7	1,029.6	222.8	21.6%
2a	Payroll Taxes	256.6	256.5	(0.0)	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	52,816.1	51,956.4	(859.7)	-1.7%
4a	*Effective Local Franchise Tax Rate*	*1.049%*	*1.058%*	*0.841%*	*0.8%*
5a	Franchise Taxes-Present Rates	554.2	549.5	(4.7)	-0.8%
5a1	Business License-Present Rates	3.1	3.1	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	1,620.5	1,838.7	218.2	11.9%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	54,541.9	57,968.0	3,426.0	5.9%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*1.058%*	*-1.670%*	*-1.6%*
9a	Franchise Taxes-Proposed Rates	572.4	613.0	40.6	6.6%
9a1	Business License-Proposed Rates	3.1	3.1	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	1,638.8	1,902.1	263.4	13.8%

Escalation Year 2024 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	859.5	1,153.7	294.2	25.5%
2b	Payroll Taxes	263.9	263.9	(0.0)	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	54,604.2	58,031.2	3,427.0	5.9%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*1.058%*	*-1.670%*	*-1.6%*
5b	Franchise Taxes-Present Rates	568.4	613.5	45.1	7.4%
5b1	Business License-Present Rates	3.1	3.1	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	1,694.8	2,034.1	339.3	16.7%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	55,856.6	60,825.6	4,969.1	8.2%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*1.058%*	*-1.670%*	*-1.6%*
9b	Franchise Taxes-Proposed Rates	586.3	643.0	56.7	8.8%
9b1	Business License-Proposed Rates	3.1	3.1	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	1,712.7	2,063.6	350.9	17.0%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	52,888.6	52,019.7	(868.9)	-1.7%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	34,568.9	34,576.1	7.1	0.0%
3	Uncollectibles Expense	72.6	63.4	(9.2)	-14.5%
4	A&G Expenses	2,430.7	2,458.4	27.7	1.1%
5	G.O. Prorated Expenses	6,261.7	6,633.8	372.1	5.6%
6	G.O. Book Depreciation (to be excluded)	(694.5)	(851.4)	(156.9)	18.4%
7	Transportation Deprec. Expense (to be excluded)	(110.6)	(166.8)	(56.2)	33.7%
8	Taxes On Other Than Income	1,620.5	1,838.7	218.2	11.9%
8a	Non-deductible Meals	(17.1)	(16.9)	0.2	-1.2%
9	Interest Expense	1,819.9	2,528.3	708.4	28.0%
10	Total Common Deductions	45,952.1	47,063.7	1,111.6	2.4%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	4,231.9	9,798.6	5,566.7	56.8%
12	Tax Depreciation - G.O.	588.4	953.8	365.4	38.3%
13	Subtotal	4,820.2	10,752.4	5,932.2	55.2%
14	Total State Deductions, incl. Common Deductions	50,772.4	57,816.1	7,043.7	12.2%
	Federal Tax Deductions				
16	Book Depreciation - District	3,364.7	3,987.7	623.0	15.6%
17	Book Depreciation - G.O.	694.5	851.4	156.9	18.4%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	187.1	(512.4)	(699.5)	136.5%
20	Subtotal	4,246.2	4,326.6	80.4	1.9%
21	Total Fed. Deductions, incl. Common Deductions	50,198.4	51,390.3	1,191.9	2.3%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	2,116.3	(5,796.4)	(7,912.6)	136.5%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	187.1	(512.4)	(699.5)	136.5%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	2,690.3	629.4	(2,060.8)	-327.4%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	565.0	132.2	(2,060.8)	-327.4%
28	Adjustment to FIT, Regulatory Liability	(465.3)	(465.6)	(0.3)	0.1%
29	Total FIT, with Adjustment	99.7	(333.4)	(433.1)	129.9%
30	Total Income Taxes for Revenues at Present Rates	286.8	(845.8)	(1,132.6)	133.9%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	54,616.9	58,039.7	3,422.8	5.9%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	34,568.9	34,576.1	7.1	0.0%
3	Uncollectibles Expense	75.0	71.8	(3.2)	-4.5%
4	A&G Expenses	2,430.7	2,458.4	27.7	1.1%
5	G.O. Prorated Expenses	6,261.7	6,633.8	372.1	5.6%
6	G.O. Book Depreciation (to be excluded)	(694.5)	(851.4)	(156.9)	18.4%
7	Transportation Deprec. Expense (to be excluded)	(110.6)	(166.8)	(56.2)	33.7%
8	Taxes On Other Than Income	1,638.8	1,902.1	263.4	13.8%
8a	Non-deductible Meals	(17.1)	(16.9)	0.2	-1.2%
9	Interest Expense	1,819.9	2,528.3	708.4	28.0%
10	Total Common Deductions	45,972.8	47,135.5	1,162.8	2.5%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	4,231.9	9,798.6	5,566.7	56.8%
12	Tax Depreciation - G.O.	588.4	953.8	365.4	38.3%
13	Subtotal	4,820.2	10,752.4	5,932.2	55.2%
14	Total State Deductions, incl. Common Deductions	50,793.0	57,888.0	7,095.0	12.3%
	Federal Tax Deductions				
16	Book Depreciation - District	3,364.7	3,987.7	623.0	15.6%
17	Book Depreciation - G.O.	694.5	851.4	156.9	18.4%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	338.0	13.4	(324.6)	-2419.4%
20	Subtotal	4,397.2	4,852.4	455.2	9.4%
21	Total Fed. Deductions, incl. Common Deductions	50,370.0	51,988.0	1,618.0	3.1%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	3,823.9	151.8	(3,672.1)	-2419.4%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	338.0	13.4	(324.6)	-2419.4%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	4,247.0	6,051.8	1,804.8	29.8%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	891.9	1,270.9	379.0	29.8%
28	Adjustment to FIT, Regulatory Liability	(465.3)	(465.6)	(0.3)	0.1%
29	Total FIT, with Adjustment	426.6	805.3	378.7	47.0%
30	Total Income Taxes for Revenues at Proposed Rates	764.6	818.7	54.0	6.6%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	141,095.8	163,665.4	22,569.6	13.8%
2a	Adjustments	27.3	27.3	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	7,667.3	19,237.4	11,570.1	60.1%
4a	Advances	352.4	352.4	0.0	0.0%
5a	Contributions	300.0	300.0	0.0	0.0%
6a	Total Gross Additions	8,319.7	19,889.8	11,570.1	58.2%
8a	Retirements	467.7	467.7	0.0	0.0%
9a	Net Additions	8,787.4	20,357.6	11,570.1	56.8%
10a	Plant in Service - End of Year	149,910.5	184,050.3	34,139.8	18.5%
11a	*Plant Weighting Factor*	*45.64%*	*45.64%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	145,106.3	172,956.4	27,850.1	16.1%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	149,910.5	184,050.3	34,139.8	18.5%
2b	Adjustments	24.7	24.7	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	8,682.4	18,091.9	9,409.5	52.0%
4b	Advances	352.4	352.4	0.0	0.0%
5b	Contributions	300.0	300.0	0.0	0.0%
6b	Total Gross Additions	9,334.8	18,744.4	9,409.5	50.2%
8b	Retirements	467.7	467.7	0.0	0.0%
9b	Net Additions	9,802.6	19,212.1	9,409.5	49.0%
10b	Plant in Service - End of Year	159,737.8	203,287.1	43,549.3	21.4%
11b	*Plant Weighting Factor*	*45.64%*	*45.64%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	154,384.3	192,818.5	38,434.2	19.9%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Depreciation Reserve - Beginning of Year	59,379.0	59,820.5	441.5	0.7%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(72.7)	(96.8)	(24.1)	24.9%
3a	Contributed Plant	(176.6)	(175.0)	1.5	-0.9%
4a	Depreciation Accrual	3,613.932	4,259.5	645.6	15.2%
5a	Total Accruals	3,364.7	3,987.7	623.0	15.6%
	Retirements				
6a	Net Retirements	(467.746)	(467.7)	0.0	0.0%
8a	Total Retirement	(467.7)	(467.7)	0.0	0.0%
9a	Net Additions	3,146	3,791.8	645.6	17.0%
7a	Carry Forward Adjustment	0.0	(148.9)	(148.9)	100.0%
10a	Depreciation Reserve - End of Year	62,525.2	63,463.4	938.2	1.5%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	60,952.1	61,567.5	615.4	1.0%
13a	*Deprec. expense for summary of earnings calc.*	3,364.7	3,987.7	623.0	15.6%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Depreciation Reserve - Beginning of Year	62,525.2	63,463.4	938.2	1.5%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(93.5)	(97.3)	(3.8)	3.9%
3b	Contributed Plant	(183.8)	(182.6)	1.2	-0.6%
4b	Depreciation Accrual	3,857.6	4,795.6	938.0	19.6%
5b	Total Accruals	3,580.4	4,515.7	935.3	20.7%
	Retirements and Adjustments:				
6b	Net Retirements	(467.7)	(467.7)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(467.7)	(467.7)	0.0	
					0.0%
9b	Net Additions	3,389.9	4,327.9	938.0	21.7%
10b	Depreciation Reserve - End of Year	65,915.1	67,791.3	1,876.2	2.8%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	64,220.2	65,627.4	1,407.2	2.1%
13b	* *Deprec. expense for summary of earnings calc.*	3,580.4	4,515.7	935.3	20.7%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	145,106.3	172,956.4	27,850.1	16.1%
3	Weighted Average Depreciation Reserve	(60,952.1)	(61,567.5)	(615.4)	1.0%
4	Net Utility Plant	84,154.2	111,388.9	27,234.7	24.5%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	3,494.3	3,498.0	3.6	0.1%
5	Advances in Construction	3,653.5	3,653.5	0.0	0.0%
6	Reserve for Amortization of Intangibles	795.0	864.2	69.2	8.0%
7	Deferred Taxes	10,469.4	13,315.1	2,845.7	21.4%
8	Unamortized Investment Tax Credits	56.6	56.6	0.0	0.0%
9	Total Deductions from Rate Base	18,468.8	21,387.3	2,918.5	13.6%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	590.3	590.3	0.0	0.0%
10a	Tank Painting	1,239.9	1,239.9	0.0	0.0%
11	Working Cash, Lead-Lag	1,073.0	1,267.7	194.7	15.4%
12	Amount Withheld from Employees	(17.8)	(17.5)	0.3	-1.5%
13	Total Working Capital	2,885.4	3,080.4	195.0	6.3%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	224.4	224.4	0.0	0.0%
17	Total Additions to Rate Base	3,109.8	3,304.7	195.0	5.9%
18	Weighted Average Rate Base, District	68,795.1	93,306.3	24,511.2	26.3%
19	Weighted Average Rate Base, G.O. Allocation	4,008.3	6,330.0	2,321.7	36.7%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	894.0	1,821.2	927.2	50.9%
20	Total Weighted Average Rate Base	73,697.5	101,457.6	27,760.1	27.4%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*70,812.078*	*98,377.2*	*27,565.1*	*28.0%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*1,819.9*	*2,528.3*	*708.4*	*28.0%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	154,384.3	192,818.5	38,434.2	19.9%
3	Weighted Average Depreciation Reserve	(64,220.2)	(65,627.4)	(1,407.2)	2.1%
4	Net Utility Plant	90,164.1	127,191.1	37,027.0	29.1%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	3,614.2	3,619.2	5.0	0.1%
5	Advances in Construction	3,829.5	3,829.5	0.0	0.0%
6	Reserve for Amortization of Intangibles	814.3	939.6	125.3	13.3%
7	Deferred Taxes	10,152.2	13,999.5	3,847.3	27.5%
8	Unamortized Investment Tax Credits	48.1	48.1	0.0	0.0%
9	Total Deductions from Rate Base	18,458.3	22,435.8	3,977.5	17.7%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	590.3	590.3	0.0	0.0%
10a	Tank Painting	2,393.8	2,459.1	65.3	2.7%
11	Working Cash, Lead-Lag	1,121.5	1,364.4	242.9	17.8%
12	Amount Withheld from Employees	(17.8)	(17.5)	0.3	-1.5%
13	Total Working Capital	4,087.9	4,396.3	308.4	7.0%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	251.3	251.3	0.0	0.0%
17	Total Additions to Rate Base	4,339.2	4,647.6	308.4	6.6%
18	Weighted Average Rate Base, District	76,045.1	109,402.9	33,357.8	30.5%
19	Weighted Average Rate Base, G.O. Allocation	4,056.3	6,854.7	2,798.4	40.8%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	928.5	1,926.7	998.2	51.8%
20	Total Weighted Average Rate Base	81,029.9	118,184.3	37,154.3	31.4%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*76,942.0*	*113,788.0*	*36,846.0*	*32.4%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*1,977.4*	*2,924.4*	*946.9*	*32.4%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	3,360.6	5,052.4	1,691.8
2. Test Year 2023 Increase (%)	13.6%	20.5%	6.9%
3. Escalation Year 2024 Increase (%)	2.2%	5.6%	3.4%
4. Escalation Year 2025 Increase (%)	2.5%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**24,697.0**	**24,697.0**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	13,371.6	13,430.2	58.6	0.4%
3a	Administrative & General	436.4	458.0	21.7	4.7%
4a	Payroll	1,489.7	1,489.7	0.0	0.0%
5a	General Office - *prorated expenses*	3,477.3	3,711.7	234.4	6.3%
6a	Depreciation Expense	3,021.8	3,324.9	303.0	9.1%
7a	Taxes Other Than Income	1,006.9	1,090.9	84.0	7.7%
8a	California Corporate Franchise Tax	(152.9)	(488.3)	(335.5)	68.7%
9a	Federal Income Tax	(205.7)	(348.3)	(142.6)	40.9%
10a	Total Operating Expenses	22,445.2	22,668.7	223.5	1.0%
11a	Net Operating Revenues	2,251.9	2,028.3	(223.5)	-11.0%
12a	Weighted Average Rate Base	62,145.8	75,287.1	13,141.3	17.5%
13a	***Return on Rate Base***	***3.62%***	***2.69%***	***-0.93%***	***-34.5%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	28,057.7	29,749.4	**1,691.8**	**5.7%**
	Operating Expenses:				
2b	Operation & Maintenance	13,374.1	13,433.8	59.8	0.4%
3b	Administrative & General	436.4	458.0	21.7	4.7%
4b	Payroll	1,489.7	1,489.7	0.0	0.0%
5b	General Office - *prorated expenses*	3,477.3	3,711.7	234.4	6.3%
6b	Depreciation Expense	3,021.8	3,324.9	303.0	9.1%
7b	Taxes Other Than Income	1,037.2	1,136.4	99.2	8.7%
8b	California Corporate Franchise Tax	141.3	(46.0)	(187.4)	407.1%
9b	Federal Income Tax	431.4	609.5	178.1	29.2%
10b	Total Operating Expenses	23,409.2	24,118.0	708.8	2.9%
11b	Net Operating Revenues	4,648.5	5,631.5	983.0	17.5%
12b	Weighted Average Rate Base	62,146	75,287.1	13,141.3	17.5%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**3,360.6**	**5,052.4**	**1,691.8**	**33.5%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	28,773.8	29,501.3	727.5	2.5%
2	Operating Expenses:*				
3	Operation & Maintenance	13,430.8	13,699.4	268.6	2.0%
4	Administrative & General	532.3	542.9	10.6	2.0%
5	Payroll	1,538.9	1,569.7	30.8	2.0%
6	G.O. Prorated Expenses	3,461.1	3,530.3	69.2	2.0%
7	Depreciation Expense	3,148.9	3,211.9	63.0	2.0%
8	Taxes Other Than Income	1,102.3	1,124.3	22.0	2.0%
9	California Corporate Franchise Tax	171.6	171.56	0.0	0.0%
10	Federal Income Tax	476.3	476.30	0.0	0.0%
11	Total Operating Expenses	23,862.1	24,326.4	464.3	1.9%
12	Net Operating Revenues	4,911.7	5,174.9	263.2	5.1%
13	Weighted Average Rate Base	65,664.4	69,183.1	3,518.6	5.1%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***0.0***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	156.4	156.4	0.0	0.0%
2a	Business	543.3	543.3	0.0	0.0%
3a	Multiple Family	1,739.4	1,739.4	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	1,343.9	1,343.9	0.0	0.0%
6a	Other	334.9	334.9	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	156.4	156.4	0.0	0.0%
2b	Business	543.3	543.3	0.0	0.0%
3b	Multiple Family	1,739.4	1,739.4	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	1,347.2	1,347.2	0.0	0.0%
6b	Other	311.8	311.8	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	17,375	17,375	0	0%
2a	Business	992	992	0	0%
3a	Multiple Family	104	104	0	0%
4a	Industrial	0	0	0	0%
5a	Public Authority	228	228	0	0%
6a	Other	27	27	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	18,727	18,727	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	373	373	0	0%
12a	Public Fire Protection	41	41	0	0%
13a	Total Number of Unmetered Connections	414	414	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	19,141	19,141	0	0%
15a	Excluding Fire Protection	18,727	18,727	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	17,452	17,452	0	0%
2b	Business	990	990	0	0%
3b	Multiple Family	105	105	0	0%
4b	Industrial	0	0	0	0%
5b	Public Authority	228	228	0	0%
6b	Other	29	29	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	18,804	18,804	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	374	374	0	0%
12b	Public Fire Protection	41	41	0	0%
13b	Total Number of Unmetered Connections	415	415	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	19,219	19,219	0	0%
15b	Excluding Fire Protection	18,804	18,804	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	2,716.7	2,716.7	0.0	0.0%
2a	Business	539.0	539.0	0.0	0.0%
3a	Multiple Family	180.9	180.9	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	306.8	306.8	0.0	0.0%
6a	Other	9.0	9.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	3,752.6	3,752.6	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	3,752.6	3,752.6	0.0	0.0%
12a	*Unaccounted For Water Rate*	*4.8%*	*4.8%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	188.7	188.7	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**3,941.3**	**3,941.3**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	9,047.9	9,047.9	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	894.8	894.8	0.0	0.0%
17a	Purchased Water	3,046.5	3,046.5	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**3,941.3**	**3,941.3**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	2,728.8	2,728.8	0.0	0.0%
2b	Business	537.9	537.9	0.0	0.0%
3b	Multiple Family	182.8	182.8	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	306.8	306.8	0.0	0.0%
6b	Other	9.0	9.0	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	3,765.3	3,765.3	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	3,765.3	3,765.3	0.0	0.0%
12b	*Unaccounted For Water Rate*	*4.8%*	*4.8%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	189.4	189.4	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**3,954.7**	**3,954.7**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	9,078.9	9,078.9	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	895.7	895.7	0.0	0.0%
17b	Purchased Water	3,059.1	3,059.1	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**3,954.7**	**3,954.7**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	11,810.4	11,810.4	0.0	0.0%
2a	Business	2,625.4	2,625.4	0.0	0.0%
3a	Multiple Family	881.1	881.1	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	1,494.4	1,494.4	0.0	0.0%
6a	Other	44.0	44.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	16,855.5	16,855.5	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	7,534.4	7,534.4	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	7,534.4	7,534.4	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	289.9	289.9	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	17.3	17.3	0.0	0.0%
16a	Total Other Revenues	307.2	307.2	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	24,697.0	24,697.0	0.0	0.0%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	14,753.9	13,197.4	(1,556.5)	-11.8%
2b	Business	3,257.8	2,913.6	(344.2)	-11.8%
3b	Multiple Family	1,107.2	990.2	(117.0)	-11.8%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	1,858.4	1,662.1	(196.3)	-11.8%
6b	Other	54.8	49.0	(5.8)	-11.8%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	21,032.0	18,812.3	(2,219.8)	-11.8%
	Unmetered Revenues:				
10b	Service Charge	6,793.8	10,714.6	3,920.8	36.6%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	6,793.8	10,714.6	3,920.8	36.6%
	Other Revenues:				
13b	Private Fire Protection	312.7	312.7	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	17.2	17.2	0.0	0.0%
16b	Total Other Revenues	329.9	329.9	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	28,155.7	29,856.8	1,701.1	5.7%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	11,084.9	11,084.9	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	382.1	382.1	0.0	0.0%
4	Purchased Chemicals	113.8	113.8	0.0	0.0%
5	Payroll	949.1	949.1	0.0	0.0%
6	Postage	62.3	58.8	(3.5)	-6.0%
7	Transportation	121.7	121.7	0.0	0.0%
	Purchased Services:				
8	Source of Supply	0.2	36.1	35.9	99.5%
9	Pumping	54.6	54.6	0.0	0.0%
10	Water Treatment	132.1	132.1	0.0	0.0%
11	Transmission & Distribution	150.5	150.5	0.0	0.0%
12	Customer Accounting	255.5	255.5	0.0	0.0%
13	Conservation	498.4	524.6	26.2	5.0%
14	Total Operations Exp. excluding Uncollectibles	13,805.3	13,863.9	58.6	0.4%
	Maintenance Expenses:				
15	Payroll	274.5	274.5	0.0	0.0%
16	Transportation	43.4	43.4	0.0	0.0%
17	Stores	40.8	40.8	0.0	0.0%
18	Contracted Maintenance	413.4	413.4	0.0	0.0%
19	Total Maintenance Expenses	772.1	772.1	0.0	0.0%
	At Present Rates				
20	Operating Revenues	24,697.0	24,697.0	0.0	0.0%
21	*Uncollectible Rate*	0.0720%	0.0720%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	17.8	17.8	0.0	0.0%
23	Total O&M Expenses including Uncollectibles	14,595.2	14,653.8	58.6	0.4%
	At Proposed Rates				
25	Operating Revenues	28,057.7	29,749.4	1,691.8	5.7%
26	*Uncollectible Rate*	0.0720%	0.0720%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	20.2	21.4	1.2	5.7%
28	Total O&M Expenses including Uncollectibles	14,597.6	14,657.4	59.8	0.4%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	11,111.4	11,111.4	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	357.3	357.3	0.0	0.0%
4	Purchased Chemicals	116.8	116.8	0.0	0.0%
5	Payroll	980.4	980.4	0.0	0.0%
6	Postage	62.4	58.9	(3.5)	-6.0%
7	Transportation	124.8	124.8	0.0	0.0%
	Purchased Services:				
8	Source of Supply	0.2	37.0	36.8	99.5%
9	Pumping	56.0	56.0	0.0	0.0%
10	Water Treatment	135.0	135.0	0.0	0.0%
11	Transmission & Distribution	154.3	154.3	0.0	0.0%
12	Customer Accounting	262.0	262.0	0.0	0.0%
13	Conservation	524.6	524.6	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	13,885.1	13,918.3	33.2	0.2%
	Maintenance Expenses:				
15	Payroll	283.5	283.5	0.0	0.0%
16	Transportation	44.5	44.5	0.0	0.0%
17	Stores	41.8	41.8	0.0	0.0%
18	Contracted Maintenance	419.0	419.0	0.0	0.0%
19	Total Maintenance Expenses	788.9	788.9	0.0	0.0%
	At Present Rates				
20	Operating Revenues	28,155.7	29,856.8	1,701.1	5.7%
21	*Uncollectible Rate*	0.0720%	0.0720%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	20.3	21.5	1.2	5.7%
23	Total O&M Expenses including Uncollectibles	14,694.3	14,728.7	34.5	0.2%
	At Proposed Rates				
25	Operating Revenues	28,773.8	31,526.4	2,752.6	8.7%
26	*Uncollectible Rate*	0.0720%	0.0720%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	20.7	22.7	2.0	8.7%
28	Total O&M Expenses including Uncollectibles	14,694.7	14,729.9	35.2	0.2%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	266.2	266.2	0.0	0.0%
2a	Benefits	470.2	488.3	18.1	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	48.1	48.1	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(162.6)	(162.6)	0.0	0.0%
6a	Workers' Compensation	21.9	22.1	0.1	0.7%
7a	Non-Specifics	61.4	56.2	(5.2)	-9.2%
8a	Subtotal	705.2	718.3	13.1	1.8%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	(0.0)	8.6	8.6	100.2%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(2.7)	(2.7)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	702.5	724.2	21.7	3.0%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	275.0	275.0	0.0	0.0%
2b	Benefits	511.0	527.3	16.3	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	48.1	48.1	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(168.0)	(168.0)	0.0	0.0%
6b	Workers' Compensation	22.5	23.6	1.1	4.7%
7b	Non-Specifics	57.0	57.0	0.0	0.0%
8b	Subtotal	745.6	763.1	17.5	2.3%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	64.4	70.3	6.0	8.5%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(2.8)	(2.8)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	807.2	830.6	23.4	2.8%

TABLE 5-1
TAXES OTHER THAN INCOME

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	677.5	761.5	84.0	11.0%
2a	Payroll Taxes	107.0	107.0	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	24,679.3	24,679.3	0.0	0.0%
4a	*Effective Local Franchise Tax Rate*	*0.000%*	*0.000%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5a1	Business License-Present Rates	222.5	222.5	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	1,006.9	1,090.9	84.0	7.7%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	28,037.4	29,728.0	1,690.6	5.7%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9a	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9a1	Business License-Proposed Rates	252.7	268.0	15.2	5.7%
10a	Total Taxes Other Than Income, At Proposed Rates	1,037.2	1,136.4	99.2	8.7%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	732.6	877.8	145.3	16.5%
2b	Payroll Taxes	110.5	110.5	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	28,135.4	29,835.3	1,699.8	5.7%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
5b	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5b1	Business License-Present Rates	253.6	268.9	15.3	5.7%
6b	Total Taxes Other Than Income, At Present Rates	1,096.7	1,257.3	160.6	12.8%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	28,753.0	31,503.6	2,750.6	8.7%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9b	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9b1	Business License-Proposed Rates	259.2	284.0	24.8	8.7%
10b	Total Taxes Other Than Income, At Proposed Rates	1,102.3	1,272.3	170.0	13.4%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	24,697.0	24,697.0	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	14,577.4	14,636.0	58.6	0.4%
3	Uncollectibles Expense	17.8	17.8	0.0	0.0%
4	A&G Expenses	702.5	724.2	21.7	3.0%
5	G.O. Prorated Expenses	3,477.3	3,711.7	234.4	6.3%
6	G.O. Book Depreciation (to be excluded)	(385.7)	(476.3)	(90.7)	19.0%
7	Transportation Deprec. Expense (to be excluded)	(43.1)	(65.7)	(22.6)	34.5%
8	Taxes On Other Than Income	1,006.9	1,090.9	84.0	7.7%
8a	Non-deductible Meals	(14.4)	(14.3)	0.1	-0.4%
9	Interest Expense	1,528.3	1,863.5	335.2	18.0%
10	Total Common Deductions	20,867.1	21,487.6	620.5	2.9%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	5,310.4	8,333.3	3,022.9	36.3%
12	Tax Depreciation - G.O.	248.6	399.9	151.3	37.8%
13	Subtotal	5,559.0	8,733.2	3,174.2	36.3%
14	Total State Deductions, incl. Common Deductions	26,426.1	30,220.9	3,794.7	12.6%
	Federal Tax Deductions				
16	Book Depreciation - District	3,021.8	3,324.9	303.0	9.1%
17	Book Depreciation - G.O.	385.7	476.3	90.7	19.0%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(152.9)	(488.3)	(335.5)	68.7%
20	Subtotal	3,254.7	3,312.9	58.2	1.8%
21	Total Fed. Deductions, incl. Common Deductions	24,121.8	24,800.5	678.8	2.7%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(1,729.1)	(5,523.8)	(3,794.7)	68.7%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(152.9)	(488.3)	(335.5)	68.7%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	575.3	(103.5)	(678.8)	655.9%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	120.8	(21.7)	(678.8)	655.9%
28	Adjustment to FIT, Regulatory Liability	(326.5)	(326.6)	(0.1)	0.0%
29	Total FIT, with Adjustment	(205.7)	(348.3)	(142.6)	40.9%
30	Total Income Taxes for Revenues at Present Rates	(358.5)	(836.6)	(478.1)	57.1%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	28,057.7	29,749.4	1,691.8	5.7%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	14,577.4	14,636.0	58.6	0.4%
3	Uncollectibles Expense	20.2	21.4	1.2	5.7%
4	A&G Expenses	702.5	724.2	21.7	3.0%
5	G.O. Prorated Expenses	3,477.3	3,711.7	234.4	6.3%
6	G.O. Book Depreciation (to be excluded)	(385.7)	(476.3)	(90.7)	19.0%
7	Transportation Deprec. Expense (to be excluded)	(43.1)	(65.7)	(22.6)	34.5%
8	Taxes On Other Than Income	1,037.2	1,136.4	99.2	8.7%
8a	Non-deductible Meals	(14.4)	(14.3)	0.1	-0.4%
9	Interest Expense	1,528.3	1,863.5	335.2	18.0%
10	Total Common Deductions	20,899.8	21,536.8	637.0	3.0%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	5,310.4	8,333.3	3,022.9	36.3%
12	Tax Depreciation - G.O.	248.6	399.9	151.3	37.8%
13	Subtotal	5,559.0	8,733.2	3,174.2	36.3%
14	Total State Deductions, incl. Common Deductions	26,458.8	30,270.0	3,811.2	12.6%
	Federal Tax Deductions				
16	Book Depreciation - District	3,021.8	3,324.9	303.0	9.1%
17	Book Depreciation - G.O.	385.7	476.3	90.7	19.0%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	141.3	(46.0)	(187.4)	407.1%
20	Subtotal	3,548.9	3,755.2	206.3	5.5%
21	Total Fed. Deductions, incl. Common Deductions	24,448.6	25,292.0	843.3	3.3%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	1,598.8	(520.6)	(2,119.4)	407.1%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	141.3	(46.0)	(187.4)	407.1%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	3,609.0	4,457.5	848.5	19.0%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	757.9	936.1	178.2	19.0%
28	Adjustment to FIT, Regulatory Liability	(326.5)	(326.6)	(0.1)	0.0%
29	Total FIT, with Adjustment	431.4	609.5	178.1	29.2%
30	Total Income Taxes for Revenues at Proposed Rates	572.7	563.5	(9.3)	-1.6%

TABLE 7-1
UTILITY PLANT IN SERVICE

Test Year 2023 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	119,465.1	128,744.6	9,279.5	7.2%
2a	Adjustments	26.0	26.0	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	5,602.1	12,999.3	7,397.3	56.9%
4a	Advances	263.7	263.7	0.0	0.0%
5a	Contributions	126.9	126.9	0.0	0.0%
6a	Total Gross Additions	5,992.6	13,389.9	7,397.3	55.2%
8a	Retirements	382.0	382.0	0.0	0.0%
9a	Net Additions	6,374.6	13,771.8	7,397.3	53.7%
10a	Plant in Service - End of Year	125,865.6	142,542.4	16,676.8	11.7%
11a	*Plant Weighting Factor*	*44.08%*	*44.08%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	122,274.8	134,814.8	12,540.0	9.3%

Escalation Year 2024 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	125,865.6	142,542.4	16,676.8	11.7%
2b	Adjustments	23.2	23.2	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	5,147.8	14,814.0	9,666.2	65.3%
4b	Advances	263.7	263.7	0.0	0.0%
5b	Contributions	126.9	126.9	0.0	0.0%
6b	Total Gross Additions	5,538.4	15,204.5	9,666.2	63.6%
8b	Retirements	353.6	353.6	0.0	0.0%
9b	Net Additions	5,892.0	15,558.2	9,666.2	62.1%
10b	Plant in Service - End of Year	131,780.9	158,123.8	26,343.0	16.7%
11b	*Plant Weighting Factor*	*44.08%*	*44.08%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	128,462.7	149,400.0	20,937.3	14.0%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Depreciation Reserve - Beginning of Year	41,081.9	41,242.3	160.5	0.4%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(27.8)	(36.4)	(8.6)	23.6%
3a	Contributed Plant	(152.2)	(153.5)	(1.3)	0.9%
4a	Depreciation Accrual	3,201.859	3,514.8	312.9	8.9%
5a	Total Accruals	3,021.8	3,324.9	303.0	9.1%
	Retirements				
6a	Net Retirements	(381.956)	(382.0)	0.0	0.0%
8a	Total Retirement	(382.0)	(382.0)	0.0	0.0%
9a	Net Additions	2,820	3,132.8	312.9	10.0%
7a	Carry Forward Adjustment	0.0	(91.4)	(91.4)	100.0%
10a	Depreciation Reserve - End of Year	43,901.8	44,283.7	381.9	0.9%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	42,491.8	42,717.3	225.5	0.5%
13a	*Deprec. expense for summary of earnings calc.*	3,021.8	3,324.9	303.0	9.1%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Depreciation Reserve - Beginning of Year	43,901.8	44,283.7	381.9	0.9%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(28.7)	(37.7)	(9.0)	23.9%
3b	Contributed Plant	(154.1)	(154.8)	(0.7)	0.5%
4b	Depreciation Accrual	3,331.7	3,827.5	495.8	13.0%
5b	Total Accruals	3,148.9	3,635.0	486.0	13.4%
	Retirements and Adjustments:				
6b	Net Retirements	(353.6)	(353.6)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(353.6)	(353.6)	0.0	0.0%
9b	Net Additions	2,978.1	3,473.9	495.8	14.3%
10b	Depreciation Reserve - End of Year	46,879.9	47,757.6	877.7	1.8%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	45,390.8	46,020.7	629.8	1.4%
13b	* *Deprec. expense for summary of earnings calc.*	3,148.9	3,635.0	486.0	13.4%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	122,274.8	134,814.8	12,540.0	9.3%
3	Weighted Average Depreciation Reserve	(42,491.8)	(42,717.3)	(225.5)	0.5%
4	Net Utility Plant	79,783.0	92,097.5	12,314.5	13.4%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	2,745.3	2,744.1	(1.1)	0.0%
5	Advances in Construction	7,310.7	7,310.7	0.0	0.0%
6	Reserve for Amortization of Intangibles	251.7	270.3	18.5	6.8%
7	Deferred Taxes	12,308.1	12,878.8	570.7	4.4%
8	Unamortized Investment Tax Credits	75.8	75.8	0.0	0.0%
9	Total Deductions from Rate Base	22,691.6	23,279.7	588.1	2.5%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	217.1	217.1	0.0	0.0%
10a	Tank Painting	1,040.3	1,032.5	(7.9)	-0.8%
11	Working Cash, Lead-Lag	1,430.1	1,537.0	106.9	7.0%
12	Amount Withheld from Employees	(9.9)	(9.8)	0.1	-0.7%
13	Total Working Capital	2,677.6	2,776.7	99.1	3.6%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	150.9	150.9	0.0	0.0%
17	Total Additions to Rate Base	2,828.5	2,927.6	99.1	3.4%
18	Weighted Average Rate Base, District	59,919.9	71,745.4	11,825.6	16.5%
19	Weighted Average Rate Base, G.O. Allocation	2,225.9	3,541.7	1,315.8	37.2%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	62,145.8	75,287.1	13,141.3	17.5%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*59,468.220*	*72,510.5*	*13,042.2*	*18.0%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*1,528.3*	*1,863.5*	*335.2*	*18.0%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	128,462.7	149,400.0	20,937.3	14.0%
3	Weighted Average Depreciation Reserve	(45,390.8)	(46,020.7)	(629.8)	1.4%
4	Net Utility Plant	83,071.8	103,379.3	20,307.5	19.6%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	2,719.0	2,716.9	(2.2)	-0.1%
5	Advances in Construction	7,146.4	7,146.4	0.0	0.0%
6	Reserve for Amortization of Intangibles	292.5	326.5	34.0	10.4%
7	Deferred Taxes	12,411.6	13,550.4	1,138.7	8.4%
8	Unamortized Investment Tax Credits	74.4	74.4	0.0	0.0%
9	Total Deductions from Rate Base	22,643.9	23,814.5	1,170.5	4.9%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	217.1	217.1	0.0	0.0%
10a	Tank Painting	1,132.5	1,151.5	19.0	1.6%
11	Working Cash, Lead-Lag	1,484.3	1,644.8	160.5	9.8%
12	Amount Withheld from Employees	(9.9)	(9.8)	0.1	-0.7%
13	Total Working Capital	2,824.0	3,003.5	179.5	6.0%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	160.0	160.0	0.0	0.0%
17	Total Additions to Rate Base	2,984.0	3,163.5	179.5	5.7%
18	Weighted Average Rate Base, District	63,411.8	82,728.3	19,316.5	23.3%
19	Weighted Average Rate Base, G.O. Allocation	2,252.6	3,835.2	1,582.7	41.3%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	65,664.4	86,563.6	20,899.1	24.1%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*62,840.5*	*83,560.1*	*20,719.6*	*24.8%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*1,615.0*	*2,147.5*	*532.5*	*24.8%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	1,835.0	5,716.7	3,881.7
2. Test Year 2023 Increase (%)	4.6%	14.4%	9.8%
3. Escalation Year 2024 Increase (%)	5.9%	9.3%	3.5%
4. Escalation Year 2025 Increase (%)	4.7%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**39,621.4**	**39,620.5**	**(0.9)**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	20,917.1	20,937.8	20.8	0.1%
3a	Administrative & General	931.2	957.2	26.0	2.7%
4a	Payroll	2,207.7	2,449.4	241.7	9.9%
5a	General Office - *prorated expenses*	4,643.2	5,132.8	489.6	9.5%
6a	Depreciation Expense	3,629.4	4,339.5	710.1	16.4%
7a	Taxes Other Than Income	1,690.8	1,903.0	212.2	11.2%
8a	California Corporate Franchise Tax	(47.1)	(472.7)	(425.6)	90.0%
9a	Federal Income Tax	190.6	(198.0)	(388.6)	196.3%
10a	Total Operating Expenses	34,162.9	35,049.1	886.2	2.5%
11a	Net Operating Revenues	5,458.5	4,571.4	(887.2)	-19.4%
12a	Weighted Average Rate Base	90,368.2	115,292.6	24,924.4	21.6%
13a	***Return on Rate Base***	***6.04%***	***3.97%***	***-2.08%***	***-52.3%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	41,456.5	45,337.2	**3,880.8**	**8.6%**
	Operating Expenses:				
2b	Operation & Maintenance	20,917.4	20,938.9	21.5	0.1%
3b	Administrative & General	931.2	957.2	26.0	2.7%
4b	Payroll	2,207.7	2,449.4	241.7	9.9%
5b	General Office - *prorated expenses*	4,643.2	5,132.8	489.6	9.5%
6b	Depreciation Expense	3,629.4	4,339.5	710.1	16.4%
7b	Taxes Other Than Income	1,719.0	1,990.6	271.7	13.6%
8b	California Corporate Franchise Tax	112.6	24.8	(87.8)	-353.2%
9b	Federal Income Tax	536.4	879.4	343.0	39.0%
10b	Total Operating Expenses	34,696.9	36,712.8	2,015.8	5.5%
11b	Net Operating Revenues	6,759.5	8,624.5	1,864.9	21.6%
12b	Weighted Average Rate Base	90,368	115,292.6	24,924.4	21.6%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**1,835.0**	**5,716.7**	**3,881.7**	**67.9%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	43,956.1	46,015.8	2,059.6	4.5%
2	Operating Expenses:*				
3	Operation & Maintenance	21,018.5	21,438.9	420.4	2.0%
4	Administrative & General	985.8	1,005.6	19.7	2.0%
5	Payroll	2,280.6	2,326.2	45.6	2.0%
6	G.O. Prorated Expenses	4,621.5	4,713.9	92.4	2.0%
7	Depreciation Expense	4,105.0	4,187.1	82.1	2.0%
8	Taxes Other Than Income	1,891.3	1,929.2	37.8	2.0%
9	California Corporate Franchise Tax	161.1	161.07	0.0	0.0%
10	Federal Income Tax	771.1	771.15	0.0	0.0%
11	Total Operating Expenses	35,835.0	36,533.1	698.1	1.9%
12	Net Operating Revenues	8,121.1	9,482.7	1,361.6	14.4%
13	Weighted Average Rate Base	108,571.1	126,774.1	18,203.0	14.4%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***(0.0)***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	198.7	198.7	0.0	0.0%
2a	Business	842.4	842.4	0.0	0.0%
3a	Multiple Family	1,580.5	1,580.5	0.0	0.0%
4a	Industrial	680.0	680.0	0.0	0.0%
5a	Public Authority	988.7	988.7	0.0	0.0%
6a	Other	375.9	375.9	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	19,878.4	19,730.6	(147.7)	-0.7%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	198.7	198.7	0.0	0.0%
2b	Business	842.4	842.4	0.0	0.0%
3b	Multiple Family	1,580.5	1,580.5	0.0	0.0%
4b	Industrial	680.0	680.0	0.0	0.0%
5b	Public Authority	983.9	983.9	0.0	0.0%
6b	Other	433.7	433.7	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	19,878.4	19,730.6	(147.7)	-0.7%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	17,026	17,026	0	0%
2a	Business	1,180	1,180	0	0%
3a	Multiple Family	177	177	0	0%
4a	Industrial	3	3	0	0%
5a	Public Authority	211	211	0	0%
6a	Other	15	15	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	1	1	0	0%
9a	Total Number of Metered Connections	18,613	18,613	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	415	415	0	0%
12a	Public Fire Protection	17	17	0	0%
13a	Total Number of Unmetered Connections	432	432	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	19,045	19,045	0	0%
15a	Excluding Fire Protection	18,613	18,613	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	17,040	17,040	0	0%
2b	Business	1,182	1,182	0	0%
3b	Multiple Family	179	179	0	0%
4b	Industrial	3	3	0	0%
5b	Public Authority	212	212	0	0%
6b	Other	13	13	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	1	1	0	0%
9b	Total Number of Metered Connections	18,630	18,630	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	417	417	0	0%
12b	Public Fire Protection	18	18	0	0%
13b	Total Number of Unmetered Connections	435	435	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	19,065	19,065	0	0%
15b	Excluding Fire Protection	18,630	18,630	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Connections' Sales:				
1a	Residential	3,383.6	3,383.6	0.0	0.0%
2a	Business	993.9	993.9	0.0	0.0%
3a	Multiple Family	279.2	279.2	0.0	0.0%
4a	Industrial	2.0	2.0	0.0	0.0%
5a	Public Authority	208.2	208.2	0.0	0.0%
6a	Other	5.6	5.6	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	19.9	19.7	(0.1)	-0.7%
9a	Total Metered Connections' Sales	4,892.4	4,892.3	(0.1)	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	4,892.4	4,892.3	(0.1)	0.0%
12a	*Unaccounted For Water Rate*	*6.7%*	*6.7%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	353.9	354.1	0.1	0.0%
14a	**Total Requirement (Sales + UAF) ***	**5,246.3**	**5,246.3**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	12,044.0	12,044.0	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	1,459.8	1,459.8	0.0	0.0%
17a	Purchased Water	3,766.8	3,766.8	0.0	0.0%
18a	Surface Supply	19.7	19.7	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**5,246.3**	**5,246.3**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Connections' Sales:				
1b	Residential	3,386.4	3,386.4	0.0	0.0%
2b	Business	996.0	996.0	0.0	0.0%
3b	Multiple Family	282.2	282.2	0.0	0.0%
4b	Industrial	2.0	2.0	0.0	0.0%
5b	Public Authority	208.2	208.2	0.0	0.0%
6b	Other	5.6	5.6	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	19.9	19.7	(0.1)	-0.7%
9b	Total Metered Connections' Sales	4,900.3	4,900.1	(0.1)	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	4,900.3	4,900.1	(0.1)	0.0%
12b	*Unaccounted For Water Rate*	*6.7%*	*6.7%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	354.3	354.4	0.1	0.0%
14b	**Total Requirement (Sales + UAF) ***	**5,254.6**	**5,254.6**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	12,062.9	12,062.9	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	1,495.8	1,495.8	0.0	0.0%
17b	Purchased Water	3,739.0	3,739.0	0.0	0.0%
18b	Surface Supply	19.7	19.7	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**5,254.6**	**5,254.6**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	20,269.3	20,269.3	0.0	0.0%
2a	Business	6,278.6	6,278.6	0.0	0.0%
3a	Multiple Family	1,763.6	1,763.6	0.0	0.0%
4a	Industrial	12.9	12.9	0.0	0.0%
5a	Public Authority	1,315.1	1,315.1	0.0	0.0%
6a	Other	35.6	35.6	0.0	0.0%
7a	Irrigation	125.8	124.8	(0.9)	-0.7%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	29,800.8	29,799.9	(0.9)	0.0%
	Unmetered Revenues:				
10a	Service Charge	9,465.9	9,465.9	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	9,465.9	9,465.9	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	254.7	254.7	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	100.1	100.1	0.0	0.0%
16a	Total Other Revenues	354.8	354.8	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	39,621.4	39,620.5	(0.9)	0.0%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	21,616.7	21,756.8	140.1	0.6%
2b	Business	6,704.3	6,747.4	43.1	0.6%
3b	Multiple Family	1,899.7	1,911.9	12.2	0.6%
4b	Industrial	13.7	13.8	0.1	0.6%
5b	Public Authority	1,401.4	1,410.4	9.0	0.6%
6b	Other	38.0	38.2	0.2	0.6%
7b	Irrigation	134.1	133.9	(0.2)	-0.2%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	31,807.9	32,012.4	204.5	0.6%
	Unmetered Revenues:				
10b	Service Charge	9,337.1	13,018.2	3,681.1	28.3%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	9,337.1	13,018.2	3,681.1	28.3%
	Other Revenues:				
13b	Private Fire Protection	276.0	276.0	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	101.6	101.6	0.0	0.0%
16b	Total Other Revenues	377.6	377.6	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	41,522.5	45,408.2	3,885.6	8.6%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	12,816.8	12,817.1	0.3	0.0%
2	Groundwater Charges	4,604.6	4,604.6	0.0	0.0%
3	Purchased Power	695.6	695.6	0.0	0.0%
4	Purchased Chemicals	110.1	110.1	0.0	0.0%
5	Payroll	1,261.5	1,399.6	138.1	9.9%
6	Postage	62.3	58.8	(3.5)	-6.0%
7	Transportation	195.0	200.9	5.9	2.9%
	Purchased Services:				
8	Source of Supply	0.0	0.0	0.0	0.0%
9	Pumping	125.0	125.0	0.0	0.0%
10	Water Treatment	153.0	153.0	0.0	0.0%
11	Transmission & Distribution	361.3	361.3	0.0	0.0%
12	Customer Accounting	222.4	222.4	0.0	0.0%
13	Conservation	347.1	357.0	9.9	2.8%
14	Total Operations Exp. excluding Uncollectibles	20,954.8	21,105.5	150.6	0.7%
	Maintenance Expenses:				
15	Payroll	574.1	636.9	62.8	9.9%
16	Transportation	69.1	71.8	2.7	3.8%
17	Stores	50.1	50.1	0.0	0.0%
18	Contracted Maintenance	1,096.8	1,096.8	0.0	0.0%
19	Total Maintenance Expenses	1,790.1	1,855.6	65.6	3.5%
	At Present Rates				
20	Operating Revenues	39,621.4	39,620.5	(0.9)	0.0%
21	*Uncollectible Rate*	0.0195%	0.0334%	*0.0139%*	*41.5%*
22	Uncollectibles Expense	7.7	13.2	5.5	41.5%
23	Total O&M Expenses including Uncollectibles	22,752.6	22,974.3	221.7	1.0%
	At Proposed Rates				
25	Operating Revenues	41,456.5	45,337.2	3,880.8	8.6%
26	*Uncollectible Rate*	0.0195%	0.0195%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	8.1	14.3	6.2	43.6%
28	Total O&M Expenses including Uncollectibles	22,753.0	22,975.4	222.4	1.0%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	12,722.9	12,723.1	0.3	0.0%
2	Groundwater Charges	4,718.2	4,718.2	0.0	0.0%
3	Purchased Power	716.1	716.1	0.0	0.0%
4	Purchased Chemicals	115.7	115.7	0.0	0.0%
5	Payroll	1,303.1	1,445.8	142.6	9.9%
6	Postage	62.3	58.7	(3.5)	-6.0%
7	Transportation	199.9	206.0	6.1	2.9%
	Purchased Services:				
8	Source of Supply	0.0	0.0	0.0	0.0%
9	Pumping	128.2	128.2	0.0	0.0%
10	Water Treatment	155.7	155.7	0.0	0.0%
11	Transmission & Distribution	370.4	370.4	0.0	0.0%
12	Customer Accounting	228.0	228.0	0.0	0.0%
13	Conservation	357.0	357.0	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	21,077.4	21,222.9	145.5	0.7%
	Maintenance Expenses:				
15	Payroll	593.0	657.9	64.9	9.9%
16	Transportation	70.8	73.6	2.8	3.8%
17	Stores	51.3	51.3	0.0	0.0%
18	Contracted Maintenance	1,113.5	1,113.5	0.0	0.0%
19	Total Maintenance Expenses	1,828.7	1,896.4	67.7	3.6%
	At Present Rates				
20	Operating Revenues	41,522.5	45,408.2	3,885.6	8.6%
21	*Uncollectible Rate*	0.0195%	0.0334%	*1.3854%*	*41.5%*
22	Uncollectibles Expense	8.1	15.1	7.0	46.5%
23	Total O&M Expenses including Uncollectibles	22,914.2	23,134.4	220.2	1.0%
	At Proposed Rates				
25	Operating Revenues	43,956.1	49,644.1	5,688.0	11.5%
26	*Uncollectible Rate*	0.0195%	0.0334%	*1.3854%*	*41.5%*
27	Uncollectibles Expense	8.6	16.6	8.0	48.2%
28	Total O&M Expenses including Uncollectibles	22,914.6	23,135.8	221.2	1.0%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Administrative & General Expenses:				
1a	Payroll	372.2	412.9	40.7	9.9%
2a	Benefits	759.2	788.4	29.2	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	66.6	66.6	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(122.4)	(122.4)	0.0	0.0%
6a	Workers' Compensation	34.2	35.7	1.5	4.1%
7a	Non-Specifics	116.7	105.9	(10.9)	-10.3%
8a	Subtotal	1,226.5	1,287.0	60.6	4.7%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	77.1	83.3	6.2	7.5%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(0.2)	(0.2)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	1,303.4	1,370.2	66.8	4.9%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Administrative & General Expenses:				
1b	Payroll	384.5	426.6	42.1	9.9%
2b	Benefits	825.1	851.5	26.4	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	66.6	66.6	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(126.5)	(126.5)	0.0	0.0%
6b	Workers' Compensation	35.1	38.1	3.0	8.0%
7b	Non-Specifics	108.7	108.7	0.0	0.0%
8b	Subtotal	1,293.4	1,364.9	71.5	5.2%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	77.1	87.8	10.8	12.3%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(0.2)	(0.2)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	1,370.3	1,452.6	82.3	5.7%

TABLE 5-1
TAXES OTHER THAN INCOME

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	925.6	1,120.6	195.0	17.4%
2a	Payroll Taxes	157.8	175.1	17.3	9.9%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	39,613.7	39,607.3	(6.4)	0.0%
4a	*Effective Local Franchise Tax Rate*	*1.533%*	*1.533%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	607.2	607.1	(0.1)	0.0%
5a1	Business License-Present Rates	0.3	0.3	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	1,690.8	1,903.0	212.2	11.2%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	41,448.4	45,322.9	3,874.5	8.5%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*1.533%*	*45.841%*	*29.9%*
9a	Franchise Taxes-Proposed Rates	635.3	694.7	59.4	8.5%
9a1	Business License-Proposed Rates	0.3	0.3	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	1,719.0	1,990.6	271.7	13.6%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	1,054.4	1,353.0	298.5	22.1%
2b	Payroll Taxes	163.0	180.9	17.8	9.9%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	41,514.5	45,393.0	3,878.6	8.5%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*1.533%*	*45.841%*	*29.9%*
5b	Franchise Taxes-Present Rates	636.3	695.8	59.5	8.5%
5b1	Business License-Present Rates	0.3	0.3	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	1,854.0	2,229.9	375.8	16.9%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	43,947.6	49,627.6	5,680.0	11.4%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*1.533%*	*45.841%*	*29.9%*
9b	Franchise Taxes-Proposed Rates	673.6	760.7	87.1	11.4%
9b1	Business License-Proposed Rates	0.3	0.3	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	1,891.3	2,294.8	403.5	17.6%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	39,621.4	39,620.5	(0.9)	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	22,744.9	22,961.1	216.2	0.9%
3	Uncollectibles Expense	7.7	13.2	5.5	41.5%
4	A&G Expenses	1,303.4	1,370.2	66.8	4.9%
5	G.O. Prorated Expenses	4,643.2	5,132.8	489.6	9.5%
6	G.O. Book Depreciation (to be excluded)	(515.0)	(658.7)	(143.7)	21.8%
7	Transportation Deprec. Expense (to be excluded)	(62.5)	(117.0)	(54.5)	46.6%
8	Taxes On Other Than Income	1,690.8	1,903.0	212.2	11.2%
8a	Non-deductible Meals	(20.5)	(20.8)	(0.3)	1.4%
9	Interest Expense	2,207.9	2,839.9	632.0	22.3%
10	Total Common Deductions	32,000.0	33,423.6	1,423.7	4.3%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	7,822.2	10,990.7	3,168.5	28.8%
12	Tax Depreciation - G.O.	332.0	553.1	221.1	40.0%
13	Subtotal	8,154.2	11,543.8	3,389.6	29.4%
14	Total State Deductions, incl. Common Deductions	40,154.2	44,967.4	4,813.2	10.7%
	Federal Tax Deductions				
16	Book Depreciation - District	3,629.4	4,339.5	710.1	16.4%
17	Book Depreciation - G.O.	515.0	658.7	143.7	21.8%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(47.1)	(472.7)	(425.6)	90.0%
20	Subtotal	4,097.3	4,525.6	428.3	9.5%
21	Total Fed. Deductions, incl. Common Deductions	36,097.2	37,949.2	1,852.0	4.9%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(532.7)	(5,346.9)	(4,814.2)	90.0%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(47.1)	(472.7)	(425.6)	90.0%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	3,524.2	1,671.3	(1,852.9)	-110.9%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	740.1	351.0	(1,852.9)	-110.9%
28	Adjustment to FIT, Regulatory Liability	(549.5)	(549.0)	0.5	-0.1%
29	Total FIT, with Adjustment	190.6	(198.0)	(388.6)	196.3%
30	Total Income Taxes for Revenues at Present Rates	143.5	(670.7)	(814.2)	121.4%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	41,456.5	45,337.2	3,880.8	8.6%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	22,744.9	22,961.1	216.2	0.9%
3	Uncollectibles Expense	8.1	14.3	6.2	43.6%
4	A&G Expenses	1,303.4	1,370.2	66.8	4.9%
5	G.O. Prorated Expenses	4,643.2	5,132.8	489.6	9.5%
6	G.O. Book Depreciation (to be excluded)	(515.0)	(658.7)	(143.7)	21.8%
7	Transportation Deprec. Expense (to be excluded)	(62.5)	(117.0)	(54.5)	46.6%
8	Taxes On Other Than Income	1,719.0	1,990.6	271.7	13.6%
8a	Non-deductible Meals	(20.5)	(20.8)	(0.3)	1.4%
9	Interest Expense	2,207.9	2,839.9	632.0	22.3%
10	Total Common Deductions	32,028.4	33,512.4	1,483.9	4.4%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	7,822.2	10,990.7	3,168.5	28.8%
12	Tax Depreciation - G.O.	332.0	553.1	221.1	40.0%
13	Subtotal	8,154.2	11,543.8	3,389.6	29.4%
14	Total State Deductions, incl. Common Deductions	40,182.7	45,056.1	4,873.5	10.8%
	Federal Tax Deductions				
16	Book Depreciation - District	3,629.4	4,339.5	710.1	16.4%
17	Book Depreciation - G.O.	515.0	658.7	143.7	21.8%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	112.6	24.8	(87.8)	-353.2%
20	Subtotal	4,257.0	5,023.1	766.1	15.3%
21	Total Fed. Deductions, incl. Common Deductions	36,285.4	38,535.4	2,250.0	5.8%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	1,273.8	281.1	(992.7)	-353.2%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	112.6	24.8	(87.8)	-353.2%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	5,171.1	6,801.8	1,630.7	24.0%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	1,085.9	1,428.4	342.5	24.0%
28	Adjustment to FIT, Regulatory Liability	(549.5)	(549.0)	0.5	-0.1%
29	Total FIT, with Adjustment	536.4	879.4	343.0	39.0%
30	Total Income Taxes for Revenues at Proposed Rates	649.1	904.3	255.2	28.2%

TABLE 7-1
UTILITY PLANT IN SERVICE

Test Year 2023 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	155,251.4	176,012.7	20,761.3	11.8%
2a	Adjustments	16.1	16.1	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	21,121.3	33,284.3	12,163.0	36.5%
4a	Advances	220.4	220.4	0.0	0.0%
5a	Contributions	909.8	909.8	0.0	0.0%
6a	Total Gross Additions	22,251.5	34,414.5	12,163.0	35.3%
8a	Retirements	377.8	377.8	0.0	0.0%
9a	Net Additions	22,629.3	34,792.2	12,163.0	35.0%
10a	Plant in Service - End of Year	177,896.7	210,821.0	32,924.2	15.6%
11a	*Plant Weighting Factor*	*37.00%*	*37.00%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	163,624.9	188,886.8	25,261.9	13.4%

Escalation Year 2024 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	177,896.7	210,821.0	32,924.2	15.6%
2b	Adjustments	14.1	14.1	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	22,239.1	36,990.2	14,751.1	39.9%
4b	Advances	220.4	220.4	0.0	0.0%
5b	Contributions	909.8	909.8	0.0	0.0%
6b	Total Gross Additions	23,369.3	38,120.4	14,751.1	38.7%
8b	Retirements	364.7	364.7	0.0	0.0%
9b	Net Additions	23,734.0	38,485.1	14,751.1	38.3%
10b	Plant in Service - End of Year	201,644.9	249,320.2	47,675.4	19.1%
11b	*Plant Weighting Factor*	*37.00%*	*37.00%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	186,679.0	225,061.6	38,382.6	17.1%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1a	Depreciation Reserve - Beginning of Year	51,052.7	51,511.9	459.2	0.9%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(42.1)	(76.5)	(34.4)	45.0%
3a	Contributed Plant	(538.7)	(541.7)	(3.0)	0.6%
4a	Depreciation Accrual	4,210.137	4,957.6	747.5	15.1%
5a	Total Accruals	3,629.4	4,339.5	710.1	16.4%
	Retirements				
6a	Net Retirements	(377.771)	(377.8)	0.0	0.0%
8a	Total Retirement	(377.8)	(377.8)	0.0	0.0%
9a	Net Additions	3,832	4,579.9	747.5	16.3%
7a	Carry Forward Adjustment	0.0	(227.1)	(227.1)	100.0%
10a	Depreciation Reserve - End of Year	54,885.1	55,864.8	979.7	1.8%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	52,968.9	53,574.8	605.9	1.1%
13a	*Deprec. expense for summary of earnings calc.*	3,629.4	4,339.5	710.1	16.4%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1b	Depreciation Reserve - Beginning of Year	54,885.1	55,864.8	979.7	1.8%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(40.4)	(77.9)	(37.5)	48.2%
3b	Contributed Plant	(545.9)	(555.5)	(9.6)	1.7%
4b	Depreciation Accrual	4,691.2	5,816.8	1,125.5	19.3%
5b	Total Accruals	4,105.0	5,183.4	1,078.4	20.8%
	Retirements and Adjustments:				
6b	Net Retirements	(364.7)	(364.7)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(364.7)	(364.7)	0.0	
					0.0%
9b	Net Additions	4,326.5	5,452.1	1,125.5	20.6%
10b	Depreciation Reserve - End of Year	59,211.6	61,316.8	2,105.2	3.4%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	57,048.4	58,590.8	1,542.4	2.6%
13b	* *Deprec. expense for summary of earnings calc.*	4,105.0	5,183.4	1,078.4	20.8%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	163,624.9	188,886.8	25,261.9	13.4%
3	Weighted Average Depreciation Reserve	(52,968.9)	(53,574.8)	(605.9)	1.1%
4	Net Utility Plant	110,656.0	135,312.0	24,656.0	18.2%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	12,075.1	12,071.5	(3.6)	0.0%
5	Advances in Construction	2,408.1	2,408.1	0.0	0.0%
6	Reserve for Amortization of Intangibles	608.9	602.2	(6.8)	-1.1%
7	Deferred Taxes	12,915.0	14,916.3	2,001.3	13.4%
8	Unamortized Investment Tax Credits	44.1	44.1	0.0	0.0%
9	Total Deductions from Rate Base	28,051.3	30,042.2	1,990.9	6.6%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	324.8	324.8	0.0	0.0%
10a	Tank Painting	2,298.3	2,443.0	144.6	5.9%
11	Working Cash, Lead-Lag	1,848.8	2,038.4	189.6	9.3%
12	Amount Withheld from Employees	(13.2)	(13.5)	(0.4)	2.8%
13	Total Working Capital	4,458.7	4,792.6	333.9	7.0%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	332.6	332.6	0.0	0.0%
17	Total Additions to Rate Base	4,791.2	5,125.1	333.9	6.5%
18	Weighted Average Rate Base, District	87,395.9	110,394.9	22,999.0	20.8%
19	Weighted Average Rate Base, G.O. Allocation	2,972.2	4,897.7	1,925.5	39.3%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	90,368.2	115,292.6	24,924.4	21.6%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*85,909.493*	*110,500.0*	*24,590.6*	*22.3%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*2,207.9*	*2,839.9*	*632.0*	*22.3%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	186,679.0	225,061.6	38,382.6	17.1%
3	Weighted Average Depreciation Reserve	(57,048.4)	(58,590.8)	(1,542.4)	2.6%
4	Net Utility Plant	129,630.6	166,470.8	36,840.1	22.1%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	12,442.6	12,432.6	(10.0)	-0.1%
5	Advances in Construction	2,502.4	2,502.4	0.0	0.0%
6	Reserve for Amortization of Intangibles	697.5	710.9	13.4	1.9%
7	Deferred Taxes	13,208.2	15,691.2	2,483.0	15.8%
8	Unamortized Investment Tax Credits	40.0	40.0	0.0	0.0%
9	Total Deductions from Rate Base	28,890.6	31,377.0	2,486.5	7.9%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	324.8	324.8	0.0	0.0%
10a	Tank Painting	2,180.3	2,355.2	174.8	7.4%
11	Working Cash, Lead-Lag	1,907.1	2,140.3	233.2	10.9%
12	Amount Withheld from Employees	(13.2)	(13.5)	(0.4)	2.8%
13	Total Working Capital	4,399.0	4,806.6	407.6	8.5%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	424.2	424.2	0.0	0.0%
17	Total Additions to Rate Base	4,823.2	5,230.9	407.6	7.8%
18	Weighted Average Rate Base, District	105,563.3	140,324.6	34,761.3	24.8%
19	Weighted Average Rate Base, G.O. Allocation	3,007.8	5,303.6	2,295.8	43.3%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	108,571.1	145,628.2	37,057.1	25.4%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*104,172.1*	*140,821.6*	*36,649.5*	*26.0%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*2,677.2*	*3,619.1*	*941.9*	*26.0%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	249.8	694.7	444.9
2. Test Year 2023 Increase (%)	6.0%	16.7%	10.7%
3. Escalation Year 2024 Increase (%)	4.7%	5.3%	0.6%
4. Escalation Year 2025 Increase (%)	2.5%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**4,149.8**	**4,149.8**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	587.4	589.4	2.0	0.3%
3a	Administrative & General	251.2	264.2	13.0	4.9%
4a	Payroll	707.0	707.0	0.0	0.0%
5a	General Office - *prorated expenses*	820.2	871.7	51.5	5.9%
6a	Depreciation Expense	711.6	807.4	95.8	11.9%
7a	Taxes Other Than Income	178.0	206.4	28.4	13.8%
8a	California Corporate Franchise Tax	21.2	(23.9)	(45.1)	188.9%
9a	Federal Income Tax	32.2	(13.4)	(45.6)	339.5%
10a	Total Operating Expenses	3,308.8	3,408.8	99.9	2.9%
11a	Net Operating Revenues	841.0	741.1	(99.9)	-13.5%
12a	Weighted Average Rate Base	13,639.8	16,571.1	2,931.3	17.7%
13a	***Return on Rate Base***	***6.17%***	***4.47%***	***-1.69%***	***-37.9%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	4,399.6	4,844.5	**444.9**	**9.2%**
	Operating Expenses:				
2b	Operation & Maintenance	588.3	592.0	3.7	0.6%
3b	Administrative & General	251.2	264.2	13.0	4.9%
4b	Payroll	707.0	707.0	0.0	0.0%
5b	General Office - *prorated expenses*	820.2	871.7	51.5	5.9%
6b	Depreciation Expense	711.6	807.4	95.8	11.9%
7b	Taxes Other Than Income	178.0	206.4	28.4	13.8%
8b	California Corporate Franchise Tax	43.2	37.3	(5.9)	-15.9%
9b	Federal Income Tax	79.8	119.1	39.2	32.9%
10b	Total Operating Expenses	3,379.4	3,605.0	225.6	6.3%
11b	Net Operating Revenues	1,020.3	1,239.5	219.3	17.7%
12b	Weighted Average Rate Base	13,640	16,571.1	2,931.3	17.7%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**249.8**	**694.7**	**444.9**	**64.0%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	4,613.8	4,728.7	114.9	2.4%
2	Operating Expenses:*				
3	Operation & Maintenance	603.0	615.1	12.1	2.0%
4	Administrative & General	302.3	308.4	6.0	2.0%
5	Payroll	730.4	745.0	14.6	2.0%
6	G.O. Prorated Expenses	816.4	832.7	16.3	2.0%
7	Depreciation Expense	752.8	767.8	15.1	2.0%
8	Taxes Other Than Income	187.7	191.4	3.8	2.0%
9	California Corporate Franchise Tax	68.6	68.62	0.0	0.0%
10	Federal Income Tax	85.3	85.26	0.0	0.0%
11	Total Operating Expenses	3,546.4	3,614.3	67.9	1.9%
12	Net Operating Revenues	1,067.3	1,114.4	47.1	4.2%
13	Weighted Average Rate Base	14,268.9	14,898.1	629.1	4.2%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***0.0***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	118.7	118.7	0.0	0.0%
2a	Business	367.1	367.1	0.0	0.0%
3a	Multiple Family	845.7	845.7	0.0	0.0%
4a	Industrial	249.6	249.6	0.0	0.0%
5a	Public Authority	1,714.7	1,714.7	0.0	0.0%
6a	Other	975.2	975.2	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	118.7	118.7	0.0	0.0%
2b	Business	367.1	367.1	0.0	0.0%
3b	Multiple Family	845.7	845.7	0.0	0.0%
4b	Industrial	249.6	249.6	0.0	0.0%
5b	Public Authority	1,657.9	1,657.9	0.0	0.0%
6b	Other	975.2	975.2	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	3,086	3,086	0	0%
2a	Business	469	469	0	0%
3a	Multiple Family	134	134	0	0%
4a	Industrial	3	3	0	0%
5a	Public Authority	55	55	0	0%
6a	Other	6	6	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	3,753	3,753	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	63	63	0	0%
12a	Public Fire Protection	10	10	0	0%
13a	Total Number of Unmetered Connections	73	73	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	3,826	3,826	0	0%
15a	Excluding Fire Protection	3,753	3,753	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	3,095	3,095	0	0%
2b	Business	468	468	0	0%
3b	Multiple Family	134	134	0	0%
4b	Industrial	3	3	0	0%
5b	Public Authority	57	57	0	0%
6b	Other	6	6	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	3,763	3,763	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	64	64	0	0%
12b	Public Fire Protection	10	10	0	0%
13b	Total Number of Unmetered Connections	74	74	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	3,837	3,837	0	0%
15b	Excluding Fire Protection	3,763	3,763	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	366.3	366.3	0.0	0.0%
2a	Business	172.3	172.3	0.0	0.0%
3a	Multiple Family	113.4	113.4	0.0	0.0%
4a	Industrial	0.7	0.7	0.0	0.0%
5a	Public Authority	93.9	93.9	0.0	0.0%
6a	Other	5.9	5.9	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	752.5	752.5	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	752.5	752.5	0.0	0.0%
12a	*Unaccounted For Water Rate*	*7.2%*	*7.2%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	58.2	58.2	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**810.8**	**810.8**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	1,861.3	1,861.3	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	810.8	810.8	0.0	0.0%
17a	Purchased Water	0.0	0.0	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**810.8**	**810.8**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	367.4	367.4	0.0	0.0%
2b	Business	171.7	171.7	0.0	0.0%
3b	Multiple Family	113.4	113.4	0.0	0.0%
4b	Industrial	0.7	0.7	0.0	0.0%
5b	Public Authority	93.9	93.9	0.0	0.0%
6b	Other	5.9	5.9	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	753.0	753.0	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	753.0	753.0	0.0	0.0%
12b	*Unaccounted For Water Rate*	*7.2%*	*7.2%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	58.4	58.4	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**811.4**	**811.4**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	1,862.8	1,862.8	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	811.4	811.4	0.0	0.0%
17b	Purchased Water	0.0	0.0	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**811.4**	**811.4**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	1,160.3	1,160.3	0.0	0.0%
2a	Business	605.1	605.1	0.0	0.0%
3a	Multiple Family	398.0	398.0	0.0	0.0%
4a	Industrial	2.6	2.6	0.0	0.0%
5a	Public Authority	329.7	329.7	0.0	0.0%
6a	Other	20.5	20.5	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	2,516.2	2,516.2	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	1,565.4	1,565.4	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	1,565.4	1,565.4	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	45.7	45.7	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	22.6	22.6	0.0	0.0%
16a	Total Other Revenues	68.3	68.3	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	4,149.8	4,149.8	0.0	0.0%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	1,200.0	1,151.4	(48.6)	-4.2%
2b	Business	621.8	596.4	(25.3)	-4.2%
3b	Multiple Family	410.5	393.8	(16.7)	-4.2%
4b	Industrial	2.7	2.6	(0.1)	-4.2%
5b	Public Authority	340.0	326.1	(13.8)	-4.2%
6b	Other	21.2	20.3	(0.9)	-4.2%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	2,596.2	2,490.7	(105.5)	-4.2%
	Unmetered Revenues:				
10b	Service Charge	1,739.0	2,291.1	552.1	24.1%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	1,739.0	2,291.1	552.1	24.1%
	Other Revenues:				
13b	Private Fire Protection	49.8	49.8	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	22.9	22.9	0.0	0.0%
16b	Total Other Revenues	72.7	72.7	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	4,407.9	4,854.5	446.7	9.2%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	167.3	167.3	0.0	0.0%
4	Purchased Chemicals	19.2	19.2	0.0	0.0%
5	Payroll	514.6	514.6	0.0	0.0%
6	Postage	12.5	11.8	(0.7)	-6.0%
7	Transportation	47.4	47.4	0.0	0.0%
	Purchased Services:				
8	Source of Supply	0.0	0.0	0.0	0.0%
9	Pumping	6.7	6.7	0.0	0.0%
10	Water Treatment	55.2	55.2	0.0	0.0%
11	Transmission & Distribution	31.7	31.7	0.0	0.0%
12	Customer Accounting	97.6	97.6	0.0	0.0%
13	Conservation	52.4	55.2	2.8	5.0%
14	Total Operations Exp. excluding Uncollectibles	1,004.7	1,006.7	2.0	0.2%
	Maintenance Expenses:				
15	Payroll	70.4	70.4	0.0	0.0%
16	Transportation	13.9	13.9	0.0	0.0%
17	Stores	7.8	7.8	0.0	0.0%
18	Contracted Maintenance	60.3	60.3	0.0	0.0%
19	Total Maintenance Expenses	152.3	152.3	0.0	0.0%
	At Present Rates				
20	Operating Revenues	4,149.8	4,149.8	0.0	0.0%
21	*Uncollectible Rate*	0.3703%	0.3703%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	15.4	15.4	0.0	0.0%
23	Total O&M Expenses including Uncollectibles	1,172.4	1,174.4	2.0	0.2%
	At Proposed Rates				
25	Operating Revenues	4,399.6	4,844.5	444.9	9.2%
26	*Uncollectible Rate*	0.3703%	0.3703%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	16.3	17.9	1.6	9.2%
28	Total O&M Expenses including Uncollectibles	1,173.3	1,177.0	3.7	0.3%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	170.6	170.6	0.0	0.0%
4	Purchased Chemicals	19.7	19.7	0.0	0.0%
5	Payroll	531.6	531.6	0.0	0.0%
6	Postage	12.6	11.8	(0.7)	-6.0%
7	Transportation	48.6	48.6	0.0	0.0%
	Purchased Services:				
8	Source of Supply	0.0	0.0	0.0	0.0%
9	Pumping	6.8	6.8	0.0	0.0%
10	Water Treatment	56.2	56.2	0.0	0.0%
11	Transmission & Distribution	32.5	32.5	0.0	0.0%
12	Customer Accounting	100.1	100.1	0.0	0.0%
13	Conservation	55.2	55.2	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	1,033.9	1,033.1	(0.7)	-0.1%
	Maintenance Expenses:				
15	Payroll	72.7	72.7	0.0	0.0%
16	Transportation	14.2	14.2	0.0	0.0%
17	Stores	8.0	8.0	0.0	0.0%
18	Contracted Maintenance	61.5	61.5	0.0	0.0%
19	Total Maintenance Expenses	156.4	156.4	0.0	0.0%
	At Present Rates				
20	Operating Revenues	4,407.9	4,854.5	446.7	9.2%
21	*Uncollectible Rate*	0.3703%	0.3703%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	16.3	18.0	1.7	9.2%
23	Total O&M Expenses including Uncollectibles	1,206.6	1,207.5	0.9	0.1%
	At Proposed Rates				
25	Operating Revenues	4,613.8	5,112.4	498.7	9.8%
26	*Uncollectible Rate*	0.3703%	0.3703%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	17.1	18.9	1.8	9.8%
28	Total O&M Expenses including Uncollectibles	1,207.3	1,208.5	1.1	0.1%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	122.0	122.0	0.0	0.0%
2a	Benefits	223.2	231.7	8.6	3.7%
3a	Transportation Expenses	0.3	0.3	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	12.2	12.2	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(12.4)	(12.4)	0.0	0.0%
6a	Workers' Compensation	10.3	10.5	0.2	1.9%
7a	Non-Specifics	22.3	22.1	(0.2)	-0.9%
8a	Subtotal	377.8	386.4	8.6	2.2%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	0.0	4.4	4.4	100.0%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(4.6)	(4.6)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	373.2	386.2	13.0	3.4%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	126.1	126.1	0.0	0.0%
2b	Benefits	242.5	250.3	7.8	3.1%
3b	Transportation Expenses	0.3	0.3	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	12.2	12.2	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(12.8)	(12.8)	0.0	0.0%
6b	Workers' Compensation	10.5	11.2	0.7	5.9%
7b	Non-Specifics	21.9	21.9	0.0	0.0%
8b	Subtotal	400.7	409.1	8.4	2.1%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	32.4	34.8	2.4	6.8%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(4.7)	(4.7)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	428.4	439.2	10.8	2.5%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Ad Valorem Taxes	126.2	154.6	28.4	18.4%
2a	Payroll Taxes	50.8	50.8	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	4,134.5	4,134.5	0.0	0.0%
4a	*Effective Local Franchise Tax Rate*	*0.000%*	*0.000%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5a1	Business License-Present Rates	1.0	1.0	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	178.0	206.4	28.4	13.8%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	4,383.4	4,826.6	443.2	9.2%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9a	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9a1	Business License-Proposed Rates	1.0	1.0	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	178.0	206.4	28.4	13.8%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Ad Valorem Taxes	134.2	163.8	29.6	18.1%
2b	Payroll Taxes	52.5	52.5	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	4,391.5	4,836.5	445.0	9.2%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
5b	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5b1	Business License-Present Rates	1.0	1.0	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	187.7	217.3	29.6	13.6%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	4,596.7	5,093.5	496.9	9.8%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9b	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9b1	Business License-Proposed Rates	1.0	1.0	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	187.7	217.3	29.6	13.6%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	4,149.8	4,149.8	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	1,157.0	1,159.1	2.0	0.2%
3	Uncollectibles Expense	15.4	15.4	0.0	0.0%
4	A&G Expenses	373.2	386.2	13.0	3.4%
5	G.O. Prorated Expenses	820.2	871.7	51.5	5.9%
6	G.O. Book Depreciation (to be excluded)	(91.0)	(111.9)	(20.9)	18.7%
7	Transportation Deprec. Expense (to be excluded)	1.2	(1.8)	(2.9)	165.4%
8	Taxes On Other Than Income	178.0	206.4	28.4	13.8%
8a	Non-deductible Meals	(3.8)	(3.8)	0.0	-0.6%
9	Interest Expense	337.5	412.0	74.5	18.1%
10	Total Common Deductions	2,787.7	2,933.3	145.6	5.0%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	1,063.3	1,392.8	329.5	23.7%
12	Tax Depreciation - G.O.	58.6	93.9	35.3	37.6%
13	Subtotal	1,121.9	1,486.7	364.8	24.5%
14	Total State Deductions, incl. Common Deductions	3,909.6	4,419.9	510.4	11.5%
	Federal Tax Deductions				
16	Book Depreciation - District	711.6	807.4	95.8	11.9%
17	Book Depreciation - G.O.	91.0	111.9	20.9	18.7%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	21.2	(23.9)	(45.1)	188.9%
20	Subtotal	823.8	895.3	71.6	8.0%
21	Total Fed. Deductions, incl. Common Deductions	3,611.4	3,828.6	217.2	5.7%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	240.3	(270.1)	(510.4)	188.9%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	21.2	(23.9)	(45.1)	188.9%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	538.4	321.2	(217.2)	-67.6%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	113.1	67.5	(217.2)	-67.6%
28	Adjustment to FIT, Regulatory Liability	(80.9)	(80.9)	(0.0)	0.0%
29	Total FIT, with Adjustment	32.2	(13.4)	(45.6)	339.5%
30	Total Income Taxes for Revenues at Present Rates	53.4	(37.3)	(90.8)	243.2%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	4,399.6	4,844.5	444.9	9.2%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	1,157.0	1,159.1	2.0	0.2%
3	Uncollectibles Expense	16.3	17.9	1.6	9.2%
4	A&G Expenses	373.2	386.2	13.0	3.4%
5	G.O. Prorated Expenses	820.2	871.7	51.5	5.9%
6	G.O. Book Depreciation (to be excluded)	(91.0)	(111.9)	(20.9)	18.7%
7	Transportation Deprec. Expense (to be excluded)	1.2	(1.8)	(2.9)	165.4%
8	Taxes On Other Than Income	178.0	206.4	28.4	13.8%
8a	Non-deductible Meals	(3.8)	(3.8)	0.0	-0.6%
9	Interest Expense	337.5	412.0	74.5	18.1%
10	Total Common Deductions	2,788.6	2,935.8	147.2	5.0%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	1,063.3	1,392.8	329.5	23.7%
12	Tax Depreciation - G.O.	58.6	93.9	35.3	37.6%
13	Subtotal	1,121.9	1,486.7	364.8	24.5%
14	Total State Deductions, incl. Common Deductions	3,910.5	4,422.5	512.0	11.6%
	Federal Tax Deductions				
16	Book Depreciation - District	711.6	807.4	95.8	11.9%
17	Book Depreciation - G.O.	91.0	111.9	20.9	18.7%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	43.2	37.3	(5.9)	-15.9%
20	Subtotal	845.8	956.5	110.8	11.6%
21	Total Fed. Deductions, incl. Common Deductions	3,634.4	3,892.4	258.0	6.6%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	489.1	422.0	(67.1)	-15.9%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	43.2	37.3	(5.9)	-15.9%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	765.3	952.2	186.9	19.6%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	160.7	200.0	39.2	19.6%
28	Adjustment to FIT, Regulatory Liability	(80.9)	(80.9)	(0.0)	0.0%
29	Total FIT, with Adjustment	79.8	119.1	39.2	32.9%
30	Total Income Taxes for Revenues at Proposed Rates	123.1	156.4	33.3	21.3%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1a	Plant in Service - Beginning of Year	29,739.0	32,454.9	2,715.9	8.4%
2a	Adjustments	0.0	0.0	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	1,451.9	1,823.5	371.6	20.4%
4a	Advances	0.0	0.0	0.0	0.0%
5a	Contributions	126.1	126.1	0.0	0.0%
6a	Total Gross Additions	1,578.0	1,949.6	371.6	19.1%
8a	Retirements	110.0	110.0	0.0	0.0%
9a	Net Additions	1,687.9	2,059.5	371.6	18.0%
10a	Plant in Service - End of Year	31,427.0	34,514.5	3,087.5	8.9%
11a	*Plant Weighting Factor*	*42.23%*	*42.23%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	30,451.9	33,324.7	2,872.8	8.6%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1b	Plant in Service - Beginning of Year	31,427.0	34,514.5	3,087.5	8.9%
2b	Adjustments	0.0	0.0	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	698.3	1,446.8	748.4	51.7%
4b	Advances	0.0	0.0	0.0	0.0%
5b	Contributions	126.1	126.1	0.0	0.0%
6b	Total Gross Additions	824.4	1,572.8	748.4	47.6%
8b	Retirements	85.2	85.2	0.0	0.0%
9b	Net Additions	909.6	1,658.0	748.4	45.1%
10b	Plant in Service - End of Year	32,336.5	36,172.5	3,836.0	10.6%
11b	*Plant Weighting Factor*	*42.23%*	*42.23%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	31,811.1	35,214.7	3,403.6	9.7%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1a	Depreciation Reserve - Beginning of Year	11,598.4	11,688.3	89.9	0.8%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	4.8	5.1	0.3	6.8%
3a	Contributed Plant	(175.3)	(174.4)	0.9	-0.5%
4a	Depreciation Accrual	882.042	976.6	94.6	9.7%
5a	Total Accruals	711.6	807.4	95.8	11.9%
	Retirements				
6a	Net Retirements	(109.959)	(110.0)	0.0	0.0%
8a	Total Retirement	(110.0)	(110.0)	0.0	0.0%
9a	Net Additions	772	866.6	94.6	10.9%
7a	Carry Forward Adjustment	0.0	(24.2)	(24.2)	100.0%
10a	Depreciation Reserve - End of Year	12,370.4	12,530.7	160.3	1.3%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	11,984.4	12,097.4	113.0	0.9%
13a	*Deprec. expense for summary of earnings calc.*	711.6	807.4	95.8	11.9%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1b	Depreciation Reserve - Beginning of Year	12,370.4	12,530.7	160.3	1.3%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	3.9	6.5	2.6	40.0%
3b	Contributed Plant	(180.0)	(178.0)	1.9	-1.1%
4b	Depreciation Accrual	928.8	1,029.7	100.8	9.8%
5b	Total Accruals	752.8	858.1	105.4	12.3%
	Retirements and Adjustments:				
6b	Net Retirements	(85.2)	(85.2)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(85.2)	(85.2)	0.0	0.0%
9b	Net Additions	843.7	944.5	100.8	10.7%
10b	Depreciation Reserve - End of Year	13,214.1	13,475.2	261.1	1.9%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	12,792.3	13,003.0	210.7	1.6%
13b	* *Deprec. expense for summary of earnings calc.*	752.8	858.1	105.4	12.3%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	30,451.9	33,324.7	2,872.8	8.6%
3	Weighted Average Depreciation Reserve	(11,984.4)	(12,097.4)	(113.0)	0.9%
4	Net Utility Plant	18,467.5	21,227.3	2,759.9	13.0%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	3,799.0	3,802.9	3.9	0.1%
5	Advances in Construction	208.1	208.1	0.0	0.0%
6	Reserve for Amortization of Intangibles	129.0	136.9	7.9	5.8%
7	Deferred Taxes	1,755.4	1,911.5	156.1	8.2%
8	Unamortized Investment Tax Credits	7.1	7.1	0.0	0.0%
9	Total Deductions from Rate Base	5,898.6	6,066.4	167.8	2.8%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	87.3	87.3	0.0	0.0%
10a	Tank Painting	103.3	114.3	11.1	9.7%
11	Working Cash, Lead-Lag	320.5	342.0	21.5	6.3%
12	Amount Withheld from Employees	(2.3)	(2.3)	0.0	-1.2%
13	Total Working Capital	508.7	541.3	32.6	6.0%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	37.1	37.1	0.0	0.0%
17	Total Additions to Rate Base	545.9	578.4	32.6	5.6%
18	Weighted Average Rate Base, District	13,114.8	15,739.4	2,624.6	16.7%
19	Weighted Average Rate Base, G.O. Allocation	525.0	831.7	306.7	36.9%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	13,639.8	16,571.1	2,931.3	17.7%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*13,131.083*	*16,029.8*	*2,898.7*	*18.1%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*337.5*	*412.0*	*74.5*	*18.1%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	31,811.1	35,214.7	3,403.6	9.7%
3	Weighted Average Depreciation Reserve	(12,792.3)	(13,003.0)	(210.7)	1.6%
4	Net Utility Plant	19,018.8	22,211.7	3,192.9	14.4%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	3,747.5	3,752.8	5.3	0.1%
5	Advances in Construction	219.0	219.0	0.0	0.0%
6	Reserve for Amortization of Intangibles	147.2	160.4	13.2	8.2%
7	Deferred Taxes	1,719.9	1,942.7	222.7	11.5%
8	Unamortized Investment Tax Credits	6.2	6.2	0.0	0.0%
9	Total Deductions from Rate Base	5,839.8	6,081.1	241.2	4.0%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	87.3	87.3	0.0	0.0%
10a	Tank Painting	90.6	101.6	11.1	10.9%
11	Working Cash, Lead-Lag	331.6	361.1	29.5	8.2%
12	Amount Withheld from Employees	(2.3)	(2.3)	0.0	-1.2%
13	Total Working Capital	507.1	547.7	40.6	7.4%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	51.6	51.6	0.0	0.0%
17	Total Additions to Rate Base	558.6	599.2	40.6	6.8%
18	Weighted Average Rate Base, District	13,737.6	16,729.9	2,992.3	17.9%
19	Weighted Average Rate Base, G.O. Allocation	531.3	900.7	369.3	41.0%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	14,268.9	17,630.6	3,361.6	19.1%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*13,761.8*	*17,082.9*	*3,321.0*	*19.4%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*353.7*	*439.0*	*85.4*	*19.4%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	131.0	683.0	552.0
2. Test Year 2023 Increase (%)	2.4%	12.3%	9.9%
3. Escalation Year 2024 Increase (%)	3.1%	5.3%	2.2%
4. Escalation Year 2025 Increase (%)	2.3%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**5,550.7**	**5,550.7**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	1,067.0	1,072.1	5.1	0.5%
3a	Administrative & General	373.2	384.4	11.2	2.9%
4a	Payroll	994.5	994.5	0.0	0.0%
5a	General Office - *prorated expenses*	1,003.7	1,070.4	66.7	6.2%
6a	Depreciation Expense	881.3	1,008.8	127.5	12.6%
7a	Taxes Other Than Income	215.1	246.7	31.6	12.8%
8a	California Corporate Franchise Tax	42.3	(0.4)	(42.7)	10929.4%
9a	Federal Income Tax	(18.3)	(77.5)	(59.2)	76.4%
10a	Total Operating Expenses	4,558.7	4,699.0	140.3	3.0%
11a	Net Operating Revenues	992.0	851.7	(140.3)	-16.5%
12a	Weighted Average Rate Base	14,519.7	17,940.8	3,421.2	19.1%
13a	***Return on Rate Base***	***6.83%***	***4.75%***	***-2.08%***	***-43.9%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	5,681.7	6,233.7	**552.0**	**8.9%**
	Operating Expenses:				
2b	Operation & Maintenance	1,067.4	1,074.0	6.6	0.6%
3b	Administrative & General	373.2	384.4	11.2	2.9%
4b	Payroll	994.5	994.5	0.0	0.0%
5b	General Office - *prorated expenses*	1,003.7	1,070.4	66.7	6.2%
6b	Depreciation Expense	881.3	1,008.8	127.5	12.6%
7b	Taxes Other Than Income	215.1	246.7	31.6	12.8%
8b	California Corporate Franchise Tax	53.8	59.8	6.0	10.0%
9b	Federal Income Tax	6.7	52.9	46.2	87.4%
10b	Total Operating Expenses	4,595.7	4,891.5	295.8	6.0%
11b	Net Operating Revenues	1,086.1	1,342.3	256.2	19.1%
12b	Weighted Average Rate Base	14,520	17,940.8	3,421.2	19.1%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**131.0**	**683.0**	**552.0**	**80.8%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	5,885.0	6,023.1	138.0	2.3%
2	Operating Expenses:*				
3	Operation & Maintenance	1,089.2	1,111.0	21.8	2.0%
4	Administrative & General	433.8	442.4	8.7	2.0%
5	Payroll	1,027.3	1,047.9	20.5	2.0%
6	G.O. Prorated Expenses	999.0	1,019.0	20.0	2.0%
7	Depreciation Expense	911.4	929.6	18.2	2.0%
8	Taxes Other Than Income	223.7	228.2	4.5	2.0%
9	California Corporate Franchise Tax	57.4	57.43	0.0	0.0%
10	Federal Income Tax	12.8	12.81	0.0	0.0%
11	Total Operating Expenses	4,754.6	4,848.3	93.7	1.9%
12	Net Operating Revenues	1,130.4	1,174.8	44.4	3.8%
13	Weighted Average Rate Base	15,112.7	15,705.8	593.0	3.8%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***0.0***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	117.8	117.8	0.0	0.0%
2a	Business	463.3	463.3	0.0	0.0%
3a	Multiple Family	760.5	760.5	0.0	0.0%
4a	Industrial	13,618.1	13,618.1	0.0	0.0%
5a	Public Authority	1,097.3	1,097.3	0.0	0.0%
6a	Other	482.3	482.3	0.0	0.0%
7a	Irrigation	1.6	1.6	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	117.8	117.8	0.0	0.0%
2b	Business	463.3	463.3	0.0	0.0%
3b	Multiple Family	760.5	760.5	0.0	0.0%
4b	Industrial	13,618.1	13,618.1	0.0	0.0%
5b	Public Authority	1,073.6	1,073.6	0.0	0.0%
6b	Other	482.3	482.3	0.0	0.0%
7b	Irrigation	1.6	1.6	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	2,687	2,687	0	0%
2a	Business	676	676	0	0%
3a	Multiple Family	89	89	0	0%
4a	Industrial	17	17	0	0%
5a	Public Authority	102	102	0	0%
6a	Other	8	8	0	0%
7a	Irrigation	6	6	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	3,585	3,585	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	102	102	0	0%
12a	Public Fire Protection	10	10	0	0%
13a	Total Number of Unmetered Connections	112	112	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	3,697	3,697	0	0%
15a	Excluding Fire Protection	3,585	3,585	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	2,693	2,693	0	0%
2b	Business	677	677	0	0%
3b	Multiple Family	92	92	0	0%
4b	Industrial	17	17	0	0%
5b	Public Authority	105	105	0	0%
6b	Other	8	8	0	0%
7b	Irrigation	6	6	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	3,598	3,598	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	103	103	0	0%
12b	Public Fire Protection	10	10	0	0%
13b	Total Number of Unmetered Connections	113	113	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	3,711	3,711	0	0%
15b	Excluding Fire Protection	3,598	3,598	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	316.5	316.5	0.0	0.0%
2a	Business	313.1	313.1	0.0	0.0%
3a	Multiple Family	67.7	67.7	0.0	0.0%
4a	Industrial	231.5	231.5	0.0	0.0%
5a	Public Authority	112.4	112.4	0.0	0.0%
6a	Other	3.9	3.9	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	1,045.1	1,045.1	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	1,045.1	1,045.1	0.0	0.0%
12a	*Unaccounted For Water Rate*	*5.8%*	*5.8%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	64.4	64.4	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**1,109.5**	**1,109.5**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	2,547.1	2,547.1	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	19.3	19.3	0.0	0.0%
17a	Purchased Water	1,090.2	1,090.2	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**1,109.5**	**1,109.5**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	317.2	317.2	0.0	0.0%
2b	Business	313.8	313.8	0.0	0.0%
3b	Multiple Family	69.8	69.8	0.0	0.0%
4b	Industrial	231.5	231.5	0.0	0.0%
5b	Public Authority	112.4	112.4	0.0	0.0%
6b	Other	3.9	3.9	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	1,048.6	1,048.6	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	1,048.6	1,048.6	0.0	0.0%
12b	*Unaccounted For Water Rate*	*5.8%*	*5.8%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	64.6	64.6	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**1,113.2**	**1,113.2**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	2,555.6	2,555.6	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	19.3	19.3	0.0	0.0%
17b	Purchased Water	1,093.9	1,093.9	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**1,113.2**	**1,113.2**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	944.2	944.2	0.0	0.0%
2a	Business	1,199.0	1,199.0	0.0	0.0%
3a	Multiple Family	259.4	259.4	0.0	0.0%
4a	Industrial	886.5	886.5	0.0	0.0%
5a	Public Authority	430.3	430.3	0.0	0.0%
6a	Other	14.8	14.8	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	3,734.0	3,734.0	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	1,711.0	1,711.0	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	1,711.0	1,711.0	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	78.1	78.1	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	27.7	27.7	0.0	0.0%
16a	Total Other Revenues	105.7	105.7	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	5,550.7	5,550.7	0.0	0.0%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	882.7	852.3	(30.5)	-3.6%
2b	Business	1,120.7	1,081.6	(39.0)	-3.6%
3b	Multiple Family	249.4	240.7	(8.7)	-3.6%
4b	Industrial	826.9	798.1	(28.8)	-3.6%
5b	Public Authority	401.3	387.4	(14.0)	-3.6%
6b	Other	13.8	13.3	(0.5)	-3.6%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	(0.0)	-3.7%
9b	Total Metered Revenues	3,494.8	3,373.3	(121.4)	-3.6%
	Unmetered Revenues:				
10b	Service Charge	2,102.4	2,774.8	672.4	24.2%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	2,102.4	2,774.8	672.4	24.2%
	Other Revenues:				
13b	Private Fire Protection	84.8	84.8	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	27.4	27.4	0.0	0.0%
16b	Total Other Revenues	112.2	112.2	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	5,709.4	6,260.3	551.0	8.8%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	240.1	240.1	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	255.2	255.2	0.0	0.0%
4	Purchased Chemicals	85.2	85.2	0.0	0.0%
5	Payroll	717.2	717.2	0.0	0.0%
6	Postage	11.7	11.0	(0.7)	-6.0%
7	Transportation	60.7	60.7	0.0	0.0%
	Purchased Services:				
8	Source of Supply	11.8	11.8	0.0	0.0%
9	Pumping	13.6	13.6	0.0	0.0%
10	Water Treatment	70.0	70.0	0.0	0.0%
11	Transmission & Distribution	81.3	81.3	0.0	0.0%
12	Customer Accounting	62.2	62.2	0.0	0.0%
13	Conservation	44.0	46.3	2.3	5.0%
14	Total Operations Exp. excluding Uncollectibles	1,652.9	1,654.6	1.7	0.1%
	Maintenance Expenses:				
15	Payroll	128.2	128.2	0.0	0.0%
16	Transportation	12.5	12.5	0.0	0.0%
17	Stores	15.8	15.8	0.0	0.0%
18	Contracted Maintenance	88.0	88.0	0.0	0.0%
19	Total Maintenance Expenses	244.5	244.5	0.0	0.0%
	At Present Rates				
20	Operating Revenues	5,550.7	5,550.7	0.0	0.0%
21	*Uncollectible Rate*	0.2687%	0.3316%	*0.0629%*	*19.0%*
22	Uncollectibles Expense	14.9	18.4	3.5	19.0%
23	Total O&M Expenses including Uncollectibles	1,912.3	1,917.5	5.1	0.3%
	At Proposed Rates				
25	Operating Revenues	5,681.7	6,233.7	552.0	8.9%
26	*Uncollectible Rate*	0.2687%	0.2687%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	15.3	20.2	5.0	24.6%
28	Total O&M Expenses including Uncollectibles	1,912.7	1,919.3	6.6	0.3%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	240.7	240.7	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	261.6	261.6	0.0	0.0%
4	Purchased Chemicals	87.4	87.4	0.0	0.0%
5	Payroll	740.8	740.8	0.0	0.0%
6	Postage	11.8	11.1	(0.7)	-6.0%
7	Transportation	62.2	62.2	0.0	0.0%
	Purchased Services:				
8	Source of Supply	12.1	12.1	0.0	0.0%
9	Pumping	13.9	13.9	0.0	0.0%
10	Water Treatment	71.4	71.4	0.0	0.0%
11	Transmission & Distribution	83.3	83.3	0.0	0.0%
12	Customer Accounting	63.8	63.8	0.0	0.0%
13	Conservation	46.3	46.3	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	1,695.3	1,694.7	(0.7)	0.0%
	Maintenance Expenses:				
15	Payroll	132.4	132.4	0.0	0.0%
16	Transportation	12.8	12.8	0.0	0.0%
17	Stores	16.2	16.2	0.0	0.0%
18	Contracted Maintenance	89.9	89.9	0.0	0.0%
19	Total Maintenance Expenses	251.3	251.3	0.0	0.0%
	At Present Rates				
20	Operating Revenues	5,709.4	6,260.3	551.0	8.8%
21	*Uncollectible Rate*	0.2687%	0.3316%	*6.2869%*	*19.0%*
22	Uncollectibles Expense	15.3	20.8	5.4	26.1%
23	Total O&M Expenses including Uncollectibles	1,961.9	1,966.7	4.7	0.2%
	At Proposed Rates				
25	Operating Revenues	5,885.0	6,592.2	707.2	10.7%
26	*Uncollectible Rate*	0.2687%	0.3316%	*6.2869%*	*19.0%*
27	Uncollectibles Expense	15.8	21.9	6.0	27.7%
28	Total O&M Expenses including Uncollectibles	1,962.4	1,967.8	5.4	0.3%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	149.2	149.2	0.0	0.0%
2a	Benefits	313.9	326.0	12.1	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	0.0	0.0	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(1.2)	(1.2)	0.0	0.0%
6a	Workers' Compensation	14.9	14.7	(0.1)	-0.9%
7a	Non-Specifics	27.1	26.0	(1.1)	-4.0%
8a	Subtotal	503.8	514.7	10.9	2.1%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	18.6	19.0	0.3	1.8%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(0.1)	(0.1)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	522.4	533.6	11.2	2.1%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	154.1	154.1	0.0	0.0%
2b	Benefits	341.1	352.1	10.9	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	0.0	0.0	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(1.3)	(1.3)	0.0	0.0%
6b	Workers' Compensation	15.3	15.8	0.5	3.1%
7b	Non-Specifics	25.0	25.0	0.0	0.0%
8b	Subtotal	534.2	545.6	11.4	2.1%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	53.7	79.3	25.6	32.3%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(0.1)	(0.1)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	587.9	624.9	37.0	5.9%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Ad Valorem Taxes	143.6	175.2	31.6	18.0%
2a	Payroll Taxes	71.5	71.5	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	5,535.8	5,532.3	(3.5)	-0.1%
4a	*Effective Local Franchise Tax Rate*	*0.000%*	*0.000%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5a1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	215.1	246.7	31.6	12.8%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	5,666.5	6,213.5	547.0	8.8%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9a	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9a1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	215.1	246.7	31.6	12.8%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Ad Valorem Taxes	149.9	183.6	33.7	18.4%
2b	Payroll Taxes	73.8	73.8	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	5,694.0	6,239.6	545.5	8.7%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
5b	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5b1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	223.7	257.4	33.7	13.1%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	5,869.2	6,570.3	701.1	10.7%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9b	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9b1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	223.7	257.4	33.7	13.1%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	5,550.7	5,550.7	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	1,897.4	1,899.1	1.7	0.1%
3	Uncollectibles Expense	14.9	18.4	3.5	19.0%
4	A&G Expenses	522.4	533.6	11.2	2.1%
5	G.O. Prorated Expenses	1,003.7	1,070.4	66.7	6.2%
6	G.O. Book Depreciation (to be excluded)	(111.3)	(137.4)	(26.0)	19.0%
7	Transportation Deprec. Expense (to be excluded)	(35.2)	(39.8)	(4.7)	11.7%
8	Taxes On Other Than Income	215.1	246.7	31.6	12.8%
8a	Non-deductible Meals	(6.2)	(6.1)	0.0	-0.3%
9	Interest Expense	355.3	442.3	87.0	19.7%
10	Total Common Deductions	3,856.1	4,027.1	171.0	4.2%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	1,144.3	1,412.7	268.4	19.0%
12	Tax Depreciation - G.O.	71.8	115.3	43.6	37.8%
13	Subtotal	1,216.1	1,528.0	311.9	20.4%
14	Total State Deductions, incl. Common Deductions	5,072.2	5,555.1	482.9	8.7%
	Federal Tax Deductions				
16	Book Depreciation - District	881.3	1,008.8	127.5	12.6%
17	Book Depreciation - G.O.	111.3	137.4	26.0	19.0%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	42.3	(0.4)	(42.7)	10929.4%
20	Subtotal	1,034.9	1,145.8	110.9	9.7%
21	Total Fed. Deductions, incl. Common Deductions	4,891.1	5,172.9	281.8	5.4%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	478.5	(4.4)	(482.9)	10929.4%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	42.3	(0.4)	(42.7)	10929.4%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	659.6	377.8	(281.8)	-74.6%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	138.5	79.3	(281.8)	-74.6%
28	Adjustment to FIT, Regulatory Liability	(156.9)	(156.9)	(0.0)	0.0%
29	Total FIT, with Adjustment	(18.3)	(77.5)	(59.2)	76.4%
30	Total Income Taxes for Revenues at Present Rates	24.0	(77.9)	(101.9)	130.8%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	5,681.7	6,233.7	552.0	8.9%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	1,897.4	1,899.1	1.7	0.1%
3	Uncollectibles Expense	15.3	20.2	5.0	24.6%
4	A&G Expenses	522.4	533.6	11.2	2.1%
5	G.O. Prorated Expenses	1,003.7	1,070.4	66.7	6.2%
6	G.O. Book Depreciation (to be excluded)	(111.3)	(137.4)	(26.0)	19.0%
7	Transportation Deprec. Expense (to be excluded)	(35.2)	(39.8)	(4.7)	11.7%
8	Taxes On Other Than Income	215.1	246.7	31.6	12.8%
8a	Non-deductible Meals	(6.2)	(6.1)	0.0	-0.3%
9	Interest Expense	355.3	442.3	87.0	19.7%
10	Total Common Deductions	3,856.5	4,028.9	172.4	4.3%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	1,144.3	1,412.7	268.4	19.0%
12	Tax Depreciation - G.O.	71.8	115.3	43.6	37.8%
13	Subtotal	1,216.1	1,528.0	311.9	20.4%
14	Total State Deductions, incl. Common Deductions	5,072.6	5,557.0	484.4	8.7%
	Federal Tax Deductions				
16	Book Depreciation - District	881.3	1,008.8	127.5	12.6%
17	Book Depreciation - G.O.	111.3	137.4	26.0	19.0%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	53.8	59.8	6.0	10.0%
20	Subtotal	1,046.5	1,206.0	159.5	13.2%
21	Total Fed. Deductions, incl. Common Deductions	4,903.0	5,235.0	332.0	6.3%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	609.1	676.8	67.6	10.0%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	53.8	59.8	6.0	10.0%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	778.7	998.8	220.0	22.0%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	163.5	209.7	46.2	22.0%
28	Adjustment to FIT, Regulatory Liability	(156.9)	(156.9)	(0.0)	0.0%
29	Total FIT, with Adjustment	6.7	52.9	46.2	87.4%
30	Total Income Taxes for Revenues at Proposed Rates	60.5	112.7	52.2	46.3%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	31,148.0	34,117.2	2,969.2	8.7%
2a	Adjustments	5.1	5.1	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	1,373.2	2,512.2	1,139.0	45.3%
4a	Advances	0.0	0.0	0.0	0.0%
5a	Contributions	64.1	64.1	0.0	0.0%
6a	Total Gross Additions	1,437.3	2,576.3	1,139.0	44.2%
8a	Retirements	87.2	87.2	0.0	0.0%
9a	Net Additions	1,524.5	2,663.5	1,139.0	42.8%
10a	Plant in Service - End of Year	32,677.6	36,785.8	4,108.2	11.2%
11a	*Plant Weighting Factor*	*43.50%*	*43.50%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	31,811.2	35,275.9	3,464.7	9.8%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	32,677.6	36,785.8	4,108.2	11.2%
2b	Adjustments	4.7	4.7	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	1,044.6	1,472.3	427.7	29.0%
4b	Advances	0.0	0.0	0.0	0.0%
5b	Contributions	64.1	64.1	0.0	0.0%
6b	Total Gross Additions	1,108.7	1,536.4	427.7	27.8%
8b	Retirements	87.2	87.2	0.0	0.0%
9b	Net Additions	1,195.9	1,623.6	427.7	26.3%
10b	Plant in Service - End of Year	33,878.1	38,414.1	4,535.9	11.8%
11b	*Plant Weighting Factor*	*43.50%*	*43.50%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	33,197.8	37,492.1	4,294.3	11.5%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Depreciation Reserve - Beginning of Year	14,088.8	14,267.1	178.3	1.2%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(30.8)	(31.4)	(0.6)	2.0%
3a	Contributed Plant	(62.6)	(63.3)	(0.7)	1.2%
4a	Depreciation Accrual	974.642	1,103.5	128.9	11.7%
5a	Total Accruals	881.3	1,008.8	127.5	12.6%
	Retirements				
6a	Net Retirements	(87.189)	(87.2)	0.0	0.0%
8a	Total Retirement	(87.2)	(87.2)	0.0	0.0%
9a	Net Additions	887	1,016.3	128.9	12.7%
7a	Carry Forward Adjustment	0.0	(19.5)	(19.5)	100.0%
10a	Depreciation Reserve - End of Year	14,976.2	15,263.9	287.6	1.9%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	14,532.5	14,755.7	223.2	1.5%
13a	*Deprec. expense for summary of earnings calc.*	881.3	1,008.8	127.5	12.6%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Depreciation Reserve - Beginning of Year	14,976.2	15,263.9	287.6	1.9%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(30.8)	(31.5)	(0.7)	2.2%
3b	Contributed Plant	(64.2)	(64.7)	(0.5)	0.7%
4b	Depreciation Accrual	1,006.4	1,157.6	151.3	13.1%
5b	Total Accruals	911.4	1,061.5	150.1	14.1%
	Retirements and Adjustments:				
6b	Net Retirements	(87.2)	(87.2)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(87.2)	(87.2)	0.0	
					0.0%
9b	Net Additions	919.2	1,070.4	151.3	14.1%
10b	Depreciation Reserve - End of Year	15,895.4	16,334.3	438.9	2.7%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	15,435.8	15,799.1	363.2	2.3%
13b	* *Deprec. expense for summary of earnings calc.*	911.4	1,061.5	150.1	14.1%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	31,811.2	35,275.9	3,464.7	9.8%
3	Weighted Average Depreciation Reserve	(14,532.5)	(14,755.7)	(223.2)	1.5%
4	Net Utility Plant	17,278.7	20,520.2	3,241.6	15.8%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	938.6	935.5	(3.1)	-0.3%
5	Advances in Construction	122.0	122.0	0.0	0.0%
6	Reserve for Amortization of Intangibles	355.3	357.1	1.8	0.5%
7	Deferred Taxes	2,743.3	2,979.9	236.5	7.9%
8	Unamortized Investment Tax Credits	9.6	9.6	0.0	0.0%
9	Total Deductions from Rate Base	4,168.8	4,404.1	235.3	5.3%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	122.1	122.1	0.0	0.0%
10a	Tank Painting	124.7	131.3	6.6	5.0%
11	Working Cash, Lead-Lag	449.3	478.7	29.5	6.2%
12	Amount Withheld from Employees	(2.8)	(2.8)	0.0	-0.8%
13	Total Working Capital	693.2	729.3	36.1	4.9%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	74.1	74.1	0.0	0.0%
17	Total Additions to Rate Base	767.3	803.4	36.1	4.5%
18	Weighted Average Rate Base, District	13,877.2	16,919.5	3,042.3	18.0%
19	Weighted Average Rate Base, G.O. Allocation	642.5	1,021.3	378.9	37.1%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	14,519.7	17,940.8	3,421.2	19.1%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*13,826.458*	*17,211.5*	*3,385.1*	*19.7%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*355.3*	*442.3*	*87.0*	*19.7%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	33,197.8	37,492.1	4,294.3	11.5%
3	Weighted Average Depreciation Reserve	(15,435.8)	(15,799.1)	(363.2)	2.3%
4	Net Utility Plant	17,762.0	21,693.0	3,931.1	18.1%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	939.3	935.6	(3.7)	-0.4%
5	Advances in Construction	116.4	116.4	0.0	0.0%
6	Reserve for Amortization of Intangibles	394.0	411.1	17.2	4.2%
7	Deferred Taxes	2,617.7	2,879.0	261.3	9.1%
8	Unamortized Investment Tax Credits	8.3	8.3	0.0	0.0%
9	Total Deductions from Rate Base	4,075.6	4,350.4	274.8	6.3%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	122.1	122.1	0.0	0.0%
10a	Tank Painting	110.1	116.7	6.6	5.7%
11	Working Cash, Lead-Lag	465.4	506.8	41.4	8.2%
12	Amount Withheld from Employees	(2.8)	(2.8)	0.0	-0.8%
13	Total Working Capital	694.7	742.7	48.0	6.5%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	81.5	81.5	0.0	0.0%
17	Total Additions to Rate Base	776.2	824.2	48.0	5.8%
18	Weighted Average Rate Base, District	14,462.5	18,166.8	3,704.2	20.4%
19	Weighted Average Rate Base, G.O. Allocation	650.2	1,106.0	455.8	41.2%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	15,112.7	19,272.7	4,160.0	21.6%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*14,418.0*	*18,530.0*	*4,112.0*	*22.2%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*370.5*	*476.2*	*105.7*	*22.2%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	2,723.2	3,123.1	399.9
2. Test Year 2023 Increase (%)	31.9%	36.6%	4.7%
3. Escalation Year 2024 Increase (%)	-2.0%	-2.0%	0.0%
4. Escalation Year 2025 Increase (%)	-0.9%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**8,531.6**	**8,531.6**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	0.0	0.0	0.0	0.0%
3a	Administrative & General	0.0	0.0	0.0	0.0%
4a	Payroll	0.0	0.0	0.0	0.0%
5a	General Office - *prorated expenses*	0.0	0.0	0.0	0.0%
6a	Depreciation Expense	2,052.6	2,116.0	63.4	3.0%
7a	Taxes Other Than Income	1,109.7	1,147.3	37.6	3.3%
8a	California Corporate Franchise Tax	179.8	155.4	(24.4)	-15.7%
9a	Federal Income Tax	621.6	588.1	(33.5)	-5.7%
10a	Total Operating Expenses	3,963.7	4,006.8	43.1	1.1%
11a	Net Operating Revenues	4,567.8	4,524.7	(43.1)	-1.0%
12a	Weighted Average Rate Base	87,004.4	90,236.8	3,232.4	3.6%
13a	***Return on Rate Base***	***5.25%***	***5.01%***	***-0.24%***	***-4.7%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	11,254.8	11,654.7	**399.9**	**3.4%**
	Operating Expenses:				
2b	Operation & Maintenance	0.0	0.0	0.0	0.0%
3b	Administrative & General	0.0	0.0	0.0	0.0%
4b	Payroll	0.0	0.0	0.0	0.0%
5b	General Office - *prorated expenses*	0.0	0.0	0.0	0.0%
6b	Depreciation Expense	2,052.6	2,116.0	63.4	3.0%
7b	Taxes Other Than Income	1,139.0	1,180.9	41.9	3.5%
8b	California Corporate Franchise Tax	418.0	428.6	10.6	2.5%
9b	Federal Income Tax	1,137.3	1,179.6	42.2	3.6%
10b	Total Operating Expenses	4,746.9	4,905.0	158.1	3.2%
11b	Net Operating Revenues	6,507.9	6,749.7	241.8	3.6%
12b	Weighted Average Rate Base	87,004	90,236.8	3,232.4	3.6%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**2,723.2**	**3,123.1**	**399.9**	**12.8%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	11,038.2	10,937.8	(100.4)	-0.9%
2	Operating Expenses:*				
3	Operation & Maintenance	0.0	0.0	0.0	0.0%
4	Administrative & General	0.0	0.0	0.0	0.0%
5	Payroll	0.0	0.0	0.0	0.0%
6	G.O. Prorated Expenses	0.0	0.0	0.0	0.0%
7	Depreciation Expense	2,052.6	2,093.7	41.1	2.0%
8	Taxes Other Than Income	1,111.0	1,133.2	22.2	2.0%
9	California Corporate Franchise Tax	421.8	421.75	0.0	0.0%
10	Federal Income Tax	1,108.6	1,108.64	0.0	0.0%
11	Total Operating Expenses	4,694.0	4,757.2	63.3	1.3%
12	Net Operating Revenues	6,344.3	6,180.6	(163.7)	-2.6%
13	Weighted Average Rate Base	84,816.3	82,628.2	(2,188.1)	-2.6%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***(0.0)***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	0.0	0.0	0.0	0.0%
2a	Business	0.0	0.0	0.0	0.0%
3a	Multiple Family	0.0	0.0	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	0.0	0.0	0.0	0.0%
6a	Other	0.0	0.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	0.0	0.0	0.0	0.0%
2b	Business	0.0	0.0	0.0	0.0%
3b	Multiple Family	0.0	0.0	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	0.0	0.0	0.0	0.0%
6b	Other	0.0	0.0	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	23,001	23,001	0	0%
2a	Business	672	672	0	0%
3a	Multiple Family	226	226	0	0%
4a	Industrial	0	0	0	0%
5a	Public Authority	250	250	0	0%
6a	Other	0	0	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	24,149	24,149	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	0	0	0	0%
12a	Public Fire Protection	0	0	0	0%
13a	Total Number of Unmetered Connections	0	0	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	24,149	24,149	0	0%
15a	Excluding Fire Protection	24,149	24,149	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	23,028	23,028	0	0%
2b	Business	672	672	0	0%
3b	Multiple Family	227	227	0	0%
4b	Industrial	0	0	0	0%
5b	Public Authority	249	249	0	0%
6b	Other	0	0	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	24,175	24,175	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	0	0	0	0%
12b	Public Fire Protection	0	0	0	0%
13b	Total Number of Unmetered Connections	0	0	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	24,175	24,175	0	0%
15b	Excluding Fire Protection	24,175	24,175	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	0.0	0.0	0.0	0.0%
2a	Business	0.0	0.0	0.0	0.0%
3a	Multiple Family	0.0	0.0	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	0.0	0.0	0.0	0.0%
6a	Other	0.0	0.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	0.0	0.0	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	0.0	0.0	0.0	0.0%
12a	*Unaccounted For Water Rate*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	0.0	0.0	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**0.0**	**0.0**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	0.0	0.0	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	0.0	0.0	0.0	0.0%
17a	Purchased Water	0.0	0.0	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**0.0**	**0.0**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	0.0	0.0	0.0	0.0%
2b	Business	0.0	0.0	0.0	0.0%
3b	Multiple Family	0.0	0.0	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	0.0	0.0	0.0	0.0%
6b	Other	0.0	0.0	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	0.0	0.0	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	0.0	0.0	0.0	0.0%
12b	*Unaccounted For Water Rate*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	0.0	0.0	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**0.0**	**0.0**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	0.0	0.0	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	0.0	0.0	0.0	0.0%
17b	Purchased Water	0.0	0.0	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**0.0**	**0.0**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	4,911.1	4,911.1	0.0	0.0%
2a	Business	844.4	844.4	0.0	0.0%
3a	Multiple Family	232.0	232.0	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	261.5	261.5	0.0	0.0%
6a	Other	7.2	7.2	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	6,256.3	6,256.3	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	2,275.3	2,275.3	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	2,275.3	2,275.3	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	0.0	0.0	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	0.0	0.0	0.0	0.0%
16a	Total Other Revenues	0.0	0.0	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	8,531.6	8,531.6	0.0	0.0%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	5,170.2	4,627.5	(542.7)	-11.7%
2b	Business	887.9	794.7	(93.3)	-11.7%
3b	Multiple Family	244.5	218.8	(25.7)	-11.7%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	275.0	246.1	(28.9)	-11.7%
6b	Other	7.6	6.8	(0.8)	-11.7%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	6,585.2	5,893.9	(691.3)	-11.7%
	Unmetered Revenues:				
10b	Service Charge	4,682.1	5,771.8	1,089.8	18.9%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	4,682.1	5,771.8	1,089.8	18.9%
	Other Revenues:				
13b	Private Fire Protection	0.0	0.0	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	0.0	0.0	0.0	0.0%
16b	Total Other Revenues	0.0	0.0	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	11,267.3	11,665.7	398.4	3.4%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	0.0	0.0	0.0	0.0%
4	Purchased Chemicals	0.0	0.0	0.0	0.0%
5	Payroll	0.0	0.0	0.0	0.0%
6	Postage	0.0	0.0	0.0	0.0%
7	Transportation	0.0	0.0	0.0	0.0%
	Purchased Services:				
8	Source of Supply	0.0	0.0	0.0	0.0%
9	Pumping	0.0	0.0	0.0	0.0%
10	Water Treatment	0.0	0.0	0.0	0.0%
11	Transmission & Distribution	0.0	0.0	0.0	0.0%
12	Customer Accounting	0.0	0.0	0.0	0.0%
13	Conservation	0.0	0.0	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	0.0	0.0	0.0	0.0%
	Maintenance Expenses:				
15	Payroll	0.0	0.0	0.0	0.0%
16	Transportation	0.0	0.0	0.0	0.0%
17	Stores	0.0	0.0	0.0	0.0%
18	Contracted Maintenance	0.0	0.0	0.0	0.0%
19	Total Maintenance Expenses	-	-	0.0	0.0%
	At Present Rates				
20	Operating Revenues	8,531.6	8,531.6	0.0	0.0%
21	*Uncollectible Rate*	0.0000%	0.0000%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	0.0	0.0	0.0	0.0%
23	Total O&M Expenses including Uncollectibles	0.0	0.0	0.0	0.0%
	At Proposed Rates				
25	Operating Revenues	11,254.8	11,654.7	399.9	3.4%
26	*Uncollectible Rate*	0.0000%	0.0000%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	0.0	0.0	0.0	0.0%
28	Total O&M Expenses including Uncollectibles	0.0	0.0	0.0	0.0%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	0.0	0.0	0.0	0.0%
4	Purchased Chemicals	0.0	0.0	0.0	0.0%
5	Payroll	0.0	0.0	0.0	0.0%
6	Postage	0.0	0.0	0.0	0.0%
7	Transportation	0.0	0.0	0.0	0.0%
	Purchased Services:				
8	Source of Supply	0.0	0.0	0.0	0.0%
9	Pumping	0.0	0.0	0.0	0.0%
10	Water Treatment	0.0	0.0	0.0	0.0%
11	Transmission & Distribution	0.0	0.0	0.0	0.0%
12	Customer Accounting	0.0	0.0	0.0	0.0%
13	Conservation	0.0	0.0	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	0.0	0.0	0.0	0.0%
	Maintenance Expenses:				
15	Payroll	0.0	0.0	0.0	0.0%
16	Transportation	0.0	0.0	0.0	0.0%
17	Stores	0.0	0.0	0.0	0.0%
18	Contracted Maintenance	0.0	0.0	0.0	0.0%
19	Total Maintenance Expenses	0.0	-	0.0	0.0%
	At Present Rates				
20	Operating Revenues	11,267.3	11,665.7	398.4	3.4%
21	*Uncollectible Rate*	0.0000%	0.0000%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	0.0	0.0	0.0	0.0%
23	Total O&M Expenses including Uncollectibles	0.0	0.0	0.0	0.0%
	At Proposed Rates				
25	Operating Revenues	11,038.2	11,434.1	395.9	3.5%
26	*Uncollectible Rate*	0.0000%	0.0000%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	0.0	0.0	0.0	0.0%
28	Total O&M Expenses including Uncollectibles	0.0	0.0	0.0	0.0%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Administrative & General Expenses:				
1a	Payroll	0.0	0.0	0.0	0.0%
2a	Benefits	0.0	0.0	0.0	0.0%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	0.0	0.0	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	0.0	0.0	0.0	0.0%
6a	Workers' Compensation	0.0	0.0	0.0	0.0%
7a	Non-Specifics	0.0	0.0	0.0	0.0%
8a	Subtotal	0.0	0.0	0.0	0.0%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	0.0	0.0	0.0	0.0%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	0.0	0.0	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	0.0	0.0	0.0	0.0%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Administrative & General Expenses:				
1b	Payroll	0.0	0.0	0.0	0.0%
2b	Benefits	0.0	0.0	0.0	0.0%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	0.0	0.0	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	0.0	0.0	0.0	0.0%
6b	Workers' Compensation	0.0	0.0	0.0	0.0%
7b	Non-Specifics	0.0	0.0	0.0	0.0%
8b	Subtotal	0.0	0.0	0.0	0.0%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	0.0	0.0	0.0	0.0%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	0.0	0.0	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	0.0	0.0	0.0	0.0%

TABLE 5-1
TAXES OTHER THAN INCOME

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	1,018.0	1,055.6	37.6	3.6%
2a	Payroll Taxes	0.0	0.0	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	8,531.6	8,531.6	0.0	0.0%
4a	*Effective Local Franchise Tax Rate*	*1.075%*	*1.075%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	91.7	91.7	0.0	0.0%
5a1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	1,109.7	1,147.3	37.6	3.3%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	11,254.8	11,654.7	399.9	3.4%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*1.075%*	*0.096%*	*0.1%*
9a	Franchise Taxes-Proposed Rates	121.0	125.3	4.3	3.4%
9a1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	1,139.0	1,180.9	41.9	3.5%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	992.2	1,029.2	37.0	3.6%
2b	Payroll Taxes	0.0	0.0	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	11,267.3	11,665.7	398.4	3.4%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*1.075%*	*0.096%*	*0.1%*
5b	Franchise Taxes-Present Rates	121.2	125.4	4.3	3.4%
5b1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	1,113.4	1,154.7	41.3	3.6%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	11,038.2	11,434.1	395.9	3.5%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*1.075%*	*0.096%*	*0.1%*
9b	Franchise Taxes-Proposed Rates	118.7	123.0	4.3	3.5%
9b1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	1,111.0	1,152.2	41.2	3.6%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	8,531.6	8,531.6	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	0.0	0.0	0.0	0.0%
3	Uncollectibles Expense	0.0	0.0	0.0	0.0%
4	A&G Expenses	0.0	0.0	0.0	0.0%
5	G.O. Prorated Expenses	0.0	0.0	0.0	0.0%
6	G.O. Book Depreciation (to be excluded)	0.0	0.0	0.0	0.0%
7	Transportation Deprec. Expense (to be excluded)	0.0	0.0	0.0	0.0%
8	Taxes On Other Than Income	1,109.7	1,147.3	37.6	3.3%
8a	Non-deductible Meals	0.0	0.0	0.0	0.0%
9	Interest Expense	2,229.5	2,312.3	82.9	3.6%
10	Total Common Deductions	3,339.2	3,459.7	120.4	3.5%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	3,158.4	3,313.5	155.1	4.7%
12	Tax Depreciation - G.O.	0.0	0.0	0.0	0.0%
13	Subtotal	3,158.4	3,313.5	155.1	4.7%
14	Total State Deductions, incl. Common Deductions	6,497.6	6,773.1	275.5	4.1%
	Federal Tax Deductions				
16	Book Depreciation - District	2,052.6	2,116.0	63.4	3.0%
17	Book Depreciation - G.O.	0.0	0.0	0.0	0.0%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	179.8	155.4	(24.4)	-15.7%
20	Subtotal	2,232.4	2,271.4	39.0	1.7%
21	Total Fed. Deductions, incl. Common Deductions	5,571.6	5,731.1	159.5	2.8%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	2,034.0	1,758.4	(275.5)	-15.7%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	179.8	155.4	(24.4)	-15.7%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	2,959.9	2,800.5	(159.5)	-5.7%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	621.6	588.1	(159.5)	-5.7%
28	Adjustment to FIT, Regulatory Liability	0.0	0.0	0.0	0.0%
29	Total FIT, with Adjustment	621.6	588.1	(33.5)	-5.7%
30	Total Income Taxes for Revenues at Present Rates	801.4	743.5	(57.8)	-7.8%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	11,254.8	11,654.7	399.9	3.4%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	0.0	0.0	0.0	0.0%
3	Uncollectibles Expense	0.0	0.0	0.0	0.0%
4	A&G Expenses	0.0	0.0	0.0	0.0%
5	G.O. Prorated Expenses	0.0	0.0	0.0	0.0%
6	G.O. Book Depreciation (to be excluded)	0.0	0.0	0.0	0.0%
7	Transportation Deprec. Expense (to be excluded)	0.0	0.0	0.0	0.0%
8	Taxes On Other Than Income	1,139.0	1,180.9	41.9	3.5%
8a	Non-deductible Meals	0.0	0.0	0.0	0.0%
9	Interest Expense	2,229.5	2,312.3	82.9	3.6%
10	Total Common Deductions	3,368.5	3,493.2	124.7	3.6%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	3,158.4	3,313.5	155.1	4.7%
12	Tax Depreciation - G.O.	0.0	0.0	0.0	0.0%
13	Subtotal	3,158.4	3,313.5	155.1	4.7%
14	Total State Deductions, incl. Common Deductions	6,526.8	6,806.7	279.8	4.1%
	Federal Tax Deductions				
16	Book Depreciation - District	2,052.6	2,116.0	63.4	3.0%
17	Book Depreciation - G.O.	0.0	0.0	0.0	0.0%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	418.0	428.6	10.6	2.5%
20	Subtotal	2,470.6	2,544.5	74.0	2.9%
21	Total Fed. Deductions, incl. Common Deductions	5,839.0	6,037.7	198.7	3.3%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	4,728.0	4,848.0	120.1	2.5%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	418.0	428.6	10.6	2.5%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	5,415.8	5,616.9	201.2	3.6%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	1,137.3	1,179.6	42.2	3.6%
28	Adjustment to FIT, Regulatory Liability	0.0	0.0	0.0	0.0%
29	Total FIT, with Adjustment	1,137.3	1,179.6	42.2	3.6%
30	Total Income Taxes for Revenues at Proposed Rates	1,555.3	1,608.1	52.9	3.3%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1a	Plant in Service - Beginning of Year	98,783.8	102,089.6	3,305.8	3.2%
2a	Adjustments	0.0	0.0	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	0.0	0.0	0.0	0.0%
4a	Advances	0.0	0.0	0.0	0.0%
5a	Contributions	0.0	0.0	0.0	0.0%
6a	Total Gross Additions	0.0	0.0	0.0	0.0%
8a	Retirements	0.0	0.0	0.0	0.0%
9a	Net Additions	0.0	0.0	0.0	0.0%
10a	Plant in Service - End of Year	98,783.8	102,089.6	3,305.8	3.2%
11a	*Plant Weighting Factor*	*45.82%*	*45.82%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	98,783.8	102,089.6	3,305.8	3.2%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1b	Plant in Service - Beginning of Year	98,783.8	102,089.6	3,305.8	3.2%
2b	Adjustments	0.0	0.0	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	0.0	0.0	0.0	0.0%
4b	Advances	0.0	0.0	0.0	0.0%
5b	Contributions	0.0	0.0	0.0	0.0%
6b	Total Gross Additions	0.0	0.0	0.0	0.0%
8b	Retirements	0.0	0.0	0.0	0.0%
9b	Net Additions	0.0	0.0	0.0	0.0%
10b	Plant in Service - End of Year	98,783.8	102,089.6	3,305.8	3.2%
11b	*Plant Weighting Factor*	*45.82%*	*45.82%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	98,783.8	102,089.6	3,305.8	3.2%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1a	Depreciation Reserve - Beginning of Year	4,449.8	4,521.0	71.2	1.6%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	0.0	0.0	0.0	0.0%
3a	Contributed Plant	0.0	0.0	0.0	0.0%
4a	Depreciation Accrual	2,052.610	2,116.0	63.4	3.0%
5a	Total Accruals	2,052.6	2,116.0	63.4	3.0%
	Retirements				
6a	Net Retirements	0.000	0.0	0.0	0.0%
8a	Total Retirement	0.0	0.0	0.0	0.0%
9a	Net Additions	2,053	2,116.0	63.4	3.0%
7a	Carry Forward Adjustment	0.0	0.0	0.0	0.0%
10a	Depreciation Reserve - End of Year	6,502.4	6,637.0	134.6	2.0%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	5,476.1	5,579.0	102.9	1.8%
13a	*Deprec. expense for summary of earnings calc.*	2,052.6	2,116.0	63.4	3.0%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1b	Depreciation Reserve - Beginning of Year	6,502.4	6,637.0	134.6	2.0%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	0.0	0.0	0.0	0.0%
3b	Contributed Plant	0.0	0.0	0.0	0.0%
4b	Depreciation Accrual	2,052.6	2,116.0	63.4	3.0%
5b	Total Accruals	2,052.6	2,116.0	63.4	3.0%
	Retirements and Adjustments:				
6b	Net Retirements	0.0	0.0	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	0.0	0.0	0.0	0.0%
9b	Net Additions	2,052.6	2,116.0	63.4	3.0%
10b	Depreciation Reserve - End of Year	8,555.0	8,753.0	198.0	2.3%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	7,528.7	7,695.0	166.3	2.2%
13b	* *Deprec. expense for summary of earnings calc.*	2,052.6	2,116.0	63.4	3.0%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	98,783.8	102,089.6	3,305.8	3.2%
3	Weighted Average Depreciation Reserve	(5,476.1)	(5,579.0)	(102.9)	1.8%
4	Net Utility Plant	93,307.7	96,510.5	3,202.9	3.3%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	0.0	0.0	0.0	0.0%
5	Advances in Construction	0.0	0.0	0.0	0.0%
6	Reserve for Amortization of Intangibles	0.0	0.0	0.0	0.0%
7	Deferred Taxes	6,557.8	6,536.7	(21.1)	-0.3%
8	Unamortized Investment Tax Credits	0.0	0.0	0.0	0.0%
9	Total Deductions from Rate Base	6,557.8	6,536.7	(21.1)	-0.3%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	0.0	0.0	0.0	0.0%
10a	Tank Painting	0.0	0.0	0.0	0.0%
11	Working Cash, Lead-Lag	254.6	263.0	8.4	3.2%
12	Amount Withheld from Employees	0.0	0.0	0.0	0.0%
13	Total Working Capital	254.6	263.0	8.4	3.2%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	0.0	0.0	0.0	0.0%
17	Total Additions to Rate Base	254.6	263.0	8.4	3.2%
18	Weighted Average Rate Base, District	87,004.4	90,236.8	3,232.4	3.6%
19	Weighted Average Rate Base, G.O. Allocation	0.0	0.0	0.0	0.0%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	87,004.4	90,236.8	3,232.4	3.6%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*86,749.846*	*89,973.8*	*3,224.0*	*3.6%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*2,229.5*	*2,312.3*	*82.9*	*3.6%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	98,783.8	102,089.6	3,305.8	3.2%
3	Weighted Average Depreciation Reserve	(7,528.7)	(7,695.0)	(166.3)	2.2%
4	Net Utility Plant	91,255.1	94,394.6	3,139.5	3.3%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	0.0	0.0	0.0	0.0%
5	Advances in Construction	0.0	0.0	0.0	0.0%
6	Reserve for Amortization of Intangibles	0.0	0.0	0.0	0.0%
7	Deferred Taxes	6,677.4	6,643.0	(34.4)	-0.5%
8	Unamortized Investment Tax Credits	0.0	0.0	0.0	0.0%
9	Total Deductions from Rate Base	6,677.4	6,643.0	(34.4)	-0.5%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	0.0	0.0	0.0	0.0%
10a	Tank Painting	0.0	0.0	0.0	0.0%
11	Working Cash, Lead-Lag	238.7	244.9	6.2	2.5%
12	Amount Withheld from Employees	0.0	0.0	0.0	0.0%
13	Total Working Capital	238.7	244.9	6.2	2.5%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	0.0	0.0	0.0	0.0%
17	Total Additions to Rate Base	238.7	244.9	6.2	2.5%
18	Weighted Average Rate Base, District	84,816.3	87,996.4	3,180.1	3.6%
19	Weighted Average Rate Base, G.O. Allocation	0.0	0.0	0.0	0.0%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	84,816.3	87,996.4	3,180.1	3.6%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*84,577.6*	*87,751.6*	*3,173.9*	*3.6%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*2,173.6*	*2,255.2*	*81.6*	*3.6%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	(420.3)	139.7	560.0
2. Test Year 2023 Increase (%)	-7.8%	2.6%	10.4%
3. Escalation Year 2024 Increase (%)	0.3%	4.1%	3.8%
4. Escalation Year 2025 Increase (%)	1.5%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**5,410.0**	**5,410.0**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	1,142.5	1,146.1	3.6	0.3%
3a	Administrative & General	174.0	217.4	43.3	19.9%
4a	Payroll	768.2	768.2	0.0	0.0%
5a	General Office - *prorated expenses*	1,070.2	1,148.0	77.7	6.8%
6a	Depreciation Expense	840.4	968.6	128.2	13.2%
7a	Taxes Other Than Income	261.3	290.0	28.7	9.9%
8a	California Corporate Franchise Tax	115.7	(49.4)	(165.1)	334.4%
9a	Federal Income Tax	60.3	15.0	(45.4)	-303.3%
10a	Total Operating Expenses	4,432.8	4,503.8	71.1	1.6%
11a	Net Operating Revenues	977.2	906.2	(71.1)	-7.8%
12a	Weighted Average Rate Base	9,113.5	13,427.9	4,314.3	32.1%
13a	***Return on Rate Base***	***10.72%***	***6.75%***	***-3.97%***	***-58.9%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	4,989.7	5,549.7	**560.0**	**10.1%**
	Operating Expenses:				
2b	Operation & Maintenance	1,141.0	1,146.7	5.7	0.5%
3b	Administrative & General	174.0	217.4	43.3	19.9%
4b	Payroll	768.2	768.2	0.0	0.0%
5b	General Office - *prorated expenses*	1,070.2	1,148.0	77.7	6.8%
6b	Depreciation Expense	840.4	968.6	128.2	13.2%
7b	Taxes Other Than Income	252.9	292.8	39.9	13.6%
8b	California Corporate Franchise Tax	79.5	(37.3)	(116.8)	312.9%
9b	Federal Income Tax	(18.2)	41.1	59.3	144.4%
10b	Total Operating Expenses	4,308.0	4,545.3	237.3	5.2%
11b	Net Operating Revenues	681.7	1,004.4	322.7	32.1%
12b	Weighted Average Rate Base	9,114	13,427.9	4,314.3	32.1%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**(420.3)**	**139.7**	**560.0**	**400.9%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	5,042.1	5,118.8	76.8	1.5%
2	Operating Expenses:*				
3	Operation & Maintenance	1,164.9	1,188.2	23.3	2.0%
4	Administrative & General	188.1	191.9	3.8	2.0%
5	Payroll	793.5	809.4	15.9	2.0%
6	G.O. Prorated Expenses	1,065.3	1,086.6	21.3	2.0%
7	Depreciation Expense	855.0	872.1	17.1	2.0%
8	Taxes Other Than Income	248.8	253.8	5.0	2.0%
9	California Corporate Franchise Tax	76.9	76.86	0.0	0.0%
10	Federal Income Tax	(22.6)	(22.59)	0.0	0.0%
11	Total Operating Expenses	4,370.0	4,456.3	86.3	1.9%
12	Net Operating Revenues	672.1	662.6	(9.6)	-1.4%
13	Weighted Average Rate Base	8,985.7	8,857.9	(127.8)	-1.4%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***0.0***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	188.0	188.0	0.0	0.0%
2a	Business	428.5	428.5	0.0	0.0%
3a	Multiple Family	1,932.1	1,932.1	0.0	0.0%
4a	Industrial	959.9	959.9	0.0	0.0%
5a	Public Authority	808.5	808.5	0.0	0.0%
6a	Other	386.6	386.6	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	188.0	188.0	0.0	0.0%
2b	Business	428.5	428.5	0.0	0.0%
3b	Multiple Family	1,932.1	1,932.1	0.0	0.0%
4b	Industrial	959.9	959.9	0.0	0.0%
5b	Public Authority	805.7	805.7	0.0	0.0%
6b	Other	386.6	386.6	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	5,799	5,799	0	0%
2a	Business	470	470	0	0%
3a	Multiple Family	72	72	0	0%
4a	Industrial	18	18	0	0%
5a	Public Authority	122	122	0	0%
6a	Other	7	7	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	6,488	6,488	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	106	106	0	0%
12a	Public Fire Protection	13	13	0	0%
13a	Total Number of Unmetered Connections	119	119	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	6,607	6,607	0	0%
15a	Excluding Fire Protection	6,488	6,488	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	5,828	5,828	0	0%
2b	Business	474	474	0	0%
3b	Multiple Family	74	74	0	0%
4b	Industrial	18	18	0	0%
5b	Public Authority	123	123	0	0%
6b	Other	7	7	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	6,524	6,524	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	108	108	0	0%
12b	Public Fire Protection	13	13	0	0%
13b	Total Number of Unmetered Connections	121	121	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	6,645	6,645	0	0%
15b	Excluding Fire Protection	6,524	6,524	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	1,090.3	1,090.3	0.0	0.0%
2a	Business	201.4	201.4	0.0	0.0%
3a	Multiple Family	138.9	138.9	0.0	0.0%
4a	Industrial	17.3	17.3	0.0	0.0%
5a	Public Authority	98.8	98.8	0.0	0.0%
6a	Other	2.7	2.7	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	1,549.4	1,549.4	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	1,549.4	1,549.4	0.0	0.0%
12a	*Unaccounted For Water Rate*	*11.1%*	*11.1%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	193.4	193.4	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**1,742.9**	**1,742.9**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	4,001.1	4,001.1	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	1,742.9	1,742.9	0.0	0.0%
17a	Purchased Water	0.0	0.0	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**1,742.9**	**1,742.9**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	1,095.7	1,095.7	0.0	0.0%
2b	Business	203.3	203.3	0.0	0.0%
3b	Multiple Family	142.9	142.9	0.0	0.0%
4b	Industrial	17.3	17.3	0.0	0.0%
5b	Public Authority	98.8	98.8	0.0	0.0%
6b	Other	2.7	2.7	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	1,560.7	1,560.7	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	1,560.7	1,560.7	0.0	0.0%
12b	*Unaccounted For Water Rate*	*11.1%*	*11.1%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	194.6	194.6	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**1,755.2**	**1,755.2**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	4,029.5	4,029.5	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	1,755.2	1,755.2	0.0	0.0%
17b	Purchased Water	0.0	0.0	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**1,755.2**	**1,755.2**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	2,315.4	2,315.4	0.0	0.0%
2a	Business	415.6	415.6	0.0	0.0%
3a	Multiple Family	286.5	286.5	0.0	0.0%
4a	Industrial	35.6	35.6	0.0	0.0%
5a	Public Authority	203.9	203.9	0.0	0.0%
6a	Other	5.6	5.6	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	3,262.7	3,262.7	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	2,043.7	2,043.7	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	2,043.7	2,043.7	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	76.2	76.2	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	27.4	27.4	0.0	0.0%
16a	Total Other Revenues	103.6	103.6	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	5,410.0	5,410.0	0.0	0.0%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	2,169.8	2,126.1	(43.7)	-2.1%
2b	Business	391.0	383.1	(7.8)	-2.0%
3b	Multiple Family	274.8	269.3	(5.5)	-2.0%
4b	Industrial	33.2	32.6	(0.7)	-2.0%
5b	Public Authority	190.1	186.3	(3.8)	-2.0%
6b	Other	5.2	5.1	(0.1)	-2.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	3,064.2	3,002.6	(61.6)	-2.1%
	Unmetered Revenues:				
10b	Service Charge	1,850.8	2,476.2	625.4	25.3%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	1,850.8	2,476.2	625.4	25.3%
	Other Revenues:				
13b	Private Fire Protection	83.4	83.4	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	29.7	29.7	0.0	0.0%
16b	Total Other Revenues	113.1	113.1	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	5,028.1	5,591.9	563.8	10.1%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	379.3	379.3	0.0	0.0%
4	Purchased Chemicals	15.9	15.9	0.0	0.0%
5	Payroll	516.0	516.0	0.0	0.0%
6	Postage	22.0	20.8	(1.2)	-6.0%
7	Transportation	40.9	40.9	0.0	0.0%
	Purchased Services:				
8	Source of Supply	0.1	0.1	0.0	0.0%
9	Pumping	121.8	121.8	0.0	0.0%
10	Water Treatment	57.1	57.1	0.0	0.0%
11	Transmission & Distribution	44.8	44.8	0.0	0.0%
12	Customer Accounting	125.2	125.2	0.0	0.0%
13	Conservation	92.6	97.5	4.9	5.0%
14	Total Operations Exp. excluding Uncollectibles	1,415.7	1,419.3	3.6	0.3%
	Maintenance Expenses:				
15	Payroll	106.9	106.9	0.0	0.0%
16	Transportation	25.9	25.9	0.0	0.0%
17	Stores	9.1	9.1	0.0	0.0%
18	Contracted Maintenance	188.1	188.1	0.0	0.0%
19	Total Maintenance Expenses	330.0	330.0	0.0	0.0%
	At Present Rates				
20	Operating Revenues	5,410.0	5,410.0	0.0	0.0%
21	*Uncollectible Rate*	0.3641%	0.3641%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	19.7	19.7	0.0	0.0%
23	Total O&M Expenses including Uncollectibles	1,765.4	1,769.0	3.6	0.2%
	At Proposed Rates				
25	Operating Revenues	4,989.7	5,549.7	560.0	10.1%
26	*Uncollectible Rate*	0.3641%	0.3641%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	18.2	20.2	2.0	10.1%
28	Total O&M Expenses including Uncollectibles	1,763.8	1,769.5	5.7	0.3%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	383.3	383.3	0.0	0.0%
4	Purchased Chemicals	16.4	16.4	0.0	0.0%
5	Payroll	533.0	533.0	0.0	0.0%
6	Postage	22.0	20.8	(1.2)	-6.0%
7	Transportation	41.9	41.9	0.0	0.0%
	Purchased Services:				
8	Source of Supply	0.1	0.1	0.0	0.0%
9	Pumping	124.9	124.9	0.0	0.0%
10	Water Treatment	58.0	58.0	0.0	0.0%
11	Transmission & Distribution	45.9	45.9	0.0	0.0%
12	Customer Accounting	128.4	128.4	0.0	0.0%
13	Conservation	97.5	97.5	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	1,451.4	1,450.2	(1.2)	-0.1%
	Maintenance Expenses:				
15	Payroll	110.4	110.4	0.0	0.0%
16	Transportation	26.5	26.5	0.0	0.0%
17	Stores	9.4	9.4	0.0	0.0%
18	Contracted Maintenance	192.3	192.3	0.0	0.0%
19	Total Maintenance Expenses	338.5	338.5	0.0	0.0%
	At Present Rates				
20	Operating Revenues	5,028.1	5,591.9	563.8	10.1%
21	*Uncollectible Rate*	0.3641%	0.3641%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	18.3	20.4	2.1	10.1%
23	Total O&M Expenses including Uncollectibles	1,808.3	1,809.1	0.8	0.0%
	At Proposed Rates				
25	Operating Revenues	5,042.1	5,821.5	779.5	13.4%
26	*Uncollectible Rate*	0.3641%	0.3641%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	18.4	21.2	2.8	13.4%
28	Total O&M Expenses including Uncollectibles	1,808.3	1,809.9	1.6	0.1%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	145.3	145.3	0.0	0.0%
2a	Benefits	242.5	251.8	9.3	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	35.8	35.8	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(148.8)	(148.8)	0.0	0.0%
6a	Workers' Compensation	12.0	11.4	(0.6)	-5.6%
7a	Non-Specifics	32.6	30.5	(2.0)	-6.6%
8a	Subtotal	319.4	326.0	6.7	2.0%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	0.0	36.7	36.7	100.0%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	0.0	0.0	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	319.4	362.7	43.3	11.9%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	150.1	150.1	0.0	0.0%
2b	Benefits	263.5	271.9	8.4	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	35.8	35.8	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(153.8)	(153.8)	0.0	0.0%
6b	Workers' Compensation	12.3	12.2	(0.2)	-1.4%
7b	Non-Specifics	30.2	30.2	0.0	0.0%
8b	Subtotal	338.2	346.5	8.3	2.4%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	0.0	36.7	36.7	100.0%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	0.0	0.0	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	338.2	383.2	44.9	11.7%

TABLE 5-1
TAXES OTHER THAN INCOME

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	97.9	126.6	28.7	22.7%
2a	Payroll Taxes	54.4	54.4	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	5,390.3	5,390.3	0.0	0.0%
4a	*Effective Local Franchise Tax Rate*	*2.009%*	*2.009%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	108.3	108.3	0.0	0.0%
5a1	Business License-Present Rates	0.7	0.7	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	261.3	290.0	28.7	9.9%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	4,971.5	5,529.5	558.0	10.1%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*2.009%*	*93.423%*	*46.5%*
9a	Franchise Taxes-Proposed Rates	99.9	111.1	11.2	10.1%
9a1	Business License-Proposed Rates	0.7	0.7	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	252.9	292.8	39.9	13.6%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	91.0	135.2	44.2	32.7%
2b	Payroll Taxes	56.2	56.2	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	5,009.8	5,571.5	561.7	10.1%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*2.009%*	*93.423%*	*46.5%*
5b	Franchise Taxes-Present Rates	100.6	111.9	11.3	10.1%
5b1	Business License-Present Rates	0.7	0.7	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	248.6	304.0	55.5	18.2%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	5,023.7	5,800.3	776.6	13.4%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*2.009%*	*93.423%*	*46.5%*
9b	Franchise Taxes-Proposed Rates	100.9	116.5	15.6	13.4%
9b1	Business License-Proposed Rates	0.7	0.7	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	248.8	308.6	59.8	19.4%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	5,410.0	5,410.0	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	1,745.7	1,749.3	3.6	0.2%
3	Uncollectibles Expense	19.7	19.7	0.0	0.0%
4	A&G Expenses	319.4	362.7	43.3	11.9%
5	G.O. Prorated Expenses	1,070.2	1,148.0	77.7	6.8%
6	G.O. Book Depreciation (to be excluded)	(118.7)	(147.3)	(28.6)	19.4%
7	Transportation Deprec. Expense (to be excluded)	(22.5)	(32.3)	(9.8)	30.2%
8	Taxes On Other Than Income	261.3	290.0	28.7	9.9%
8a	Non-deductible Meals	(5.6)	(5.6)	0.0	-0.1%
9	Interest Expense	212.6	322.0	109.4	34.0%
10	Total Common Deductions	3,482.2	3,706.5	224.4	6.1%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	542.2	2,138.3	1,596.1	74.6%
12	Tax Depreciation - G.O.	76.5	123.7	47.2	38.1%
13	Subtotal	618.7	2,261.9	1,643.2	72.6%
14	Total State Deductions, incl. Common Deductions	4,100.9	5,968.5	1,867.6	31.3%
	Federal Tax Deductions				
16	Book Depreciation - District	840.4	968.6	128.2	13.2%
17	Book Depreciation - G.O.	118.7	147.3	28.6	19.4%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	115.7	(49.4)	(165.1)	334.4%
20	Subtotal	1,074.8	1,066.5	(8.3)	-0.8%
21	Total Fed. Deductions, incl. Common Deductions	4,557.0	4,773.0	216.1	4.5%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	1,309.2	(558.5)	(1,867.6)	334.4%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	115.7	(49.4)	(165.1)	334.4%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	853.0	637.0	(216.1)	-33.9%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	179.1	133.8	(216.1)	-33.9%
28	Adjustment to FIT, Regulatory Liability	(118.8)	(118.8)	(0.0)	0.0%
29	Total FIT, with Adjustment	60.3	15.0	(45.4)	-303.3%
30	Total Income Taxes for Revenues at Present Rates	176.1	(34.4)	(210.5)	611.8%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	4,989.7	5,549.7	560.0	10.1%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	1,745.7	1,749.3	3.6	0.2%
3	Uncollectibles Expense	18.2	20.2	2.0	10.1%
4	A&G Expenses	319.4	362.7	43.3	11.9%
5	G.O. Prorated Expenses	1,070.2	1,148.0	77.7	6.8%
6	G.O. Book Depreciation (to be excluded)	(118.7)	(147.3)	(28.6)	19.4%
7	Transportation Deprec. Expense (to be excluded)	(22.5)	(32.3)	(9.8)	30.2%
8	Taxes On Other Than Income	252.9	292.8	39.9	13.6%
8a	Non-deductible Meals	(5.6)	(5.6)	0.0	-0.1%
9	Interest Expense	212.6	322.0	109.4	34.0%
10	Total Common Deductions	3,472.2	3,709.8	237.6	6.4%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	542.2	2,138.3	1,596.1	74.6%
12	Tax Depreciation - G.O.	76.5	123.7	47.2	38.1%
13	Subtotal	618.7	2,261.9	1,643.2	72.6%
14	Total State Deductions, incl. Common Deductions	4,090.9	5,971.8	1,880.9	31.5%
	Federal Tax Deductions				
16	Book Depreciation - District	840.4	968.6	128.2	13.2%
17	Book Depreciation - G.O.	118.7	147.3	28.6	19.4%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	79.5	(37.3)	(116.8)	312.9%
20	Subtotal	1,038.5	1,078.6	40.0	3.7%
21	Total Fed. Deductions, incl. Common Deductions	4,510.8	4,788.4	277.7	5.8%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	898.8	(422.1)	(1,320.9)	312.9%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	79.5	(37.3)	(116.8)	312.9%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	478.9	761.3	282.4	37.1%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	100.6	159.9	59.3	37.1%
28	Adjustment to FIT, Regulatory Liability	(118.8)	(118.8)	(0.0)	0.0%
29	Total FIT, with Adjustment	(18.2)	41.1	59.3	144.4%
30	Total Income Taxes for Revenues at Proposed Rates	61.2	3.8	(57.5)	-1528.5%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	36,962.2	40,923.2	3,961.0	9.7%
2a	Adjustments	12.5	12.5	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	123.0	1,727.2	1,604.2	92.9%
4a	Advances	123.6	123.6	0.0	0.0%
5a	Contributions	92.5	92.5	0.0	0.0%
6a	Total Gross Additions	339.1	1,943.3	1,604.2	82.5%
8a	Retirements	124.6	124.6	0.0	0.0%
9a	Net Additions	463.8	2,067.9	1,604.2	77.6%
10a	Plant in Service - End of Year	37,438.5	43,003.7	5,565.2	12.9%
11a	*Plant Weighting Factor*	*46.29%*	*46.29%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	37,176.9	41,880.6	4,703.6	11.2%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	37,438.5	43,003.7	5,565.2	12.9%
2b	Adjustments	11.3	11.3	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	175.0	1,847.3	1,672.3	90.5%
4b	Advances	123.6	123.6	0.0	0.0%
5b	Contributions	92.5	92.5	0.0	0.0%
6b	Total Gross Additions	391.1	2,063.4	1,672.3	81.0%
8b	Retirements	98.9	98.9	0.0	0.0%
9b	Net Additions	490.1	2,162.4	1,672.3	77.3%
10b	Plant in Service - End of Year	37,939.9	45,177.4	7,237.5	16.0%
11b	*Plant Weighting Factor*	*46.29%*	*46.29%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	37,665.4	44,004.7	6,339.4	14.4%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1a	Depreciation Reserve - Beginning of Year	15,578.1	15,650.1	72.0	0.5%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(17.8)	(23.2)	(5.4)	23.2%
3a	Contributed Plant	(303.8)	(303.0)	0.8	-0.3%
4a	Depreciation Accrual	1,161.964	1,294.7	132.8	10.3%
5a	Total Accruals	840.4	968.6	128.2	13.2%
	Retirements				
6a	Net Retirements	(124.615)	(124.6)	0.0	0.0%
8a	Total Retirement	(124.6)	(124.6)	0.0	0.0%
9a	Net Additions	1,037	1,170.1	132.8	11.3%
7a	Carry Forward Adjustment	0.0	(21.1)	(21.1)	100.0%
10a	Depreciation Reserve - End of Year	16,615.4	16,799.1	183.7	1.1%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	16,096.7	16,214.1	117.3	0.7%
13a	*Deprec. expense for summary of earnings calc.*	840.4	968.6	128.2	13.2%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1b	Depreciation Reserve - Beginning of Year	16,615.4	16,799.1	183.7	1.1%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(15.9)	(26.2)	(10.3)	39.4%
3b	Contributed Plant	(306.8)	(306.1)	0.7	-0.2%
4b	Depreciation Accrual	1,177.8	1,362.6	184.9	13.6%
5b	Total Accruals	855.0	1,030.3	175.2	17.0%
	Retirements and Adjustments:				
6b	Net Retirements	(98.9)	(98.9)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(98.9)	(98.9)	0.0	
					0.0%
9b	Net Additions	1,078.8	1,263.7	184.9	14.6%
10b	Depreciation Reserve - End of Year	17,694.2	18,062.8	368.6	2.0%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	17,154.8	17,431.0	276.1	1.6%
13b	* *Deprec. expense for summary of earnings calc.*	855.0	1,030.3	175.2	17.0%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	37,176.9	41,880.6	4,703.6	11.2%
3	Weighted Average Depreciation Reserve	(16,096.7)	(16,214.1)	(117.3)	0.7%
4	Net Utility Plant	21,080.2	25,666.5	4,586.3	17.9%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	7,204.5	7,204.2	(0.3)	0.0%
5	Advances in Construction	3,404.5	3,404.5	0.0	0.0%
6	Reserve for Amortization of Intangibles	333.0	357.9	24.9	7.0%
7	Deferred Taxes	2,598.3	3,314.4	716.1	21.6%
8	Unamortized Investment Tax Credits	17.8	17.8	0.0	0.0%
9	Total Deductions from Rate Base	13,558.1	14,298.8	740.7	5.2%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	187.4	187.4	0.0	0.0%
10a	Tank Painting	185.9	185.9	0.0	0.0%
11	Working Cash, Lead-Lag	469.3	527.7	58.4	11.1%
12	Amount Withheld from Employees	(3.0)	(3.0)	0.0	-0.2%
13	Total Working Capital	839.6	898.0	58.4	6.5%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	66.8	66.8	0.0	0.0%
17	Total Additions to Rate Base	906.4	964.8	58.4	6.1%
18	Weighted Average Rate Base, District	8,428.4	12,332.5	3,904.1	31.7%
19	Weighted Average Rate Base, G.O. Allocation	685.1	1,095.4	410.3	37.5%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	9,113.5	13,427.9	4,314.3	32.1%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*8,273.958*	*12,529.9*	*4,255.9*	*34.0%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*212.6*	*322.0*	*109.4*	*34.0%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	37,665.4	44,004.7	6,339.4	14.4%
3	Weighted Average Depreciation Reserve	(17,154.8)	(17,431.0)	(276.1)	1.6%
4	Net Utility Plant	20,510.5	26,573.8	6,063.2	22.8%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	6,991.8	6,992.2	0.4	0.0%
5	Advances in Construction	3,423.6	3,423.6	0.0	0.0%
6	Reserve for Amortization of Intangibles	335.6	399.8	64.1	16.0%
7	Deferred Taxes	2,414.0	3,433.7	1,019.8	29.7%
8	Unamortized Investment Tax Credits	17.4	17.4	0.0	0.0%
9	Total Deductions from Rate Base	13,182.3	14,266.7	1,084.3	7.6%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	187.4	187.4	0.0	0.0%
10a	Tank Painting	162.7	162.7	0.0	0.0%
11	Working Cash, Lead-Lag	481.0	549.8	68.8	12.5%
12	Amount Withheld from Employees	(3.0)	(3.0)	0.0	-0.2%
13	Total Working Capital	828.0	896.9	68.8	7.7%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	136.2	136.2	0.0	0.0%
17	Total Additions to Rate Base	964.2	1,033.0	68.8	6.7%
18	Weighted Average Rate Base, District	8,292.4	13,340.1	5,047.7	37.8%
19	Weighted Average Rate Base, G.O. Allocation	693.3	1,186.2	492.9	41.6%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	8,985.7	14,526.3	5,540.6	38.1%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*8,157.7*	*13,629.4*	*5,471.8*	*40.1%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*209.7*	*350.3*	*140.6*	*40.1%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	9,041.3	14,018.6	4,977.3
2. Test Year 2023 Increase (%)	17.7%	27.4%	9.7%
3. Escalation Year 2024 Increase (%)	3.4%	5.6%	2.1%
4. Escalation Year 2025 Increase (%)	3.0%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**51,189.3**	**51,189.3**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	22,330.6	22,401.6	71.0	0.3%
3a	Administrative & General	1,782.3	1,824.8	42.5	2.3%
4a	Payroll	5,102.4	5,102.4	0.0	0.0%
5a	General Office - *prorated expenses*	8,389.1	9,013.1	624.0	6.9%
6a	Depreciation Expense	7,708.1	8,927.7	1,219.6	13.7%
7a	Taxes Other Than Income	2,417.2	2,737.3	320.2	11.7%
8a	California Corporate Franchise Tax	(1,012.7)	(1,910.5)	(897.8)	47.0%
9a	Federal Income Tax	(1,019.8)	(1,485.7)	(465.9)	31.4%
10a	Total Operating Expenses	45,697.1	46,610.7	913.6	2.0%
11a	Net Operating Revenues	5,492.2	4,578.7	(913.6)	-20.0%
12a	Weighted Average Rate Base	159,511.7	194,559.8	35,048.1	18.0%
13a	***Return on Rate Base***	***3.44%***	***2.35%***	***-1.09%***	***-46.3%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	60,230.6	65,207.9	**4,977.3**	**7.6%**
	Operating Expenses:				
2b	Operation & Maintenance	22,385.1	22,486.2	101.0	0.4%
3b	Administrative & General	1,782.3	1,824.8	42.5	2.3%
4b	Payroll	5,102.4	5,102.4	0.0	0.0%
5b	General Office - *prorated expenses*	8,389.1	9,013.1	624.0	6.9%
6b	Depreciation Expense	7,708.1	8,927.7	1,219.6	13.7%
7b	Taxes Other Than Income	2,462.6	2,807.7	345.1	12.3%
8b	California Corporate Franchise Tax	(222.3)	(684.9)	(462.6)	67.5%
9b	Federal Income Tax	691.9	1,168.3	476.4	40.8%
10b	Total Operating Expenses	48,299.2	50,645.2	2,346.0	4.6%
11b	Net Operating Revenues	11,931.5	14,562.8	2,631.3	18.1%
12b	Weighted Average Rate Base	159,512	194,559.8	35,048.1	18.0%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.1%***
14	**Increase in Operating Revenues (1b - 1a)**	**9,041.3**	**14,018.6**	**4,977.3**	**35.5%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	62,532.4	64,417.8	1,885.4	2.9%
2	Operating Expenses:*				
3	Operation & Maintenance	22,492.2	22,942.0	449.8	2.0%
4	Administrative & General	1,967.6	2,007.0	39.4	2.0%
5	Payroll	5,270.8	5,376.2	105.4	2.0%
6	G.O. Prorated Expenses	8,350.0	8,517.0	167.0	2.0%
7	Depreciation Expense	8,232.2	8,396.8	164.6	2.0%
8	Taxes Other Than Income	2,627.5	2,680.1	52.6	2.0%
9	California Corporate Franchise Tax	(93.6)	(93.59)	0.0	0.0%
10	Federal Income Tax	847.6	847.61	0.0	0.0%
11	Total Operating Expenses	49,694.3	50,673.1	978.8	1.9%
12	Net Operating Revenues	12,838.1	13,744.7	906.6	6.6%
13	Weighted Average Rate Base	171,631.9	183,752.1	12,120.2	6.6%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***0.0***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	119.8	119.8	0.0	0.0%
2a	Business	537.0	537.0	0.0	0.0%
3a	Multiple Family	1,449.8	1,449.8	0.0	0.0%
4a	Industrial	9,667.6	9,667.6	0.0	0.0%
5a	Public Authority	2,670.9	2,670.9	0.0	0.0%
6a	Other	1,005.9	1,005.9	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	119.8	119.8	0.0	0.0%
2b	Business	537.0	537.0	0.0	0.0%
3b	Multiple Family	1,449.8	1,449.8	0.0	0.0%
4b	Industrial	9,667.6	9,667.6	0.0	0.0%
5b	Public Authority	2,672.4	2,672.4	0.0	0.0%
6b	Other	1,005.9	1,005.9	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	39,692	39,692	0	0%
2a	Business	3,854	3,854	0	0%
3a	Multiple Family	418	418	0	0%
4a	Industrial	81	81	0	0%
5a	Public Authority	317	317	0	0%
6a	Other	40	40	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	44,401	44,401	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	866	866	0	0%
12a	Public Fire Protection	42	42	0	0%
13a	Total Number of Unmetered Connections	908	908	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	45,309	45,309	0	0%
15a	Excluding Fire Protection	44,401	44,401	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	39,914	39,914	0	0%
2b	Business	3,861	3,861	0	0%
3b	Multiple Family	418	418	0	0%
4b	Industrial	81	81	0	0%
5b	Public Authority	317	317	0	0%
6b	Other	40	40	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	44,630	44,630	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	876	876	0	0%
12b	Public Fire Protection	42	42	0	0%
13b	Total Number of Unmetered Connections	918	918	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	45,548	45,548	0	0%
15b	Excluding Fire Protection	44,630	44,630	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	4,756.6	4,756.6	0.0	0.0%
2a	Business	2,069.3	2,069.3	0.0	0.0%
3a	Multiple Family	605.4	605.4	0.0	0.0%
4a	Industrial	783.1	783.1	0.0	0.0%
5a	Public Authority	846.8	846.8	0.0	0.0%
6a	Other	40.2	40.2	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	9,101.4	9,101.4	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	9,101.4	9,101.4	0.0	0.0%
12a	*Unaccounted For Water Rate*	*7.5%*	*7.5%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	740.7	740.7	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**9,842.1**	**9,842.1**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	22,594.4	22,594.4	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	583.3	583.3	0.0	0.0%
17a	Purchased Water	9,258.8	9,258.8	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**9,842.1**	**9,842.1**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	4,783.2	4,783.2	0.0	0.0%
2b	Business	2,073.2	2,073.2	0.0	0.0%
3b	Multiple Family	606.2	606.2	0.0	0.0%
4b	Industrial	783.1	783.1	0.0	0.0%
5b	Public Authority	846.8	846.8	0.0	0.0%
6b	Other	40.2	40.2	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	9,132.6	9,132.6	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	9,132.6	9,132.6	0.0	0.0%
12b	*Unaccounted For Water Rate*	*7.5%*	*7.5%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	744.6	744.6	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**9,877.2**	**9,877.2**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	22,675.1	22,675.1	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	583.3	583.3	0.0	0.0%
17b	Purchased Water	9,293.9	9,293.9	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**9,877.2**	**9,877.2**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Revenues:				
1a	Residential	16,888.5	16,888.5	0.0	0.0%
2a	Business	7,809.5	7,809.5	0.0	0.0%
3a	Multiple Family	2,284.9	2,284.9	0.0	0.0%
4a	Industrial	2,955.3	2,955.3	0.0	0.0%
5a	Public Authority	3,195.7	3,195.7	0.0	0.0%
6a	Other	151.8	151.8	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	33,285.7	33,285.7	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	17,104.6	17,104.6	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	17,104.6	17,104.6	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	652.9	652.9	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	146.1	146.1	0.0	0.0%
16a	Total Other Revenues	799.0	799.0	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	51,189.3	51,189.3	0.0	0.0%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Revenues:				
1b	Residential	21,626.6	21,276.6	(350.0)	-1.6%
2b	Business	9,962.6	9,800.3	(162.3)	-1.7%
3b	Multiple Family	2,913.1	2,865.7	(47.5)	-1.7%
4b	Industrial	3,763.1	3,701.7	(61.3)	-1.7%
5b	Public Authority	4,069.1	4,002.8	(66.3)	-1.7%
6b	Other	193.3	190.2	(3.2)	-1.7%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	42,527.8	41,837.3	(690.6)	-1.7%
	Unmetered Revenues:				
10b	Service Charge	17,071.6	22,761.3	5,689.8	25.0%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	17,071.6	22,761.3	5,689.8	25.0%
	Other Revenues:				
13b	Private Fire Protection	710.2	710.2	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	147.6	147.6	0.0	0.0%
16b	Total Other Revenues	857.9	857.9	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	60,457.3	65,456.4	4,999.2	7.6%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	17,426.9	17,426.9	0.0	0.0%
2	Groundwater Charges	535.0	535.0	0.0	0.0%
3	Purchased Power	296.7	296.7	0.0	0.0%
4	Purchased Chemicals	17.2	17.2	0.0	0.0%
5	Payroll	2,935.4	2,935.4	0.0	0.0%
6	Postage	146.0	137.7	(8.3)	-6.0%
7	Transportation	363.8	363.8	0.0	0.0%
	Purchased Services:				
8	Source of Supply	43.3	43.3	0.0	0.0%
9	Pumping	99.9	99.9	0.0	0.0%
10	Water Treatment	246.6	246.6	0.0	0.0%
11	Transmission & Distribution	561.9	561.9	0.0	0.0%
12	Customer Accounting	424.7	424.7	0.0	0.0%
13	Conservation	571.3	601.4	30.1	5.0%
14	Total Operations Exp. excluding Uncollectibles	23,668.7	23,690.5	21.8	0.1%
	Maintenance Expenses:				
15	Payroll	1,302.9	1,302.9	0.0	0.0%
16	Transportation	120.6	120.6	0.0	0.0%
17	Stores	200.9	200.9	0.0	0.0%
18	Contracted Maintenance	967.2	967.2	0.0	0.0%
19	Total Maintenance Expenses	2,591.6	2,591.6	0.0	0.0%
	At Present Rates				
20	Operating Revenues	51,189.3	51,189.3	0.0	0.0%
21	*Uncollectible Rate*	0.6030%	0.6992%	*0.0962%*	*13.8%*
22	Uncollectibles Expense	308.7	357.9	49.2	13.8%
23	Total O&M Expenses including Uncollectibles	26,568.9	26,639.9	71.0	0.3%
	At Proposed Rates				
25	Operating Revenues	60,230.6	65,207.9	4,977.3	7.6%
26	*Uncollectible Rate*	0.6030%	0.6030%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	363.2	442.4	79.2	17.9%
28	Total O&M Expenses including Uncollectibles	26,623.4	26,724.5	101.0	0.4%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	17,426.9	17,426.9	0.0	0.0%
2	Groundwater Charges	535.0	535.0	0.0	0.0%
3	Purchased Power	286.8	286.8	0.0	0.0%
4	Purchased Chemicals	17.6	17.6	0.0	0.0%
5	Payroll	3,032.3	3,032.3	0.0	0.0%
6	Postage	147.2	138.9	(8.3)	-6.0%
7	Transportation	372.9	372.9	0.0	0.0%
	Purchased Services:				
8	Source of Supply	43.5	43.5	0.0	0.0%
9	Pumping	102.4	102.4	0.0	0.0%
10	Water Treatment	250.8	250.8	0.0	0.0%
11	Transmission & Distribution	576.1	576.1	0.0	0.0%
12	Customer Accounting	435.4	435.4	0.0	0.0%
13	Conservation	601.4	601.4	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	23,828.3	23,820.0	(8.3)	0.0%
	Maintenance Expenses:				
15	Payroll	1,345.9	1,345.9	0.0	0.0%
16	Transportation	123.7	123.7	0.0	0.0%
17	Stores	205.9	205.9	0.0	0.0%
18	Contracted Maintenance	989.5	989.5	0.0	0.0%
19	Total Maintenance Expenses	2,664.9	2,664.9	0.0	0.0%
	At Present Rates				
20	Operating Revenues	60,457.3	65,456.4	4,999.2	7.6%
21	*Uncollectible Rate*	0.6030%	0.6992%	*9.6162%*	*13.8%*
22	Uncollectibles Expense	364.6	457.6	93.1	20.3%
23	Total O&M Expenses including Uncollectibles	26,857.8	26,942.6	84.8	0.3%
	At Proposed Rates				
25	Operating Revenues	62,532.4	69,109.3	6,576.9	9.5%
26	*Uncollectible Rate*	0.6030%	0.6992%	*9.6162%*	*13.8%*
27	Uncollectibles Expense	377.1	483.2	106.1	22.0%
28	Total O&M Expenses including Uncollectibles	26,870.3	26,968.1	97.8	0.4%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	864.1	864.1	0.0	0.0%
2a	Benefits	1,610.4	1,672.4	62.0	3.7%
3a	Transportation Expenses	5.5	5.5	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	29.4	29.4	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(148.4)	(148.4)	0.0	0.0%
6a	Workers' Compensation	75.4	75.6	0.2	0.3%
7a	Non-Specifics	222.7	202.3	(20.4)	-10.1%
8a	Subtotal	2,659.1	2,700.9	41.8	1.5%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	1.6	2.3	0.7	29.2%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(14.4)	(14.4)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	2,646.3	2,688.8	42.5	1.6%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	892.6	892.6	0.0	0.0%
2b	Benefits	1,750.2	1,806.2	56.0	3.1%
3b	Transportation Expenses	5.6	5.6	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	29.4	29.4	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(153.3)	(153.3)	0.0	0.0%
6b	Workers' Compensation	77.3	80.8	3.5	4.3%
7b	Non-Specifics	207.2	207.2	0.0	0.0%
8b	Subtotal	2,809.0	2,868.5	59.5	2.1%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	65.9	63.7	(2.3)	-3.6%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(14.8)	(14.8)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	2,860.2	2,917.5	57.2	2.0%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	1,794.4	2,114.8	320.4	15.2%
2a	Payroll Taxes	365.5	365.5	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	50,880.7	50,831.4	(49.2)	-0.1%
4a	*Effective Local Franchise Tax Rate*	*0.491%*	*0.491%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	250.0	249.7	(0.2)	-0.1%
5a1	Business License-Present Rates	7.3	7.3	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	2,417.2	2,737.3	320.2	11.7%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	59,867.4	64,765.5	4,898.1	7.6%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.491%*	*-58.313%*	*-118.7%*
9a	Franchise Taxes-Proposed Rates	294.1	318.1	24.0	7.5%
9a1	Business License-Proposed Rates	8.6	9.3	0.7	7.6%
10a	Total Taxes Other Than Income, At Proposed Rates	2,462.6	2,807.7	345.1	12.3%

Escalation Year 2024 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	1,935.7	2,327.1	391.4	16.8%
2b	Payroll Taxes	377.6	377.6	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	60,092.7	64,998.8	4,906.1	7.5%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.491%*	*-58.313%*	*-118.7%*
5b	Franchise Taxes-Present Rates	295.2	319.3	24.1	7.5%
5b1	Business License-Present Rates	8.6	9.3	0.7	7.6%
6b	Total Taxes Other Than Income, At Present Rates	2,617.1	3,033.3	416.2	13.7%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	62,155.3	68,626.1	6,470.8	9.4%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.491%*	*-58.313%*	*-118.7%*
9b	Franchise Taxes-Proposed Rates	305.4	337.1	31.8	9.4%
9b1	Business License-Proposed Rates	8.9	9.8	0.9	9.5%
10b	Total Taxes Other Than Income, At Proposed Rates	2,627.5	3,051.6	424.1	13.9%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	51,189.3	51,189.3	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	26,260.2	26,282.0	21.8	0.1%
3	Uncollectibles Expense	308.7	357.9	49.2	13.8%
4	A&G Expenses	2,646.3	2,688.8	42.5	1.6%
5	G.O. Prorated Expenses	8,389.1	9,013.1	624.0	6.9%
6	G.O. Book Depreciation (to be excluded)	(930.4)	(1,156.7)	(226.3)	19.6%
7	Transportation Deprec. Expense (to be excluded)	(195.7)	(247.8)	(52.1)	21.0%
8	Taxes On Other Than Income	2,417.2	2,737.3	320.2	11.7%
8a	Non-deductible Meals	(36.8)	(36.8)	0.0	0.0%
9	Interest Expense	3,907.7	4,798.8	891.1	18.6%
10	Total Common Deductions	42,766.3	44,436.8	1,670.5	3.8%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	19,279.4	27,393.3	8,113.9	29.6%
12	Tax Depreciation - G.O.	599.8	971.2	371.4	38.2%
13	Subtotal	19,879.2	28,364.5	8,485.3	29.9%
14	Total State Deductions, incl. Common Deductions	62,645.5	72,801.3	10,155.8	14.0%
	Federal Tax Deductions				
16	Book Depreciation - District	7,708.1	8,927.7	1,219.6	13.7%
17	Book Depreciation - G.O.	930.4	1,156.7	226.3	19.6%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(1,012.7)	(1,910.5)	(897.8)	47.0%
20	Subtotal	7,625.8	8,173.9	548.0	6.7%
21	Total Fed. Deductions, incl. Common Deductions	50,392.1	52,610.7	2,218.5	4.2%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(11,456.2)	(21,611.9)	(10,155.8)	47.0%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(1,012.7)	(1,910.5)	(897.8)	47.0%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	797.2	(1,421.3)	(2,218.5)	156.1%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	167.4	(298.5)	(2,218.5)	156.1%
28	Adjustment to FIT, Regulatory Liability	(1,187.2)	(1,187.2)	(0.0)	0.0%
29	Total FIT, with Adjustment	(1,019.8)	(1,485.7)	(465.9)	31.4%
30	Total Income Taxes for Revenues at Present Rates	(2,032.5)	(3,396.2)	(1,363.7)	40.2%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	60,230.6	65,207.9	4,977.3	7.6%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	26,260.2	26,282.0	21.8	0.1%
3	Uncollectibles Expense	363.2	442.4	79.2	17.9%
4	A&G Expenses	2,646.3	2,688.8	42.5	1.6%
5	G.O. Prorated Expenses	8,389.1	9,013.1	624.0	6.9%
6	G.O. Book Depreciation (to be excluded)	(930.4)	(1,156.7)	(226.3)	19.6%
7	Transportation Deprec. Expense (to be excluded)	(195.7)	(247.8)	(52.1)	21.0%
8	Taxes On Other Than Income	2,462.6	2,807.7	345.1	12.3%
8a	Non-deductible Meals	(36.8)	(36.8)	0.0	0.0%
9	Interest Expense	3,907.7	4,798.8	891.1	18.6%
10	Total Common Deductions	42,866.2	44,591.7	1,725.4	3.9%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	19,279.4	27,393.3	8,113.9	29.6%
12	Tax Depreciation - G.O.	599.8	971.2	371.4	38.2%
13	Subtotal	19,879.2	28,364.5	8,485.3	29.9%
14	Total State Deductions, incl. Common Deductions	62,745.4	72,956.2	10,210.7	14.0%
	Federal Tax Deductions				
16	Book Depreciation - District	7,708.1	8,927.7	1,219.6	13.7%
17	Book Depreciation - G.O.	930.4	1,156.7	226.3	19.6%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(222.3)	(684.9)	(462.6)	67.5%
20	Subtotal	8,416.3	9,399.4	983.2	10.5%
21	Total Fed. Deductions, incl. Common Deductions	51,282.5	53,991.1	2,708.6	5.0%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(2,514.8)	(7,748.3)	(5,233.4)	67.5%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(222.3)	(684.9)	(462.6)	67.5%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	8,948.1	11,216.8	2,268.7	20.2%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	1,879.1	2,355.5	476.4	20.2%
28	Adjustment to FIT, Regulatory Liability	(1,187.2)	(1,187.2)	(0.0)	0.0%
29	Total FIT, with Adjustment	691.9	1,168.3	476.4	40.8%
30	Total Income Taxes for Revenues at Proposed Rates	469.6	483.3	13.8	2.8%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	272,021.6	305,802.8	33,781.1	11.0%
2a	Adjustments	41.5	41.5	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	19,138.8	30,025.6	10,886.8	36.3%
4a	Advances	0.0	0.0	0.0	0.0%
5a	Contributions	812.4	812.4	0.0	0.0%
6a	Total Gross Additions	19,951.3	30,838.1	10,886.8	35.3%
8a	Retirements	817.9	817.9	0.0	0.0%
9a	Net Additions	20,769.2	31,656.0	10,886.8	34.4%
10a	Plant in Service - End of Year	292,832.3	337,500.2	44,667.9	13.2%
11a	*Plant Weighting Factor*	*43.01%*	*43.01%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	280,955.1	319,419.0	38,463.9	12.0%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	292,832.3	337,500.2	44,667.9	13.2%
2b	Adjustments	36.5	36.5	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	19,395.7	34,113.5	14,717.9	43.1%
4b	Advances	0.0	0.0	0.0	0.0%
5b	Contributions	812.4	812.4	0.0	0.0%
6b	Total Gross Additions	20,208.1	34,926.0	14,717.9	42.1%
8b	Retirements	806.9	806.9	0.0	0.0%
9b	Net Additions	21,015.0	35,732.9	14,717.9	41.2%
10b	Plant in Service - End of Year	313,883.8	373,269.6	59,385.8	15.9%
11b	*Plant Weighting Factor*	*43.01%*	*43.01%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	301,871.5	352,870.1	50,998.6	14.5%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Depreciation Reserve - Beginning of Year	90,169.4	91,033.4	864.0	0.9%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(158.8)	(176.5)	(17.7)	10.0%
3a	Contributed Plant	(411.5)	(407.8)	3.7	-0.9%
4a	Depreciation Accrual	8,278.418	9,512.0	1,233.6	13.0%
5a	Total Accruals	7,708.1	8,927.7	1,219.6	13.7%
	Retirements				
6a	Net Retirements	(817.900)	(817.9)	0.0	0.0%
8a	Total Retirement	(817.9)	(817.9)	0.0	0.0%
9a	Net Additions	7,461	8,694.1	1,233.6	14.2%
7a	Carry Forward Adjustment	0.0	(305.7)	(305.7)	100.0%
10a	Depreciation Reserve - End of Year	97,629.9	99,421.8	1,791.8	1.8%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	93,899.7	95,074.7	1,175.1	1.2%
13a	*Deprec. expense for summary of earnings calc.*	7,708.1	8,927.7	1,219.6	13.7%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Depreciation Reserve - Beginning of Year	97,629.9	99,421.8	1,791.8	1.8%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(161.7)	(196.3)	(34.6)	17.6%
3b	Contributed Plant	(432.9)	(429.6)	3.3	-0.8%
4b	Depreciation Accrual	8,826.7	10,389.1	1,562.4	15.0%
5b	Total Accruals	8,232.2	9,763.2	1,531.0	15.7%
	Retirements and Adjustments:				
6b	Net Retirements	(806.9)	(806.9)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(806.9)	(806.9)	0.0	
					0.0%
9b	Net Additions	8,019.8	9,582.2	1,562.4	16.3%
10b	Depreciation Reserve - End of Year	105,649.8	109,004.0	3,354.2	3.1%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	101,639.8	104,212.9	2,573.0	2.5%
13b	* *Deprec. expense for summary of earnings calc.*	8,232.2	9,763.2	1,531.0	15.7%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	280,955.1	319,419.0	38,463.9	12.0%
3	Weighted Average Depreciation Reserve	(93,899.7)	(95,074.7)	(1,175.1)	1.2%
4	Net Utility Plant	187,055.5	224,344.3	37,288.8	16.6%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	7,699.2	7,704.1	4.9	0.1%
5	Advances in Construction	4,237.8	4,237.8	0.0	0.0%
6	Reserve for Amortization of Intangibles	898.4	915.2	16.8	1.8%
7	Deferred Taxes	28,000.2	33,825.0	5,824.7	17.2%
8	Unamortized Investment Tax Credits	59.9	59.9	0.0	0.0%
9	Total Deductions from Rate Base	40,895.6	46,742.0	5,846.4	12.5%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	504.9	504.9	0.0	0.0%
10a	Tank Painting	238.2	238.2	0.0	0.0%
11	Working Cash, Lead-Lag	6,740.7	7,116.2	375.5	5.3%
12	Amount Withheld from Employees	(23.8)	(23.8)	0.0	0.0%
13	Total Working Capital	7,460.1	7,835.6	375.5	4.8%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	521.6	521.6	0.0	0.0%
17	Total Additions to Rate Base	7,981.7	8,357.2	375.5	4.5%
18	Weighted Average Rate Base, District	154,141.6	185,959.5	31,817.9	17.1%
19	Weighted Average Rate Base, G.O. Allocation	5,370.1	8,600.4	3,230.2	37.6%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	159,511.7	194,559.8	35,048.1	18.0%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*152,051.660*	*186,724.3*	*34,672.6*	*18.6%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*3,907.7*	*4,798.8*	*891.1*	*18.6%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	301,871.5	352,870.1	50,998.6	14.5%
3	Weighted Average Depreciation Reserve	(101,639.8)	(104,212.9)	(2,573.0)	2.5%
4	Net Utility Plant	200,231.7	248,657.2	48,425.5	19.5%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	8,089.5	8,097.8	8.3	0.1%
5	Advances in Construction	3,964.3	3,964.3	0.0	0.0%
6	Reserve for Amortization of Intangibles	952.9	988.8	36.0	3.6%
7	Deferred Taxes	29,074.9	36,383.5	7,308.6	20.1%
8	Unamortized Investment Tax Credits	54.5	54.5	0.0	0.0%
9	Total Deductions from Rate Base	42,136.1	49,489.0	7,352.9	14.9%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	504.9	504.9	0.0	0.0%
10a	Tank Painting	155.6	155.6	0.0	0.0%
11	Working Cash, Lead-Lag	6,852.2	7,324.9	472.7	6.5%
12	Amount Withheld from Employees	(23.8)	(23.8)	0.0	0.0%
13	Total Working Capital	7,488.9	7,961.7	472.7	5.9%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	612.9	612.9	0.0	0.0%
17	Total Additions to Rate Base	8,101.9	8,574.6	472.7	5.5%
18	Weighted Average Rate Base, District	166,197.4	207,742.8	41,545.4	20.0%
19	Weighted Average Rate Base, G.O. Allocation	5,434.5	9,313.2	3,878.7	41.6%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	171,631.9	217,056.0	45,424.1	20.9%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*164,143.0*	*209,094.3*	*44,951.3*	*21.5%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*4,218.5*	*5,373.7*	*1,155.2*	*21.5%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	1,234.6	5,779.6	4,545.0
2. Test Year 2023 Increase (%)	3.2%	15.2%	12.0%
3. Escalation Year 2024 Increase (%)	2.6%	5.0%	2.5%
4. Escalation Year 2025 Increase (%)	2.5%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**37,999.1**	**37,999.1**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	6,899.8	6,930.9	31.2	0.4%
3a	Administrative & General	1,897.5	1,996.7	99.3	5.0%
4a	Payroll	4,806.7	4,806.7	0.0	0.0%
5a	General Office - *prorated expenses*	6,383.6	6,845.3	461.8	6.7%
6a	Depreciation Expense	6,762.8	7,778.7	1,015.8	13.1%
7a	Taxes Other Than Income	2,599.4	2,843.0	243.6	8.6%
8a	California Corporate Franchise Tax	388.0	(205.1)	(593.1)	289.2%
9a	Federal Income Tax	357.0	(53.4)	(410.4)	768.0%
10a	Total Operating Expenses	30,094.7	30,942.8	848.2	2.7%
11a	Net Operating Revenues	7,904.5	7,056.3	(848.2)	-12.0%
12a	Weighted Average Rate Base	117,217.3	148,287.5	31,070.2	21.0%
13a	***Return on Rate Base***	***6.74%***	***4.76%***	***-1.98%***	***-41.7%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	39,233.8	43,778.7	**4,545.0**	**10.4%**
	Operating Expenses:				
2b	Operation & Maintenance	6,901.6	6,939.7	38.1	0.5%
3b	Administrative & General	1,897.5	1,996.7	99.3	5.0%
4b	Payroll	4,806.7	4,806.7	0.0	0.0%
5b	General Office - *prorated expenses*	6,383.6	6,845.3	461.8	6.7%
6b	Depreciation Expense	6,762.8	7,778.7	1,015.8	13.1%
7b	Taxes Other Than Income	2,633.2	3,001.6	368.4	12.3%
8b	California Corporate Franchise Tax	493.9	291.0	(202.9)	-69.7%
9b	Federal Income Tax	586.5	1,020.9	434.5	42.6%
10b	Total Operating Expenses	30,465.9	32,680.8	2,214.8	6.8%
11b	Net Operating Revenues	8,767.9	11,098.0	2,330.1	21.0%
12b	Weighted Average Rate Base	117,217	148,287.5	31,070.2	21.0%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.1%***
14	**Increase in Operating Revenues (1b - 1a)**	**1,234.6**	**5,779.6**	**4,545.0**	**78.6%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	40,386.3	41,413.2	1,026.8	2.5%
2	Operating Expenses:*				
3	Operation & Maintenance	7,051.1	7,192.1	141.0	2.0%
4	Administrative & General	2,016.2	2,056.5	40.3	2.0%
5	Payroll	4,965.4	5,064.7	99.3	2.0%
6	G.O. Prorated Expenses	6,353.8	6,480.9	127.1	2.0%
7	Depreciation Expense	6,957.4	7,096.5	139.1	2.0%
8	Taxes Other Than Income	2,691.4	2,745.2	53.8	2.0%
9	California Corporate Franchise Tax	492.0	492.01	0.0	0.0%
10	Federal Income Tax	659.8	659.77	0.0	0.0%
11	Total Operating Expenses	31,187.0	31,787.7	600.7	1.9%
12	Net Operating Revenues	9,199.4	9,625.5	426.1	4.4%
13	Weighted Average Rate Base	122,950.2	128,683.2	5,732.9	4.5%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***(0.0)***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	119.7	119.7	0.0	0.0%
2a	Business	694.5	694.5	0.0	0.0%
3a	Multiple Family	1,282.0	1,282.0	0.0	0.0%
4a	Industrial	13,483.0	13,483.0	0.0	0.0%
5a	Public Authority	1,194.0	1,194.0	0.0	0.0%
6a	Other	597.8	597.8	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	119.8	119.8	0.0	0.0%
2b	Business	694.6	694.6	0.0	0.0%
3b	Multiple Family	1,282.0	1,282.0	0.0	0.0%
4b	Industrial	13,237.8	13,237.8	0.0	0.0%
5b	Public Authority	1,190.2	1,190.2	0.0	0.0%
6b	Other	582.8	582.8	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	27,243	27,243	0	0%
2a	Business	2,924	2,924	0	0%
3a	Multiple Family	476	476	0	0%
4a	Industrial	54	54	0	0%
5a	Public Authority	356	356	0	0%
6a	Other	39	39	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	31,093	31,093	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	808	808	0	0%
12a	Public Fire Protection	52	52	0	0%
13a	Total Number of Unmetered Connections	860	860	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	31,953	31,953	0	0%
15a	Excluding Fire Protection	31,093	31,093	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	27,356	27,356	0	0%
2b	Business	2,934	2,934	0	0%
3b	Multiple Family	478	478	0	0%
4b	Industrial	55	55	0	0%
5b	Public Authority	357	357	0	0%
6b	Other	40	40	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	31,220	31,220	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	815	815	0	0%
12b	Public Fire Protection	53	53	0	0%
13b	Total Number of Unmetered Connections	868	868	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	32,088	32,088	0	0%
15b	Excluding Fire Protection	31,220	31,220	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Connections' Sales:				
1a	Residential	3,261.9	3,261.9	0.0	0.0%
2a	Business	2,030.9	2,030.9	0.0	0.0%
3a	Multiple Family	610.7	610.7	0.0	0.0%
4a	Industrial	728.1	728.1	0.0	0.0%
5a	Public Authority	424.8	424.8	0.0	0.0%
6a	Other	23.3	23.3	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	7,079.7	7,079.7	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	7,079.7	7,079.7	0.0	0.0%
12a	*Unaccounted For Water Rate*	*15.7%*	*15.7%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	587.0	587.0	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**7,666.7**	**7,666.7**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	17,600.4	17,600.4	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	7,666.7	7,666.7	0.0	0.0%
17a	Purchased Water	0.0	0.0	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**7,666.7**	**7,666.7**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Connections' Sales:				
1b	Residential	3,276.0	3,276.0	0.0	0.0%
2b	Business	2,037.7	2,037.7	0.0	0.0%
3b	Multiple Family	613.4	613.4	0.0	0.0%
4b	Industrial	728.1	728.1	0.0	0.0%
5b	Public Authority	424.8	424.8	0.0	0.0%
6b	Other	23.3	23.3	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	7,103.3	7,103.3	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	7,103.3	7,103.3	0.0	0.0%
12b	*Unaccounted For Water Rate*	*15.7%*	*15.7%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	589.5	589.5	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**7,692.8**	**7,692.8**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	17,660.4	17,660.4	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	7,692.8	7,692.8	0.0	0.0%
17b	Purchased Water	0.0	0.0	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**7,692.8**	**7,692.8**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	11,512.4	11,512.4	0.0	0.0%
2a	Business	7,606.3	7,606.3	0.0	0.0%
3a	Multiple Family	2,287.1	2,287.1	0.0	0.0%
4a	Industrial	2,726.9	2,726.9	0.0	0.0%
5a	Public Authority	1,590.9	1,590.9	0.0	0.0%
6a	Other	87.3	87.3	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	25,811.0	25,811.0	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	11,548.2	11,548.2	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	11,548.2	11,548.2	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	567.7	567.7	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	72.3	72.3	0.0	0.0%
16a	Total Other Revenues	640.0	640.0	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	37,999.1	37,999.1	0.0	0.0%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	10,467.7	10,211.0	(256.7)	-2.5%
2b	Business	6,909.7	6,739.0	(170.8)	-2.5%
3b	Multiple Family	2,080.0	2,028.6	(51.4)	-2.5%
4b	Industrial	2,468.9	2,407.8	(61.0)	-2.5%
5b	Public Authority	1,440.4	1,404.8	(35.6)	-2.5%
6b	Other	79.1	77.1	(2.0)	-2.5%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	23,445.7	22,868.3	(577.4)	-2.5%
	Unmetered Revenues:				
10b	Service Charge	15,244.8	20,386.1	5,141.3	25.2%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	15,244.8	20,386.1	5,141.3	25.2%
	Other Revenues:				
13b	Private Fire Protection	616.6	616.6	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	73.6	73.6	0.0	0.0%
16b	Total Other Revenues	690.2	690.2	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	39,380.7	43,944.6	4,563.9	10.4%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	86.1	86.1	0.0	0.0%
3	Purchased Power	1,855.7	1,855.7	0.0	0.0%
4	Purchased Chemicals	251.4	251.4	0.0	0.0%
5	Payroll	2,715.8	2,715.8	0.0	0.0%
6	Postage	104.7	98.8	(5.9)	-6.0%
7	Transportation	308.4	314.6	6.2	2.0%
	Purchased Services:				
8	Source of Supply	130.6	122.9	(7.7)	-6.3%
9	Pumping	247.0	247.0	0.0	0.0%
10	Water Treatment	1,234.9	1,234.9	0.0	0.0%
11	Transmission & Distribution	492.9	492.9	0.0	0.0%
12	Customer Accounting	417.1	417.1	0.0	0.0%
13	Conservation	687.1	723.3	36.2	5.0%
14	Total Operations Exp. excluding Uncollectibles	8,531.8	8,560.5	28.7	0.3%
	Maintenance Expenses:				
15	Payroll	1,246.6	1,246.6	0.0	0.0%
16	Transportation	110.6	113.1	2.5	2.2%
17	Stores	67.5	67.5	0.0	0.0%
18	Contracted Maintenance	847.5	847.5	0.0	0.0%
19	Total Maintenance Expenses	2,272.3	2,274.8	2.5	0.1%
	At Present Rates				
20	Operating Revenues	37,999.1	37,999.1	0.0	0.0%
21	*Uncollectible Rate*	0.1528%	0.1528%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	58.0	58.0	0.0	0.0%
23	Total O&M Expenses including Uncollectibles	10,862.2	10,893.4	31.2	0.3%
	At Proposed Rates				
25	Operating Revenues	39,233.8	43,778.7	4,545.0	10.4%
26	*Uncollectible Rate*	0.1519%	0.1519%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	59.9	66.8	6.9	10.3%
28	Total O&M Expenses including Uncollectibles	10,864.1	10,902.1	38.1	0.3%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	86.1	86.1	0.0	0.0%
3	Purchased Power	1,877.8	1,877.8	0.0	0.0%
4	Purchased Chemicals	258.6	258.6	0.0	0.0%
5	Payroll	2,805.4	2,805.4	0.0	0.0%
6	Postage	104.9	99.0	(5.9)	-6.0%
7	Transportation	316.2	322.5	6.4	2.0%
	Purchased Services:				
8	Source of Supply	130.6	122.9	(7.7)	-6.3%
9	Pumping	253.2	253.2	0.0	0.0%
10	Water Treatment	1,264.3	1,264.3	0.0	0.0%
11	Transmission & Distribution	505.4	505.4	0.0	0.0%
12	Customer Accounting	427.6	427.6	0.0	0.0%
13	Conservation	723.3	723.3	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	8,753.4	8,746.1	(7.3)	-0.1%
	Maintenance Expenses:				
15	Payroll	1,287.8	1,287.8	0.0	0.0%
16	Transportation	113.4	116.0	2.5	2.2%
17	Stores	69.2	69.2	0.0	0.0%
18	Contracted Maintenance	862.5	862.5	0.0	0.0%
19	Total Maintenance Expenses	2,332.9	2,335.4	2.5	0.1%
	At Present Rates				
20	Operating Revenues	39,380.7	43,944.6	4,563.9	10.4%
21	*Uncollectible Rate*	0.1432%	0.1527%	*0.9501%*	*6.2%*
22	Uncollectibles Expense	56.4	67.1	10.7	16.0%
23	Total O&M Expenses including Uncollectibles	11,142.7	11,148.7	5.9	0.1%
	At Proposed Rates				
25	Operating Revenues	40,386.3	46,151.8	5,765.5	12.5%
26	*Uncollectible Rate*	0.1519%	0.2977%	*14.5788%*	*49.0%*
27	Uncollectibles Expense	57.9	73.7	15.8	21.4%
28	Total O&M Expenses including Uncollectibles	11,144.3	11,155.2	11.0	0.1%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	844.3	844.3	0.0	0.0%
2a	Benefits	1,517.1	1,575.5	58.4	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	115.5	115.5	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(57.7)	(57.7)	0.0	0.0%
6a	Workers' Compensation	67.8	71.3	3.5	4.9%
7a	Non-Specifics	207.2	190.3	(16.8)	-8.8%
8a	Subtotal	2,694.2	2,739.3	45.1	1.6%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	48.7	102.9	54.2	52.7%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(1.1)	(1.1)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	2,741.8	2,841.1	99.3	3.5%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	872.2	872.2	0.0	0.0%
2b	Benefits	1,648.8	1,701.5	52.8	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	115.5	115.5	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(59.6)	(59.6)	0.0	0.0%
6b	Workers' Compensation	69.5	76.1	6.6	8.7%
7b	Non-Specifics	194.4	194.4	0.0	0.0%
8b	Subtotal	2,840.8	2,900.1	59.4	2.0%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	48.7	104.1	55.4	53.2%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(1.1)	(1.1)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	2,888.4	3,003.1	114.8	3.8%

TABLE 5-1
TAXES OTHER THAN INCOME

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Ad Valorem Taxes	1,213.2	1,456.8	243.6	16.7%
2a	Payroll Taxes	343.6	343.6	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	37,941.1	37,941.1	0.0	0.0%
4a	*Effective Local Franchise Tax Rate*	*0.360%*	*0.360%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	136.6	136.6	0.0	0.0%
5a1	Business License-Present Rates	906.0	906.0	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	2,599.4	2,843.0	243.6	8.6%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	39,173.9	43,711.9	4,538.0	10.4%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.360%*	*-71.441%*	*-198.5%*
9a	Franchise Taxes-Proposed Rates	141.0	157.3	16.3	10.3%
9a1	Business License-Proposed Rates	935.4	1,043.9	108.5	10.4%
10a	Total Taxes Other Than Income, At Proposed Rates	2,633.2	3,001.6	368.4	12.3%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Ad Valorem Taxes	1,228.3	1,553.3	325.0	20.9%
2b	Payroll Taxes	354.9	354.9	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	39,324.3	43,877.5	4,553.2	10.4%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.360%*	*-71.441%*	*-198.5%*
5b	Franchise Taxes-Present Rates	132.7	157.8	25.1	15.9%
5b1	Business License-Present Rates	880.3	1,048.1	167.8	16.0%
6b	Total Taxes Other Than Income, At Present Rates	2,596.3	3,114.2	517.9	16.6%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	40,328.4	46,078.1	5,749.7	12.5%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.360%*	*-71.441%*	*-198.5%*
9b	Franchise Taxes-Proposed Rates	145.1	165.7	20.6	12.4%
9b1	Business License-Proposed Rates	963.0	1,100.8	137.8	12.5%
10b	Total Taxes Other Than Income, At Proposed Rates	2,691.4	3,174.7	483.4	15.2%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	37,999.1	37,999.1	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	10,804.1	10,835.3	31.2	0.3%
3	Uncollectibles Expense	58.0	58.0	0.0	0.0%
4	A&G Expenses	2,741.8	2,841.1	99.3	3.5%
5	G.O. Prorated Expenses	6,383.6	6,845.3	461.8	6.7%
6	G.O. Book Depreciation (to be excluded)	(708.0)	(878.5)	(170.5)	19.4%
7	Transportation Deprec. Expense (to be excluded)	(149.1)	(245.5)	(96.4)	39.3%
8	Taxes On Other Than Income	2,599.4	2,843.0	243.6	8.6%
8a	Non-deductible Meals	(35.0)	(35.0)	0.0	-0.1%
9	Interest Expense	2,873.6	3,665.4	791.8	21.6%
10	Total Common Deductions	24,568.4	25,929.2	1,360.8	5.2%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	8,585.6	13,652.4	5,066.8	37.1%
12	Tax Depreciation - G.O.	456.4	737.6	281.2	38.1%
13	Subtotal	9,042.0	14,390.0	5,348.0	37.2%
14	Total State Deductions, incl. Common Deductions	33,610.4	40,319.2	6,708.8	16.6%
	Federal Tax Deductions				
16	Book Depreciation - District	6,762.8	7,778.7	1,015.8	13.1%
17	Book Depreciation - G.O.	708.0	878.5	170.5	19.4%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	388.0	(205.1)	(593.1)	289.2%
20	Subtotal	7,858.8	8,452.1	593.3	7.0%
21	Total Fed. Deductions, incl. Common Deductions	32,427.2	34,381.2	1,954.1	5.7%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	4,388.7	(2,320.0)	(6,708.8)	289.2%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	388.0	(205.1)	(593.1)	289.2%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	5,572.0	3,617.9	(1,954.1)	-54.0%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	1,170.1	759.8	(1,954.1)	-54.0%
28	Adjustment to FIT, Regulatory Liability	(813.1)	(813.2)	(0.1)	0.0%
29	Total FIT, with Adjustment	357.0	(53.4)	(410.4)	768.0%
30	Total Income Taxes for Revenues at Present Rates	744.9	(258.5)	(1,003.5)	388.1%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	39,233.8	43,778.7	4,545.0	10.4%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	10,804.1	10,835.3	31.2	0.3%
3	Uncollectibles Expense	59.9	66.8	6.9	10.3%
4	A&G Expenses	2,741.8	2,841.1	99.3	3.5%
5	G.O. Prorated Expenses	6,383.6	6,845.3	461.8	6.7%
6	G.O. Book Depreciation (to be excluded)	(708.0)	(878.5)	(170.5)	19.4%
7	Transportation Deprec. Expense (to be excluded)	(149.1)	(245.5)	(96.4)	39.3%
8	Taxes On Other Than Income	2,633.2	3,001.6	368.4	12.3%
8a	Non-deductible Meals	(35.0)	(35.0)	0.0	-0.1%
9	Interest Expense	2,873.6	3,665.4	791.8	21.6%
10	Total Common Deductions	24,604.1	26,096.6	1,492.4	5.7%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	8,585.6	13,652.4	5,066.8	37.1%
12	Tax Depreciation - G.O.	456.4	737.6	281.2	38.1%
13	Subtotal	9,042.0	14,390.0	5,348.0	37.2%
14	Total State Deductions, incl. Common Deductions	33,646.2	40,486.6	6,840.4	16.9%
	Federal Tax Deductions				
16	Book Depreciation - District	6,762.8	7,778.7	1,015.8	13.1%
17	Book Depreciation - G.O.	708.0	878.5	170.5	19.4%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	493.9	291.0	(202.9)	-69.7%
20	Subtotal	7,964.8	8,948.2	983.4	11.0%
21	Total Fed. Deductions, incl. Common Deductions	32,568.9	35,044.8	2,475.8	7.1%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	5,587.6	3,292.1	(2,295.5)	-69.7%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	493.9	291.0	(202.9)	-69.7%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	6,664.8	8,734.0	2,069.1	23.7%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	1,399.6	1,834.1	434.5	23.7%
28	Adjustment to FIT, Regulatory Liability	(813.1)	(813.2)	(0.1)	0.0%
29	Total FIT, with Adjustment	586.5	1,020.9	434.5	42.6%
30	Total Income Taxes for Revenues at Proposed Rates	1,080.4	1,312.0	231.5	17.6%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	247,088.1	276,628.3	29,540.2	10.7%
2a	Adjustments	42.1	42.1	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	7,335.2	14,217.3	6,882.1	48.4%
4a	Advances	140.3	140.3	0.0	0.0%
5a	Contributions	606.8	606.8	0.0	0.0%
6a	Total Gross Additions	8,082.3	14,964.4	6,882.1	46.0%
8a	Retirements	684.6	684.6	0.0	0.0%
9a	Net Additions	8,767.0	15,649.1	6,882.1	44.0%
10a	Plant in Service - End of Year	255,897.2	292,319.4	36,422.3	12.5%
11a	*Plant Weighting Factor*	*47.18%*	*47.18%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	251,224.4	284,011.5	32,787.1	11.5%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	255,897.2	292,319.4	36,422.3	12.5%
2b	Adjustments	35.8	35.8	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	13,937.2	24,040.3	10,103.0	42.0%
4b	Advances	140.3	140.3	0.0	0.0%
5b	Contributions	606.8	606.8	0.0	0.0%
6b	Total Gross Additions	14,684.4	24,787.4	10,103.0	40.8%
8b	Retirements	695.3	695.3	0.0	0.0%
9b	Net Additions	15,379.7	25,482.7	10,103.0	39.6%
10b	Plant in Service - End of Year	271,312.6	317,837.9	46,525.3	14.6%
11b	*Plant Weighting Factor*	*47.18%*	*47.18%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	263,153.3	304,342.1	41,188.8	13.5%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1a	Depreciation Reserve - Beginning of Year	89,887.0	90,451.8	564.9	0.6%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(121.0)	(191.3)	(70.3)	36.8%
3a	Contributed Plant	(1,034.2)	(1,027.0)	7.2	-0.7%
4a	Depreciation Accrual	7,918.058	8,997.0	1,078.9	12.0%
5a	Total Accruals	6,762.8	7,778.7	1,015.8	13.1%
	Retirements				
6a	Net Retirements	(684.642)	(684.6)	0.0	0.0%
8a	Total Retirement	(684.6)	(684.6)	0.0	0.0%
9a	Net Additions	7,233	8,312.3	1,078.9	13.0%
7a	Carry Forward Adjustment	0.0	(207.4)	(207.4)	100.0%
10a	Depreciation Reserve - End of Year	97,120.4	98,556.7	1,436.4	1.5%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	93,503.7	94,400.6	896.9	1.0%
13a	*Deprec. expense for summary of earnings calc.*	6,762.8	7,778.7	1,015.8	13.1%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1b	Depreciation Reserve - Beginning of Year	97,120.4	98,556.7	1,436.4	1.5%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(126.8)	(208.5)	(81.6)	39.2%
3b	Contributed Plant	(1,048.3)	(1,043.8)	4.5	-0.4%
4b	Depreciation Accrual	8,132.5	9,453.2	1,320.7	14.0%
5b	Total Accruals	6,957.4	8,200.9	1,243.5	15.2%
	Retirements and Adjustments:				
6b	Net Retirements	(695.3)	(695.3)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(695.3)	(695.3)	0.0	
					0.0%
9b	Net Additions	7,437.2	8,757.9	1,320.7	15.1%
10b	Depreciation Reserve - End of Year	104,557.6	107,314.6	2,757.0	2.6%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	100,839.0	102,935.7	2,096.7	2.0%
13b	** Deprec. expense for summary of earnings calc.*	6,957.4	8,200.9	1,243.5	15.2%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	251,224.4	284,011.5	32,787.1	11.5%
3	Weighted Average Depreciation Reserve	(93,503.7)	(94,400.6)	(896.9)	1.0%
4	Net Utility Plant	157,720.7	189,610.9	31,890.2	16.8%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	18,548.9	18,559.6	10.6	0.1%
5	Advances in Construction	10,293.4	10,293.4	0.0	0.0%
6	Reserve for Amortization of Intangibles	1,818.5	1,896.6	78.1	4.1%
7	Deferred Taxes	19,606.0	23,042.7	3,436.7	14.9%
8	Unamortized Investment Tax Credits	93.1	93.1	0.0	0.0%
9	Total Deductions from Rate Base	50,359.8	53,885.2	3,525.4	6.5%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	670.2	670.2	0.0	0.0%
10a	Tank Painting	1,698.0	1,692.8	(5.2)	-0.3%
11	Working Cash, Lead-Lag	3,055.6	3,320.6	265.0	8.0%
12	Amount Withheld from Employees	(18.1)	(18.1)	0.0	-0.2%
13	Total Working Capital	5,405.7	5,665.5	259.8	4.6%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	364.4	364.4	0.0	0.0%
17	Total Additions to Rate Base	5,770.1	6,030.0	259.8	4.3%
18	Weighted Average Rate Base, District	113,131.0	141,755.6	28,624.7	20.2%
19	Weighted Average Rate Base, G.O. Allocation	4,086.3	6,531.8	2,445.5	37.4%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	117,217.3	148,287.5	31,070.2	21.0%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*111,811.608*	*142,622.0*	*30,810.3*	*21.6%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*2,873.6*	*3,665.4*	*791.8*	*21.6%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	263,153.3	304,342.1	41,188.8	13.5%
3	Weighted Average Depreciation Reserve	(100,839.0)	(102,935.7)	(2,096.7)	2.0%
4	Net Utility Plant	162,314.3	201,406.4	39,092.2	19.4%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	18,114.5	18,131.0	16.5	0.1%
5	Advances in Construction	9,937.1	9,937.1	0.0	0.0%
6	Reserve for Amortization of Intangibles	1,883.0	2,031.0	148.0	7.3%
7	Deferred Taxes	19,153.7	23,388.1	4,234.4	18.1%
8	Unamortized Investment Tax Credits	89.9	89.9	0.0	0.0%
9	Total Deductions from Rate Base	49,178.1	53,577.0	4,398.9	8.2%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	670.2	670.2	0.0	0.0%
10a	Tank Painting	1,502.9	1,577.1	74.2	4.7%
11	Working Cash, Lead-Lag	3,098.5	3,524.4	426.0	12.1%
12	Amount Withheld from Employees	(18.1)	(18.1)	0.0	-0.2%
13	Total Working Capital	5,253.5	5,753.7	500.2	8.7%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	425.3	425.3	0.0	0.0%
17	Total Additions to Rate Base	5,678.8	6,179.0	500.2	8.1%
18	Weighted Average Rate Base, District	118,815.0	154,008.4	35,193.5	22.9%
19	Weighted Average Rate Base, G.O. Allocation	4,135.3	7,073.2	2,937.9	41.5%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	122,950.2	161,081.6	38,131.4	23.7%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*117,696.7*	*155,327.9*	*37,631.2*	*24.2%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*3,024.8*	*3,991.9*	*967.1*	*24.2%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	464.9	1,436.0	971.2
2. Test Year 2023 Increase (%)	23.6%	73.0%	49.4%
3. Escalation Year 2024 Increase (%)	6.6%	37.1%	30.5%
4. Escalation Year 2025 Increase (%)	3.6%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**1,967.2**	**1,967.2**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	191.0	193.0	2.0	1.0%
3a	Administrative & General	182.9	252.6	69.8	27.6%
4a	Payroll	522.5	522.5	0.0	0.0%
5a	General Office - *prorated expenses*	961.7	1,020.9	59.3	5.8%
6a	Depreciation Expense	98.4	224.5	126.1	56.2%
7a	Taxes Other Than Income	82.5	109.3	26.8	24.5%
8a	California Corporate Franchise Tax	(21.7)	(89.3)	(67.7)	75.7%
9a	Federal Income Tax	(27.9)	(112.3)	(84.4)	75.1%
10a	Total Operating Expenses	1,989.3	2,121.2	131.9	6.2%
11a	Net Operating Revenues	(22.1)	(154.0)	(131.9)	85.7%
12a	Weighted Average Rate Base	4,180.5	11,766.8	7,586.3	64.5%
13a	***Return on Rate Base***	***-0.53%***	***-1.31%***	***-0.78%***	***59.6%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	2,432.1	3,403.2	**971.2**	**28.5%**
	Operating Expenses:				
2b	Operation & Maintenance	191.0	193.0	2.0	1.0%
3b	Administrative & General	182.9	252.6	69.8	27.6%
4b	Payroll	522.5	522.5	0.0	0.0%
5b	General Office - *prorated expenses*	961.7	1,020.9	59.3	5.8%
6b	Depreciation Expense	98.4	224.5	126.1	56.2%
7b	Taxes Other Than Income	82.5	109.3	26.8	24.5%
8b	California Corporate Franchise Tax	19.4	37.6	18.2	48.4%
9b	Federal Income Tax	61.1	162.6	101.5	62.4%
10b	Total Operating Expenses	2,119.4	2,523.1	403.7	16.0%
11b	Net Operating Revenues	312.7	880.2	567.5	64.5%
12b	Weighted Average Rate Base	4,180	11,766.8	7,586.3	64.5%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**464.9**	**1,436.0**	**971.2**	**67.6%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	2,591.6	2,685.6	94.0	3.5%
2	Operating Expenses:*				
3	Operation & Maintenance	196.9	200.8	3.9	2.0%
4	Administrative & General	211.9	216.1	4.2	2.0%
5	Payroll	539.7	550.5	10.8	2.0%
6	G.O. Prorated Expenses	957.2	976.3	19.1	2.0%
7	Depreciation Expense	129.2	131.8	2.6	2.0%
8	Taxes Other Than Income	99.2	101.2	2.0	2.0%
9	California Corporate Franchise Tax	23.6	23.61	0.0	0.0%
10	Federal Income Tax	70.0	69.96	0.0	0.0%
11	Total Operating Expenses	2,227.6	2,270.3	42.7	1.9%
12	Net Operating Revenues	364.0	415.3	51.3	12.4%
13	Weighted Average Rate Base	4,866.2	5,551.9	685.7	12.4%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***(0.0)***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	0.0	0.0	0.0	0.0%
2a	Business	0.0	0.0	0.0	0.0%
3a	Multiple Family	0.0	0.0	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	0.0	0.0	0.0	0.0%
6a	Other	0.0	0.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	0.0	0.0	0.0	0.0%
2b	Business	0.0	0.0	0.0	0.0%
3b	Multiple Family	0.0	0.0	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	0.0	0.0	0.0	0.0%
6b	Other	0.0	0.0	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	0	0	0	0%
2a	Business	0	0	0	0%
3a	Multiple Family	0	0	0	0%
4a	Industrial	0	0	0	0%
5a	Public Authority	0	0	0	0%
6a	Other	0	0	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	0	0	0	0%
	Unmetered Connections:				
10a	Residential Flat	1	1	0	0%
11a	Private Fire Protection	0	0	0	0%
12a	Public Fire Protection	0	0	0	0%
13a	Total Number of Unmetered Connections	1	1	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	1	1	0	0%
15a	Excluding Fire Protection	1	1	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	0	0	0	0%
2b	Business	0	0	0	0%
3b	Multiple Family	0	0	0	0%
4b	Industrial	0	0	0	0%
5b	Public Authority	0	0	0	0%
6b	Other	0	0	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	0	0	0	0%
	Unmetered Connections:				
10b	Residential Flat	1	1	0	0%
11b	Private Fire Protection	0	0	0	0%
12b	Public Fire Protection	0	0	0	0%
13b	Total Number of Unmetered Connections	1	1	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	1	1	0	0%
15b	Excluding Fire Protection	1	1	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	0.0	0.0	0.0	0.0%
2a	Business	0.0	0.0	0.0	0.0%
3a	Multiple Family	0.0	0.0	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	0.0	0.0	0.0	0.0%
6a	Other	0.0	0.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	0.0	0.0	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	0.0	0.0	0.0	0.0%
12a	*Unaccounted For Water Rate*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	0.0	0.0	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**0.0**	**0.0**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	0.0	0.0	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	0.0	0.0	0.0	0.0%
17a	Purchased Water	0.0	0.0	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**0.0**	**0.0**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	0.0	0.0	0.0	0.0%
2b	Business	0.0	0.0	0.0	0.0%
3b	Multiple Family	0.0	0.0	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	0.0	0.0	0.0	0.0%
6b	Other	0.0	0.0	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	0.0	0.0	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	0.0	0.0	0.0	0.0%
12b	*Unaccounted For Water Rate*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	0.0	0.0	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**0.0**	**0.0**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	0.0	0.0	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	0.0	0.0	0.0	0.0%
17b	Purchased Water	0.0	0.0	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**0.0**	**0.0**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	0.0	0.0	0.0	0.0%
2a	Business	0.0	0.0	0.0	0.0%
3a	Multiple Family	0.0	0.0	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	0.0	0.0	0.0	0.0%
6a	Other	0.0	0.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	0.0	0.0	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	0.0	0.0	0.0	0.0%
11a	Residental Flat	1,967.2	1,967.2	0.0	0.0%
12a	Total Unmetered Revenues	1,967.2	1,967.2	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	0.0	0.0	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	0.0	0.0	0.0	0.0%
16a	Total Other Revenues	0.0	0.0	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	1,967.2	1,967.2	0.0	0.0%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	0.0	0.0	0.0	0.0%
2b	Business	0.0	0.0	0.0	0.0%
3b	Multiple Family	0.0	0.0	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	0.0	0.0	0.0	0.0%
6b	Other	0.0	0.0	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	0.0	0.0	0.0	0.0%
	Unmetered Revenues:				
10b	Service Charge	0.0	0.0	0.0	0.0%
11b	Residental Flat	2,432.1	3,403.2	971.2	28.5%
12b	Total Unmetered Revenues	2,432.1	3,403.2	971.2	28.5%
	Other Revenues:				
13b	Private Fire Protection	0.0	0.0	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	0.0	0.0	0.0	0.0%
16b	Total Other Revenues	0.0	0.0	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	2,432.1	3,403.2	971.2	28.5%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	0.0	0.0	0.0	0.0%
4	Purchased Chemicals	0.0	0.0	0.0	0.0%
5	Payroll	188.4	188.4	0.0	0.0%
6	Postage	0.3	0.3	(0.0)	-6.0%
7	Transportation	15.4	15.4	0.0	0.0%
	Purchased Services:				
8	Source of Supply	0.0	0.0	0.0	0.0%
9	Pumping	14.2	14.2	0.0	0.0%
10	Water Treatment	9.6	9.6	0.0	0.0%
11	Transmission & Distribution	49.5	49.5	0.0	0.0%
12	Customer Accounting	10.7	10.7	0.0	0.0%
13	Conservation	38.7	40.7	2.0	5.0%
14	Total Operations Exp. excluding Uncollectibles	326.8	328.8	2.0	0.6%
	Maintenance Expenses:				
15	Payroll	180.3	180.3	0.0	0.0%
16	Transportation	14.7	14.7	0.0	0.0%
17	Stores	0.0	0.0	0.0	0.0%
18	Contracted Maintenance	37.9	37.9	0.0	0.0%
19	Total Maintenance Expenses	233.0	233.0	0.0	0.0%
	At Present Rates				
20	Operating Revenues	1,967.2	1,967.2	0.0	0.0%
21	*Uncollectible Rate*	0.0000%	0.0000%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	0.0	0.0	0.0	0.0%
23	Total O&M Expenses including Uncollectibles	559.7	561.8	2.0	0.4%
	At Proposed Rates				
25	Operating Revenues	2,432.1	3,403.2	971.2	28.5%
26	*Uncollectible Rate*	0.0000%	0.0000%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	0.0	0.0	0.0	0.0%
28	Total O&M Expenses including Uncollectibles	559.7	561.8	2.0	0.4%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	0.0	0.0	0.0	0.0%
4	Purchased Chemicals	0.0	0.0	0.0	0.0%
5	Payroll	194.6	194.6	0.0	0.0%
6	Postage	0.3	0.3	(0.0)	-6.0%
7	Transportation	15.8	15.8	0.0	0.0%
	Purchased Services:				
8	Source of Supply	0.0	0.0	0.0	0.0%
9	Pumping	14.5	14.5	0.0	0.0%
10	Water Treatment	9.8	9.8	0.0	0.0%
11	Transmission & Distribution	50.8	50.8	0.0	0.0%
12	Customer Accounting	11.0	11.0	0.0	0.0%
13	Conservation	40.7	40.7	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	337.6	337.5	(0.0)	0.0%
	Maintenance Expenses:				
15	Payroll	186.3	186.3	0.0	0.0%
16	Transportation	15.1	15.1	0.0	0.0%
17	Stores	0.0	0.0	0.0	0.0%
18	Contracted Maintenance	38.9	38.9	0.0	0.0%
19	Total Maintenance Expenses	240.2	240.2	0.0	0.0%
	At Present Rates				
20	Operating Revenues	2,432.1	3,403.2	971.2	28.5%
21	*Uncollectible Rate*	0.0000%	0.0000%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	0.0	0.0	0.0	0.0%
23	Total O&M Expenses including Uncollectibles	577.8	577.8	(0.0)	0.0%
	At Proposed Rates				
25	Operating Revenues	2,591.6	4,665.1	2,073.5	44.4%
26	*Uncollectible Rate*	0.0000%	0.0000%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	0.0	0.0	0.0	0.0%
28	Total O&M Expenses including Uncollectibles	577.8	577.8	(0.0)	0.0%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	153.7	153.7	0.0	0.0%
2a	Benefits	164.9	171.3	6.4	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	45.7	45.7	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(11.1)	(11.1)	0.0	0.0%
6a	Workers' Compensation	1.3	7.7	6.4	82.7%
7a	Non-Specifics	(17.4)	(3.4)	14.0	-410.4%
8a	Subtotal	337.2	363.9	26.7	7.3%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	0.0	43.0	43.0	100.0%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(0.6)	(0.6)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	336.6	406.4	69.8	17.2%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	158.8	158.8	0.0	0.0%
2b	Benefits	179.2	185.0	5.7	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	46.9	46.9	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(11.5)	(11.5)	0.0	0.0%
6b	Workers' Compensation	1.4	8.3	6.9	83.4%
7b	Non-Specifics	(3.5)	(3.5)	0.0	0.0%
8b	Subtotal	371.3	383.9	12.6	3.3%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	0.0	43.0	43.0	100.0%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(0.6)	(0.6)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	370.7	426.4	55.7	13.1%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Ad Valorem Taxes	45.0	71.8	26.8	37.3%
2a	Payroll Taxes	37.5	37.5	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	1,967.2	1,967.2	0.0	0.0%
4a	*Effective Local Franchise Tax Rate*	*0.000%*	*0.000%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5a1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	82.5	109.3	26.8	24.5%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	2,432.1	3,403.2	971.2	28.5%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9a	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9a1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	82.5	109.3	26.8	24.5%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Ad Valorem Taxes	60.5	149.9	89.4	59.7%
2b	Payroll Taxes	38.8	38.8	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	2,432.1	3,403.2	971.2	28.5%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
5b	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5b1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	99.2	188.6	89.4	47.4%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	2,591.6	4,665.1	2,073.5	44.4%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9b	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9b1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	99.2	188.6	89.4	47.4%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	1,967.2	1,967.2	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	559.7	561.8	2.0	0.4%
3	Uncollectibles Expense	0.0	0.0	0.0	0.0%
4	A&G Expenses	336.6	406.4	69.8	17.2%
5	G.O. Prorated Expenses	961.7	1,020.9	59.3	5.8%
6	G.O. Book Depreciation (to be excluded)	(106.7)	(131.0)	(24.4)	18.6%
7	Transportation Deprec. Expense (to be excluded)	(6.4)	(16.8)	(10.3)	61.6%
8	Taxes On Other Than Income	82.5	109.3	26.8	24.5%
8a	Non-deductible Meals	(2.8)	(2.8)	0.0	-1.0%
9	Interest Expense	109.7	305.2	195.6	64.1%
10	Total Common Deductions	1,934.3	2,253.0	318.8	14.1%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	209.3	614.7	405.4	65.9%
12	Tax Depreciation - G.O.	68.8	110.0	41.3	37.5%
13	Subtotal	278.1	724.7	446.6	61.6%
14	Total State Deductions, incl. Common Deductions	2,212.4	2,977.7	765.4	25.7%
	Federal Tax Deductions				
16	Book Depreciation - District	98.4	224.5	126.1	56.2%
17	Book Depreciation - G.O.	106.7	131.0	24.4	18.6%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(21.7)	(89.3)	(67.7)	75.7%
20	Subtotal	183.4	266.2	82.8	31.1%
21	Total Fed. Deductions, incl. Common Deductions	2,117.6	2,519.2	401.6	15.9%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(245.2)	(1,010.5)	(765.4)	75.7%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(21.7)	(89.3)	(67.7)	75.7%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	(150.5)	(552.0)	(401.6)	72.7%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	(31.6)	(115.9)	(401.6)	72.7%
28	Adjustment to FIT, Regulatory Liability	3.7	3.6	(0.0)	-1.3%
29	Total FIT, with Adjustment	(27.9)	(112.3)	(84.4)	75.1%
30	Total Income Taxes for Revenues at Present Rates	(49.6)	(201.6)	(152.0)	75.4%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	2,432.1	3,403.2	971.2	28.5%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	559.7	561.8	2.0	0.4%
3	Uncollectibles Expense	0.0	0.0	0.0	0.0%
4	A&G Expenses	336.6	406.4	69.8	17.2%
5	G.O. Prorated Expenses	961.7	1,020.9	59.3	5.8%
6	G.O. Book Depreciation (to be excluded)	(106.7)	(131.0)	(24.4)	18.6%
7	Transportation Deprec. Expense (to be excluded)	(6.4)	(16.8)	(10.3)	61.6%
8	Taxes On Other Than Income	82.5	109.3	26.8	24.5%
8a	Non-deductible Meals	(2.8)	(2.8)	0.0	-1.0%
9	Interest Expense	109.7	305.2	195.6	64.1%
10	Total Common Deductions	1,934.3	2,253.0	318.8	14.1%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	209.3	614.7	405.4	65.9%
12	Tax Depreciation - G.O.	68.8	110.0	41.3	37.5%
13	Subtotal	278.1	724.7	446.6	61.6%
14	Total State Deductions, incl. Common Deductions	2,212.4	2,977.7	765.4	25.7%
	Federal Tax Deductions				
16	Book Depreciation - District	98.4	224.5	126.1	56.2%
17	Book Depreciation - G.O.	106.7	131.0	24.4	18.6%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	19.4	37.6	18.2	48.4%
20	Subtotal	224.5	393.1	168.7	42.9%
21	Total Fed. Deductions, incl. Common Deductions	2,158.7	2,646.2	487.4	18.4%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	219.7	425.5	205.8	48.4%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	19.4	37.6	18.2	48.4%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	273.3	757.0	483.7	63.9%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	57.4	159.0	101.6	63.9%
28	Adjustment to FIT, Regulatory Liability	3.7	3.6	(0.0)	-1.3%
29	Total FIT, with Adjustment	61.1	162.6	101.5	62.4%
30	Total Income Taxes for Revenues at Proposed Rates	80.5	200.2	119.7	59.8%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1a	Plant in Service - Beginning of Year	68,448.7	71,349.9	2,901.2	4.1%
2a	Adjustments	0.0	0.0	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	1,046.5	11,362.3	10,315.8	90.8%
4a	Advances	0.0	0.0	0.0	0.0%
5a	Contributions	0.0	0.0	0.0	0.0%
6a	Total Gross Additions	1,046.5	11,362.3	10,315.8	90.8%
8a	Retirements	0.7	0.7	0.0	0.0%
9a	Net Additions	1,047.1	11,363.0	10,315.8	90.8%
10a	Plant in Service - End of Year	69,495.9	82,712.9	13,217.0	16.0%
11a	*Plant Weighting Factor*	*45.47%*	*45.47%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	68,924.9	76,517.0	7,592.1	9.9%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1b	Plant in Service - Beginning of Year	69,495.9	82,712.9	13,217.0	16.0%
2b	Adjustments	0.0	0.0	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	496.9	4,782.5	4,285.6	89.6%
4b	Advances	0.0	0.0	0.0	0.0%
5b	Contributions	0.0	0.0	0.0	0.0%
6b	Total Gross Additions	496.9	4,782.5	4,285.6	89.6%
8b	Retirements	0.7	0.7	0.0	0.0%
9b	Net Additions	497.5	4,783.1	4,285.6	89.6%
10b	Plant in Service - End of Year	69,993.4	87,496.0	17,502.6	20.0%
11b	*Plant Weighting Factor*	*45.47%*	*45.47%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	69,722.1	84,887.9	15,165.8	17.9%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Depreciation Reserve - Beginning of Year	65,380.7	65,486.3	105.6	0.2%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(2.2)	(8.7)	(6.5)	74.6%
3a	Contributed Plant	0.0	0.0	0.0	0.0%
4a	Depreciation Accrual	100.577	233.2	132.6	56.9%
5a	Total Accruals	98.4	224.5	126.1	56.2%
	Retirements				
6a	Net Retirements	(0.660)	(0.7)	0.0	0.0%
8a	Total Retirement	(0.7)	(0.7)	0.0	0.0%
9a	Net Additions	100	232.5	132.6	57.0%
7a	Carry Forward Adjustment	0.0	0.0	0.0	0.0%
10a	Depreciation Reserve - End of Year	65,480.6	65,718.9	238.2	0.4%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	65,430.7	65,602.6	171.9	0.3%
13a	*Deprec. expense for summary of earnings calc.*	98.4	224.5	126.1	56.2%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Depreciation Reserve - Beginning of Year	65,480.6	65,718.9	238.2	0.4%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(2.2)	(15.3)	(13.1)	85.6%
3b	Contributed Plant	0.0	0.0	0.0	0.0%
4b	Depreciation Accrual	131.4	602.3	470.9	78.2%
5b	Total Accruals	129.2	587.0	457.8	78.0%
	Retirements and Adjustments:				
6b	Net Retirements	(0.7)	(0.7)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(0.7)	(0.7)	0.0	
					0.0%
9b	Net Additions	130.7	601.6	470.9	78.3%
10b	Depreciation Reserve - End of Year	65,611.4	66,320.5	709.2	1.1%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	65,546.0	66,019.7	473.7	0.7%
13b	* *Deprec. expense for summary of earnings calc.*	129.2	587.0	457.8	78.0%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	68,924.9	76,517.0	7,592.1	9.9%
3	Weighted Average Depreciation Reserve	(65,430.7)	(65,602.6)	(171.9)	0.3%
4	Net Utility Plant	3,494.2	10,914.3	7,420.1	68.0%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	0.0	0.0	0.0	0.0%
5	Advances in Construction	0.0	0.0	0.0	0.0%
6	Reserve for Amortization of Intangibles	25.9	91.9	66.0	71.9%
7	Deferred Taxes	(182.7)	(80.2)	102.6	-127.9%
8	Unamortized Investment Tax Credits	0.0	0.0	0.0	0.0%
9	Total Deductions from Rate Base	(156.8)	11.7	168.6	1437.3%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	0.0	0.0	0.0	0.0%
10a	Tank Painting	0.0	0.0	0.0	0.0%
11	Working Cash, Lead-Lag	(83.5)	(107.3)	(23.8)	22.2%
12	Amount Withheld from Employees	(2.7)	(2.7)	0.0	-1.4%
13	Total Working Capital	(86.2)	(110.0)	(23.8)	21.6%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	0.0	0.0	0.0	0.0%
17	Total Additions to Rate Base	(86.2)	(110.0)	(23.8)	21.6%
18	Weighted Average Rate Base, District	3,564.9	10,792.6	7,227.8	67.0%
19	Weighted Average Rate Base, G.O. Allocation	615.6	974.2	358.6	36.8%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	4,180.5	11,766.8	7,586.3	64.5%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*4,266.639*	*11,876.8*	*7,610.1*	*64.1%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*109.7*	*305.2*	*195.6*	*64.1%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	69,722.1	84,887.9	15,165.8	17.9%
3	Weighted Average Depreciation Reserve	(65,546.0)	(66,019.7)	(473.7)	0.7%
4	Net Utility Plant	4,176.1	18,868.2	14,692.1	77.9%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	0.0	0.0	0.0	0.0%
5	Advances in Construction	0.0	0.0	0.0	0.0%
6	Reserve for Amortization of Intangibles	28.2	139.5	111.3	79.8%
7	Deferred Taxes	(188.6)	(137.6)	51.0	-37.1%
8	Unamortized Investment Tax Credits	0.0	0.0	0.0	0.0%
9	Total Deductions from Rate Base	(160.4)	1.9	162.3	8444.3%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	0.0	0.0	0.0	0.0%
10a	Tank Painting	0.0	0.0	0.0	0.0%
11	Working Cash, Lead-Lag	(90.6)	(141.3)	(50.7)	35.9%
12	Amount Withheld from Employees	(2.7)	(2.7)	0.0	-1.4%
13	Total Working Capital	(93.3)	(144.0)	(50.7)	35.2%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	0.0	0.0	0.0	0.0%
17	Total Additions to Rate Base	(93.3)	(144.0)	(50.7)	35.2%
18	Weighted Average Rate Base, District	4,243.2	18,722.3	14,479.1	77.3%
19	Weighted Average Rate Base, G.O. Allocation	623.0	1,054.9	431.9	40.9%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	4,866.2	19,777.2	14,911.0	75.4%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*4,959.5*	*19,921.2*	*14,961.7*	*75.1%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*127.5*	*512.0*	*384.5*	*75.1%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	193.5	2,659.6	2,466.0
2. Test Year 2023 Increase (%)	0.6%	8.8%	8.1%
3. Escalation Year 2024 Increase (%)	4.4%	5.7%	1.3%
4. Escalation Year 2025 Increase (%)	2.1%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**30,275.8**	**30,275.8**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	5,948.0	5,958.1	10.2	0.2%
3a	Administrative & General	1,598.9	1,651.7	52.8	3.2%
4a	Payroll	4,320.6	4,320.6	0.0	0.0%
5a	General Office - *prorated expenses*	6,815.4	7,253.0	437.6	6.0%
6a	Depreciation Expense	5,909.0	6,537.8	628.7	9.6%
7a	Taxes Other Than Income	926.2	1,034.4	108.2	10.5%
8a	California Corporate Franchise Tax	403.1	(376.0)	(779.1)	207.2%
9a	Federal Income Tax	114.1	(76.8)	(190.9)	248.5%
10a	Total Operating Expenses	26,035.2	26,302.7	267.5	1.0%
11a	Net Operating Revenues	4,240.6	3,973.1	(267.5)	-6.7%
12a	Weighted Average Rate Base	58,549.7	78,642.5	20,092.8	25.5%
13a	***Return on Rate Base***	***7.24%***	***5.05%***	***-2.19%***	***-43.4%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	30,469.3	32,935.4	**2,466.0**	**7.5%**
	Operating Expenses:				
2b	Operation & Maintenance	5,948.6	5,967.0	18.4	0.3%
3b	Administrative & General	1,598.9	1,651.7	52.8	3.2%
4b	Payroll	4,320.6	4,320.6	0.0	0.0%
5b	General Office - *prorated expenses*	6,815.4	7,253.0	437.6	6.0%
6b	Depreciation Expense	5,909.0	6,537.8	628.7	9.6%
7b	Taxes Other Than Income	926.2	1,034.4	108.2	10.5%
8b	California Corporate Franchise Tax	420.1	(141.7)	(561.8)	396.4%
9b	Federal Income Tax	151.0	430.6	279.7	64.9%
10b	Total Operating Expenses	26,089.8	27,053.3	963.5	3.6%
11b	Net Operating Revenues	4,379.5	5,882.0	1,502.5	25.5%
12b	Weighted Average Rate Base	58,550	78,642.5	20,092.8	25.5%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**193.5**	**2,659.6**	**2,466.0**	**92.7%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	31,278.2	31,927.3	649.0	2.0%
2	Operating Expenses:*				
3	Operation & Maintenance	6,089.6	6,211.4	121.8	2.0%
4	Administrative & General	1,709.8	1,744.0	34.2	2.0%
5	Payroll	4,463.2	4,552.4	89.3	2.0%
6	G.O. Prorated Expenses	6,783.6	6,919.3	135.7	2.0%
7	Depreciation Expense	6,172.9	6,296.4	123.5	2.0%
8	Taxes Other Than Income	941.5	960.3	18.8	2.0%
9	California Corporate Franchise Tax	439.3	439.29	0.0	0.0%
10	Federal Income Tax	172.9	172.95	0.0	0.0%
11	Total Operating Expenses	26,772.9	27,296.1	523.2	1.9%
12	Net Operating Revenues	4,505.4	4,631.2	125.8	2.7%
13	Weighted Average Rate Base	60,232.0	61,914.2	1,682.2	2.7%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***(0.0)***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	198.8	198.8	0.0	0.0%
2a	Business	725.4	725.4	0.0	0.0%
3a	Multiple Family	627.5	627.5	0.0	0.0%
4a	Industrial	2,591.8	2,591.8	0.0	0.0%
5a	Public Authority	1,180.0	1,180.0	0.0	0.0%
6a	Other	939.0	939.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	198.8	198.8	0.0	0.0%
2b	Business	725.4	725.4	0.0	0.0%
3b	Multiple Family	627.5	627.5	0.0	0.0%
4b	Industrial	2,591.8	2,591.8	0.0	0.0%
5b	Public Authority	1,144.5	1,144.5	0.0	0.0%
6b	Other	913.6	913.6	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	42,478	42,478	0	0%
2a	Business	3,146	3,146	0	0%
3a	Multiple Family	966	966	0	0%
4a	Industrial	63	63	0	0%
5a	Public Authority	1,026	1,026	0	0%
6a	Other	72	72	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	47,751	47,751	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	764	764	0	0%
12a	Public Fire Protection	91	91	0	0%
13a	Total Number of Unmetered Connections	855	855	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	48,606	48,606	0	0%
15a	Excluding Fire Protection	47,751	47,751	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	43,178	43,178	0	0%
2b	Business	3,172	3,172	0	0%
3b	Multiple Family	964	964	0	0%
4b	Industrial	63	63	0	0%
5b	Public Authority	1,058	1,058	0	0%
6b	Other	74	74	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	48,508	48,508	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	775	775	0	0%
12b	Public Fire Protection	93	93	0	0%
13b	Total Number of Unmetered Connections	868	868	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	49,376	49,376	0	0%
15b	Excluding Fire Protection	48,508	48,508	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Connections' Sales:				
1a	Residential	8,445.9	8,445.9	0.0	0.0%
2a	Business	2,282.3	2,282.3	0.0	0.0%
3a	Multiple Family	606.2	606.2	0.0	0.0%
4a	Industrial	163.3	163.3	0.0	0.0%
5a	Public Authority	1,210.4	1,210.4	0.0	0.0%
6a	Other	67.6	67.6	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	12,775.8	12,775.8	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	12,775.8	12,775.8	0.0	0.0%
12a	*Unaccounted For Water Rate*	*3.7%*	*3.7%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	491.0	491.0	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**13,266.8**	**13,266.8**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	30,456.5	30,456.5	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	13,266.8	13,266.8	0.0	0.0%
17a	Purchased Water	0.0	0.0	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**13,266.8**	**13,266.8**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Connections' Sales:				
1b	Residential	8,585.3	8,585.3	0.0	0.0%
2b	Business	2,300.7	2,300.7	0.0	0.0%
3b	Multiple Family	604.8	604.8	0.0	0.0%
4b	Industrial	163.3	163.3	0.0	0.0%
5b	Public Authority	1,210.4	1,210.4	0.0	0.0%
6b	Other	67.6	67.6	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	12,932.1	12,932.1	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	12,932.1	12,932.1	0.0	0.0%
12b	*Unaccounted For Water Rate*	*3.7%*	*3.7%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	498.7	498.7	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**13,430.8**	**13,430.8**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	30,833.2	30,833.2	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	13,430.8	13,430.8	0.0	0.0%
17b	Purchased Water	0.0	0.0	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**13,430.8**	**13,430.8**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	12,780.1	12,780.1	0.0	0.0%
2a	Business	3,950.0	3,950.0	0.0	0.0%
3a	Multiple Family	1,049.2	1,049.2	0.0	0.0%
4a	Industrial	282.6	282.6	0.0	0.0%
5a	Public Authority	2,094.9	2,094.9	0.0	0.0%
6a	Other	117.0	117.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	20,273.8	20,273.8	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	9,272.2	9,272.2	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	9,272.2	9,272.2	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	585.2	585.2	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	144.6	144.6	0.0	0.0%
16a	Total Other Revenues	729.8	729.8	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	30,275.8	30,275.8	0.0	0.0%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	10,920.7	11,276.6	356.0	3.2%
2b	Business	3,630.3	3,455.6	(174.6)	-5.1%
3b	Multiple Family	954.3	908.4	(45.9)	-5.1%
4b	Industrial	257.6	245.3	(12.4)	-5.1%
5b	Public Authority	1,910.0	1,818.1	(91.9)	-5.1%
6b	Other	106.7	101.5	(5.1)	-5.1%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	17,779.5	17,805.6	26.0	0.1%
	Unmetered Revenues:				
10b	Service Charge	11,383.3	14,785.4	3,402.1	23.0%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	11,383.3	14,785.4	3,402.1	23.0%
	Other Revenues:				
13b	Private Fire Protection	639.3	639.3	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	157.3	157.3	0.0	0.0%
16b	Total Other Revenues	796.6	796.6	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	29,959.4	33,387.5	3,428.2	10.3%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	523.9	523.9	0.0	0.0%
3	Purchased Power	2,246.5	2,246.5	0.0	0.0%
4	Purchased Chemicals	119.4	119.4	0.0	0.0%
5	Payroll	2,826.3	2,826.3	0.0	0.0%
6	Postage	151.8	143.2	(8.6)	-6.0%
7	Transportation	377.3	377.3	0.0	0.0%
	Purchased Services:				
8	Source of Supply	62.8	62.8	0.0	0.0%
9	Pumping	226.7	226.7	0.0	0.0%
10	Water Treatment	195.4	195.4	0.0	0.0%
11	Transmission & Distribution	166.4	166.4	0.0	0.0%
12	Customer Accounting	590.9	590.9	0.0	0.0%
13	Conservation	484.1	509.5	25.5	5.0%
14	Total Operations Exp. excluding Uncollectibles	7,971.5	7,988.4	16.9	0.2%
	Maintenance Expenses:				
15	Payroll	709.6	709.6	0.0	0.0%
16	Transportation	123.6	123.6	0.0	0.0%
17	Stores	106.2	106.2	0.0	0.0%
18	Contracted Maintenance	472.3	472.3	0.0	0.0%
19	Total Maintenance Expenses	1,411.7	1,411.7	0.0	0.0%
	At Present Rates				
20	Operating Revenues	30,275.8	30,275.8	0.0	0.0%
21	*Uncollectible Rate*	0.3327%	0.3105%	*-0.0222%*	*-7.1%*
22	Uncollectibles Expense	100.7	94.0	(6.7)	-7.1%
23	Total O&M Expenses including Uncollectibles	9,483.9	9,494.0	10.2	0.1%
	At Proposed Rates				
25	Operating Revenues	30,469.3	32,935.4	2,466.0	7.5%
26	*Uncollectible Rate*	0.3327%	0.3327%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	101.4	102.9	1.5	1.4%
28	Total O&M Expenses including Uncollectibles	9,484.5	9,502.9	18.4	0.2%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	530.3	530.3	0.0	0.0%
3	Purchased Power	2,306.0	2,306.0	0.0	0.0%
4	Purchased Chemicals	123.9	123.9	0.0	0.0%
5	Payroll	2,919.6	2,919.6	0.0	0.0%
6	Postage	154.1	145.4	(8.7)	-6.0%
7	Transportation	386.9	386.9	0.0	0.0%
	Purchased Services:				
8	Source of Supply	62.8	62.8	0.0	0.0%
9	Pumping	232.4	232.4	0.0	0.0%
10	Water Treatment	199.6	199.6	0.0	0.0%
11	Transmission & Distribution	170.6	170.6	0.0	0.0%
12	Customer Accounting	605.8	605.8	0.0	0.0%
13	Conservation	509.5	509.5	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	8,201.5	8,192.8	(8.7)	-0.1%
	Maintenance Expenses:				
15	Payroll	733.0	733.0	0.0	0.0%
16	Transportation	126.7	126.7	0.0	0.0%
17	Stores	108.9	108.9	0.0	0.0%
18	Contracted Maintenance	468.1	468.1	0.0	0.0%
19	Total Maintenance Expenses	1,436.6	1,436.6	0.0	0.0%
	At Present Rates				
20	Operating Revenues	29,959.4	33,387.5	3,428.2	10.3%
21	*Uncollectible Rate*	0.3327%	0.3105%	*-2.2197%*	*-7.1%*
22	Uncollectibles Expense	99.7	103.7	4.0	3.9%
23	Total O&M Expenses including Uncollectibles	9,737.8	9,733.1	(4.7)	0.0%
	At Proposed Rates				
25	Operating Revenues	31,278.2	35,285.6	4,007.4	11.4%
26	*Uncollectible Rate*	0.3327%	0.3105%	*-2.2197%*	*-7.1%*
27	Uncollectibles Expense	104.1	109.6	5.5	5.0%
28	Total O&M Expenses including Uncollectibles	9,742.2	9,739.0	(3.2)	0.0%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	784.7	784.7	0.0	0.0%
2a	Benefits	1,363.7	1,416.2	52.5	3.7%
3a	Transportation Expenses	2.8	2.8	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	63.6	63.6	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(101.4)	(101.4)	0.0	0.0%
6a	Workers' Compensation	68.3	64.1	(4.2)	-6.6%
7a	Non-Specifics	212.9	198.8	(14.2)	-7.1%
8a	Subtotal	2,394.7	2,428.8	34.1	1.4%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	42.6	61.3	18.7	30.5%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(53.7)	(53.7)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	2,383.6	2,436.4	52.8	2.2%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	810.6	810.6	0.0	0.0%
2b	Benefits	1,482.0	1,529.4	47.4	3.1%
3b	Transportation Expenses	2.9	2.9	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	63.6	63.6	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(104.7)	(104.7)	0.0	0.0%
6b	Workers' Compensation	70.0	68.4	(1.6)	-2.3%
7b	Non-Specifics	197.1	197.1	0.0	0.0%
8b	Subtotal	2,521.6	2,567.4	45.8	1.8%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	53.9	72.0	18.1	25.1%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(55.1)	(55.1)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	2,520.4	2,584.3	63.9	2.5%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Ad Valorem Taxes	616.1	724.3	108.2	14.9%
2a	Payroll Taxes	309.3	309.3	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	30,175.1	30,181.8	6.7	0.0%
4a	*Effective Local Franchise Tax Rate*	*0.000%*	*0.000%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5a1	Business License-Present Rates	0.8	0.8	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	926.2	1,034.4	108.2	10.5%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	30,368.0	32,832.5	2,464.6	7.5%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9a	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9a1	Business License-Proposed Rates	0.8	0.8	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	926.2	1,034.4	108.2	10.5%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Ad Valorem Taxes	621.2	808.2	187.0	23.1%
2b	Payroll Taxes	319.5	319.5	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	29,859.7	33,283.9	3,424.2	10.3%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
5b	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5b1	Business License-Present Rates	0.8	0.8	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	941.5	1,128.6	187.0	16.6%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	31,174.1	35,176.0	4,001.9	11.4%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9b	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9b1	Business License-Proposed Rates	0.8	0.8	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	941.5	1,128.6	187.0	16.6%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	30,275.8	30,275.8	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	9,383.2	9,400.0	16.9	0.2%
3	Uncollectibles Expense	100.7	94.0	(6.7)	-7.1%
4	A&G Expenses	2,383.6	2,436.4	52.8	2.2%
5	G.O. Prorated Expenses	6,815.4	7,253.0	437.6	6.0%
6	G.O. Book Depreciation (to be excluded)	(755.9)	(930.8)	(174.9)	18.8%
7	Transportation Deprec. Expense (to be excluded)	(75.3)	(136.5)	(61.1)	44.8%
8	Taxes On Other Than Income	926.2	1,034.4	108.2	10.5%
8a	Non-deductible Meals	(32.7)	(32.5)	0.2	-0.5%
9	Interest Expense	1,429.3	1,939.5	510.2	26.3%
10	Total Common Deductions	20,174.5	21,057.5	883.1	4.2%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	5,054.5	12,690.7	7,636.1	60.2%
12	Tax Depreciation - G.O.	487.3	781.5	294.3	37.7%
13	Subtotal	5,541.8	13,472.2	7,930.4	58.9%
14	Total State Deductions, incl. Common Deductions	25,716.3	34,529.7	8,813.4	25.5%
	Federal Tax Deductions				
16	Book Depreciation - District	5,909.0	6,537.8	628.7	9.6%
17	Book Depreciation - G.O.	755.9	930.8	174.9	18.8%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	403.1	(376.0)	(779.1)	207.2%
20	Subtotal	7,068.0	7,092.5	24.5	0.3%
21	Total Fed. Deductions, incl. Common Deductions	27,242.5	28,150.1	907.6	3.2%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	4,559.5	(4,253.9)	(8,813.4)	207.2%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	403.1	(376.0)	(779.1)	207.2%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	3,033.4	2,125.8	(907.6)	-42.7%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	637.0	446.4	(907.6)	-42.7%
28	Adjustment to FIT, Regulatory Liability	(523.0)	(523.2)	(0.3)	0.0%
29	Total FIT, with Adjustment	114.1	(76.8)	(190.9)	248.5%
30	Total Income Taxes for Revenues at Present Rates	517.1	(452.8)	(970.0)	214.2%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	30,469.3	32,935.4	2,466.0	7.5%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	9,383.2	9,400.0	16.9	0.2%
3	Uncollectibles Expense	101.4	102.9	1.5	1.4%
4	A&G Expenses	2,383.6	2,436.4	52.8	2.2%
5	G.O. Prorated Expenses	6,815.4	7,253.0	437.6	6.0%
6	G.O. Book Depreciation (to be excluded)	(755.9)	(930.8)	(174.9)	18.8%
7	Transportation Deprec. Expense (to be excluded)	(75.3)	(136.5)	(61.1)	44.8%
8	Taxes On Other Than Income	926.2	1,034.4	108.2	10.5%
8a	Non-deductible Meals	(32.7)	(32.5)	0.2	-0.5%
9	Interest Expense	1,429.3	1,939.5	510.2	26.3%
10	Total Common Deductions	20,175.1	21,066.4	891.3	4.2%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	5,054.5	12,690.7	7,636.1	60.2%
12	Tax Depreciation - G.O.	487.3	781.5	294.3	37.7%
13	Subtotal	5,541.8	13,472.2	7,930.4	58.9%
14	Total State Deductions, incl. Common Deductions	25,716.9	34,538.6	8,821.6	25.5%
	Federal Tax Deductions				
16	Book Depreciation - District	5,909.0	6,537.8	628.7	9.6%
17	Book Depreciation - G.O.	755.9	930.8	174.9	18.8%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	420.1	(141.7)	(561.8)	396.4%
20	Subtotal	7,085.0	7,326.8	241.8	3.3%
21	Total Fed. Deductions, incl. Common Deductions	27,260.2	28,393.2	1,133.1	4.0%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	4,752.4	(1,603.2)	(6,355.6)	396.4%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	420.1	(141.7)	(561.8)	396.4%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	3,209.2	4,542.1	1,333.0	29.3%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	673.9	953.9	279.9	29.3%
28	Adjustment to FIT, Regulatory Liability	(523.0)	(523.2)	(0.3)	0.0%
29	Total FIT, with Adjustment	151.0	430.6	279.7	64.9%
30	Total Income Taxes for Revenues at Proposed Rates	571.1	288.9	(282.2)	-97.7%

TABLE 7-1
UTILITY PLANT IN SERVICE

Test Year 2023 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	233,828.4	250,531.9	16,703.4	6.7%
2a	Adjustments	25.9	25.9	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	5,724.5	16,301.2	10,576.7	64.9%
4a	Advances	1,985.4	1,985.4	0.0	0.0%
5a	Contributions	1,039.7	1,039.7	0.0	0.0%
6a	Total Gross Additions	8,749.5	19,326.2	10,576.7	54.7%
8a	Retirements	613.2	613.2	0.0	0.0%
9a	Net Additions	9,362.7	19,939.4	10,576.7	53.0%
10a	Plant in Service - End of Year	243,217.0	270,497.2	27,280.1	10.1%
11a	*Plant Weighting Factor*	*39.00%*	*39.00%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	237,479.9	258,308.3	20,828.4	8.1%

Escalation Year 2024 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	243,217.0	270,497.2	27,280.1	10.1%
2b	Adjustments	21.3	21.3	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	2,337.5	15,438.0	13,100.5	84.9%
4b	Advances	1,985.4	1,985.4	0.0	0.0%
5b	Contributions	1,039.7	1,039.7	0.0	0.0%
6b	Total Gross Additions	5,362.5	18,463.0	13,100.5	71.0%
8b	Retirements	479.2	479.2	0.0	0.0%
9b	Net Additions	5,841.7	18,942.2	13,100.5	69.2%
10b	Plant in Service - End of Year	249,080.0	289,460.7	40,380.7	14.0%
11b	*Plant Weighting Factor*	*39.00%*	*39.00%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	245,495.3	277,884.7	32,389.4	11.7%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Depreciation Reserve - Beginning of Year	91,627.0	91,969.2	342.2	0.4%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(45.4)	(79.1)	(33.7)	42.6%
3a	Contributed Plant	(1,118.7)	(1,123.2)	(4.6)	0.4%
4a	Depreciation Accrual	7,073.088	7,740.1	667.0	8.6%
5a	Total Accruals	5,909.0	6,537.8	628.7	9.6%
	Retirements				
6a	Net Retirements	(613.208)	(613.2)	0.0	0.0%
8a	Total Retirement	(613.2)	(613.2)	0.0	0.0%
9a	Net Additions	6,460	7,126.9	667.0	9.4%
7a	Carry Forward Adjustment	0.0	(136.6)	(136.6)	100.0%
10a	Depreciation Reserve - End of Year	98,086.8	98,959.6	872.7	0.9%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	94,856.9	95,396.1	539.2	0.6%
13a	*Deprec. expense for summary of earnings calc.*	5,909.0	6,537.8	628.7	9.6%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Depreciation Reserve - Beginning of Year	98,086.8	98,959.6	872.7	0.9%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(45.6)	(82.1)	(36.5)	44.5%
3b	Contributed Plant	(1,152.5)	(1,157.3)	(4.8)	0.4%
4b	Depreciation Accrual	7,371.0	8,350.2	979.2	11.7%
5b	Total Accruals	6,172.9	7,110.9	938.0	13.2%
	Retirements and Adjustments:				
6b	Net Retirements	(479.2)	(479.2)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(479.2)	(479.2)	0.0	
					0.0%
9b	Net Additions	6,891.8	7,871.0	979.2	12.4%
10b	Depreciation Reserve - End of Year	104,978.7	106,830.6	1,851.9	1.7%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	101,532.7	102,895.1	1,362.3	1.3%
13b	* *Deprec. expense for summary of earnings calc.*	6,172.9	7,110.9	938.0	13.2%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	237,479.9	258,308.3	20,828.4	8.1%
3	Weighted Average Depreciation Reserve	(94,856.9)	(95,396.1)	(539.2)	0.6%
4	Net Utility Plant	142,623.0	162,912.2	20,289.2	12.5%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	25,125.7	25,113.8	(11.9)	0.0%
5	Advances in Construction	53,809.4	53,809.4	0.0	0.0%
6	Reserve for Amortization of Intangibles	717.8	738.5	20.7	2.8%
7	Deferred Taxes	12,463.9	15,451.1	2,987.2	19.3%
8	Unamortized Investment Tax Credits	81.3	81.3	0.0	0.0%
9	Total Deductions from Rate Base	92,198.0	95,194.0	2,996.0	3.1%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	197.5	197.5	0.0	0.0%
10a	Tank Painting	391.7	403.2	11.5	2.9%
11	Working Cash, Lead-Lag	2,363.8	2,593.7	229.9	8.9%
12	Amount Withheld from Employees	(19.3)	(19.1)	0.2	-1.0%
13	Total Working Capital	2,933.7	3,175.2	241.6	7.6%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	828.4	828.4	0.0	0.0%
17	Total Additions to Rate Base	3,762.0	4,003.6	241.6	6.0%
18	Weighted Average Rate Base, District	54,187.0	71,721.7	17,534.7	24.4%
19	Weighted Average Rate Base, G.O. Allocation	4,362.7	6,920.8	2,558.1	37.0%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	58,549.7	78,642.5	20,092.8	25.5%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*55,616.076*	*75,467.3*	*19,851.2*	*26.3%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*1,429.3*	*1,939.5*	*510.2*	*26.3%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	245,495.3	277,884.7	32,389.4	11.7%
3	Weighted Average Depreciation Reserve	(101,532.7)	(102,895.1)	(1,362.3)	1.3%
4	Net Utility Plant	143,962.6	174,989.6	31,027.0	17.7%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	25,029.7	25,013.1	(16.6)	-0.1%
5	Advances in Construction	54,634.6	54,634.6	0.0	0.0%
6	Reserve for Amortization of Intangibles	782.9	837.9	55.0	6.6%
7	Deferred Taxes	11,787.6	16,217.5	4,429.9	27.3%
8	Unamortized Investment Tax Credits	79.9	79.9	0.0	0.0%
9	Total Deductions from Rate Base	92,314.7	96,783.1	4,468.4	4.6%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	197.5	197.5	0.0	0.0%
10a	Tank Painting	338.3	349.8	11.5	3.3%
11	Working Cash, Lead-Lag	2,424.8	2,731.2	306.4	11.2%
12	Amount Withheld from Employees	(19.3)	(19.1)	0.2	-1.0%
13	Total Working Capital	2,941.3	3,259.3	318.1	9.8%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	1,227.9	1,227.9	0.0	0.0%
17	Total Additions to Rate Base	4,169.1	4,487.2	318.1	7.1%
18	Weighted Average Rate Base, District	55,817.0	82,693.7	26,876.8	32.5%
19	Weighted Average Rate Base, G.O. Allocation	4,415.0	7,494.4	3,079.4	41.1%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	60,232.0	90,188.2	29,956.2	33.2%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*57,290.7*	*86,928.8*	*29,638.1*	*34.1%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*1,472.4*	*2,234.1*	*761.7*	*34.1%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	2,086.6	2,855.3	768.8
2. Test Year 2023 Increase (%)	10.7%	14.5%	3.8%
3. Escalation Year 2024 Increase (%)	0.3%	1.6%	1.3%
4. Escalation Year 2025 Increase (%)	1.7%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**19,490.5**	**19,699.6**	**209.0**	**1.1%**
	Operating Expenses:				
2a	Operation & Maintenance	12,955.0	12,970.6	15.6	0.1%
3a	Administrative & General	506.8	549.2	42.4	7.7%
4a	Payroll	1,071.6	1,071.6	0.0	0.0%
5a	General Office - *prorated expenses*	2,205.6	2,355.4	149.8	6.4%
6a	Depreciation Expense	1,422.2	1,614.1	191.8	11.9%
7a	Taxes Other Than Income	611.0	647.2	36.2	5.6%
8a	California Corporate Franchise Tax	(22.8)	(200.6)	(177.8)	88.6%
9a	Federal Income Tax	(97.5)	(143.2)	(45.7)	31.9%
10a	Total Operating Expenses	18,652.0	18,864.3	212.3	1.1%
11a	Net Operating Revenues	838.5	835.3	(3.3)	-0.4%
12a	Weighted Average Rate Base	31,050.5	38,309.3	7,258.8	18.9%
13a	***Return on Rate Base***	***2.70%***	***2.18%***	***-0.52%***	***-23.9%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	21,577.1	22,554.9	**977.8**	**4.3%**
	Operating Expenses:				
2b	Operation & Maintenance	12,955.9	12,971.8	15.9	0.1%
3b	Administrative & General	506.8	549.2	42.4	7.7%
4b	Payroll	1,071.6	1,071.6	0.0	0.0%
5b	General Office - *prorated expenses*	2,205.6	2,355.4	149.8	6.4%
6b	Depreciation Expense	1,422.2	1,614.1	191.8	11.9%
7b	Taxes Other Than Income	636.0	681.4	45.5	6.7%
8b	California Corporate Franchise Tax	159.3	48.7	(110.6)	-227.2%
9b	Federal Income Tax	297.0	396.7	99.7	25.1%
10b	Total Operating Expenses	19,254.5	19,688.8	434.3	2.2%
11b	Net Operating Revenues	2,322.6	2,866.1	543.5	19.0%
12b	Weighted Average Rate Base	31,051	38,309.3	7,258.8	18.9%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**2,086.6**	**2,855.3**	**768.8**	**26.9%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	21,655.7	22,027.0	371.3	1.7%
2	Operating Expenses:*				
3	Operation & Maintenance	12,984.5	13,244.2	259.7	2.0%
4	Administrative & General	524.2	534.7	10.5	2.0%
5	Payroll	1,107.0	1,129.1	22.1	2.0%
6	G.O. Prorated Expenses	2,195.4	2,239.3	43.9	2.0%
7	Depreciation Expense	1,442.9	1,471.7	28.9	2.0%
8	Taxes Other Than Income	636.1	648.9	12.7	2.0%
9	California Corporate Franchise Tax	155.1	155.13	0.0	0.0%
10	Federal Income Tax	294.4	294.40	0.0	0.0%
11	Total Operating Expenses	19,339.6	19,717.4	377.8	1.9%
12	Net Operating Revenues	2,316.1	2,309.6	(6.5)	-0.3%
13	Weighted Average Rate Base	30,963.9	30,877.3	(86.6)	-0.3%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***(0.0)***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	296.9	296.9	0.0	0.0%
2a	Business	1,254.4	1,254.4	0.0	0.0%
3a	Multiple Family	646.3	646.3	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	907.4	907.4	0.0	0.0%
6a	Other	246.7	246.7	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	7,451.5	10,260.4	2,808.9	27.4%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	296.9	296.9	0.0	0.0%
2b	Business	1,254.4	1,254.4	0.0	0.0%
3b	Multiple Family	646.3	646.3	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	907.4	907.4	0.0	0.0%
6b	Other	246.7	246.7	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	7,451.5	10,260.4	2,808.9	27.4%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	6,179	6,179	0	0%
2a	Business	519	519	0	0%
3a	Multiple Family	125	125	0	0%
4a	Industrial	0	0	0	0%
5a	Public Authority	89	89	0	0%
6a	Other	8	8	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	18	18	0	0%
9a	Total Number of Metered Connections	6,938	6,938	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	139	139	0	0%
12a	Public Fire Protection	8	8	0	0%
13a	Total Number of Unmetered Connections	147	147	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	7,085	7,085	0	0%
15a	Excluding Fire Protection	6,938	6,938	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	6,180	6,180	0	0%
2b	Business	519	519	0	0%
3b	Multiple Family	125	125	0	0%
4b	Industrial	0	0	0	0%
5b	Public Authority	89	89	0	0%
6b	Other	8	8	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	18	18	0	0%
9b	Total Number of Metered Connections	6,939	6,939	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	139	139	0	0%
12b	Public Fire Protection	8	8	0	0%
13b	Total Number of Unmetered Connections	147	147	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	7,086	7,086	0	0%
15b	Excluding Fire Protection	6,939	6,939	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	1,834.4	1,834.4	0.0	0.0%
2a	Business	650.9	650.9	0.0	0.0%
3a	Multiple Family	80.8	80.8	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	80.8	80.8	0.0	0.0%
6a	Other	2.0	2.0	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	134.1	184.7	50.6	27.4%
9a	Total Metered Connections' Sales	2,783.0	2,833.5	50.6	1.8%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	2,783.0	2,833.5	50.6	1.8%
12a	*Unaccounted For Water Rate*	*6.9%*	*6.8%*	*-0.1%*	*-1.7%*
13a	Unaccounted For Water (UAF)	255.7	205.2	(50.6)	-24.6%
14a	**Total Requirement (Sales + UAF) ***	**3,038.7**	**3,038.7**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	6,976.0	6,976.0	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	0.0	0.0	0.0	0.0%
17a	Purchased Water	2,854.0	2,854.0	0.0	0.0%
18a	Surface Supply	184.7	184.7	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**3,038.7**	**3,038.7**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	1,834.9	1,834.9	0.0	0.0%
2b	Business	650.9	650.9	0.0	0.0%
3b	Multiple Family	80.8	80.8	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	80.8	80.8	0.0	0.0%
6b	Other	2.0	2.0	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	134.1	184.7	50.6	27.4%
9b	Total Metered Connections' Sales	2,783.5	2,834.0	50.6	1.8%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	2,783.5	2,834.0	50.6	1.8%
12b	*Unaccounted For Water Rate*	*6.9%*	*6.8%*	*-0.1%*	*-1.7%*
13b	Unaccounted For Water	255.8	205.2	(50.6)	-24.6%
14b	**Total Requirement (Sales + UAF) ***	**3,039.2**	**3,039.2**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	6,977.2	6,977.2	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	0.0	0.0	0.0	0.0%
17b	Purchased Water	2,854.6	2,854.6	0.0	0.0%
18b	Surface Supply	184.7	184.7	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**3,039.2**	**3,039.2**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Revenues:				
1a	Residential	10,025.8	10,025.8	0.0	0.0%
2a	Business	2,995.9	2,995.9	0.0	0.0%
3a	Multiple Family	371.8	371.8	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	371.7	371.7	0.0	0.0%
6a	Other	9.1	9.1	0.0	0.0%
7a	Irrigation	554.6	763.6	209.0	27.4%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	14,328.9	14,537.9	209.0	1.4%
	Unmetered Revenues:				
10a	Service Charge	5,067.8	5,067.8	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	5,067.8	5,067.8	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	87.4	87.4	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	6.5	6.5	0.0	0.0%
16a	Total Other Revenues	93.8	93.8	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	19,490.5	19,699.6	209.0	1.1%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Metered Revenues:				
1b	Residential	12,319.8	11,275.8	(1,044.1)	-9.3%
2b	Business	3,680.6	3,368.8	(311.8)	-9.3%
3b	Multiple Family	456.8	418.1	(38.7)	-9.3%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	456.6	417.9	(38.7)	-9.3%
6b	Other	11.2	10.2	(0.9)	-9.3%
7b	Irrigation	681.3	858.4	177.1	20.6%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	17,606.3	16,349.2	(1,257.1)	-7.7%
	Unmetered Revenues:				
10b	Service Charge	3,874.4	6,109.7	2,235.3	36.6%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	3,874.4	6,109.7	2,235.3	36.6%
	Other Revenues:				
13b	Private Fire Protection	94.0	94.0	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	7.4	7.4	0.0	0.0%
16b	Total Other Revenues	101.4	101.4	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	21,582.2	22,560.4	978.2	4.3%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	11,675.5	11,675.7	0.2	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	313.9	313.9	0.0	0.0%
4	Purchased Chemicals	0.0	0.0	0.0	0.0%
5	Payroll	629.5	629.5	0.0	0.0%
6	Postage	23.1	21.8	(1.3)	-6.0%
7	Transportation	77.4	77.4	0.0	0.0%
	Purchased Services:				
8	Source of Supply	0.9	0.9	0.0	0.0%
9	Pumping	70.5	70.5	0.0	0.0%
10	Water Treatment	70.8	70.8	0.0	0.0%
11	Transmission & Distribution	47.0	47.0	0.0	0.0%
12	Customer Accounting	149.5	149.5	0.0	0.0%
13	Conservation	258.2	269.6	11.4	4.2%
14	Total Operations Exp. excluding Uncollectibles	13,316.3	13,326.6	10.3	0.1%
	Maintenance Expenses:				
15	Payroll	264.8	264.8	0.0	0.0%
16	Transportation	45.8	45.8	0.0	0.0%
17	Stores	14.9	14.9	0.0	0.0%
18	Contracted Maintenance	199.5	199.5	0.0	0.0%
19	Total Maintenance Expenses	525.0	525.0	0.0	0.0%
	At Present Rates				
20	Operating Revenues	19,490.5	19,699.6	209.0	1.1%
21	*Uncollectible Rate*	0.0412%	0.0676%	*0.0264%*	*39.1%*
22	Uncollectibles Expense	8.0	13.3	5.3	39.7%
23	Total O&M Expenses including Uncollectibles	13,849.4	13,865.0	15.6	0.1%
	At Proposed Rates				
25	Operating Revenues	21,577.1	22,554.9	977.8	4.3%
26	*Uncollectible Rate*	0.0412%	0.0412%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	8.9	14.5	5.6	38.7%
28	Total O&M Expenses including Uncollectibles	13,850.3	13,866.1	15.9	0.1%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	11,677.3	11,677.5	0.2	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	314.4	314.4	0.0	0.0%
4	Purchased Chemicals	0.0	0.0	0.0	0.0%
5	Payroll	650.3	650.3	0.0	0.0%
6	Postage	23.1	21.8	(1.3)	-6.0%
7	Transportation	79.3	79.3	0.0	0.0%
	Purchased Services:				
8	Source of Supply	0.9	0.9	0.0	0.0%
9	Pumping	72.3	72.3	0.0	0.0%
10	Water Treatment	71.9	71.9	0.0	0.0%
11	Transmission & Distribution	48.2	48.2	0.0	0.0%
12	Customer Accounting	153.3	153.3	0.0	0.0%
13	Conservation	269.6	269.6	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	13,360.7	13,359.6	(1.1)	0.0%
	Maintenance Expenses:				
15	Payroll	273.6	273.6	0.0	0.0%
16	Transportation	46.9	46.9	0.0	0.0%
17	Stores	15.3	15.3	0.0	0.0%
18	Contracted Maintenance	203.0	203.0	0.0	0.0%
19	Total Maintenance Expenses	538.8	538.8	0.0	0.0%
	At Present Rates				
20	Operating Revenues	21,582.2	22,560.4	978.2	4.3%
21	*Uncollectible Rate*	0.0412%	0.0676%	*2.6435%*	*39.1%*
22	Uncollectibles Expense	8.9	15.3	6.4	41.7%
23	Total O&M Expenses including Uncollectibles	13,908.4	13,913.6	5.3	0.0%
	At Proposed Rates				
25	Operating Revenues	21,655.7	22,931.0	1,275.3	5.6%
26	*Uncollectible Rate*	0.0412%	0.0676%	*2.6435%*	*39.1%*
27	Uncollectibles Expense	8.9	15.5	6.6	42.5%
28	Total O&M Expenses including Uncollectibles	13,908.4	13,913.9	5.5	0.0%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	177.2	177.2	0.0	0.0%
2a	Benefits	338.2	351.2	13.0	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	106.6	106.6	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(11.9)	(11.9)	0.0	0.0%
6a	Workers' Compensation	15.4	15.9	0.4	2.8%
7a	Non-Specifics	53.0	50.3	(2.7)	-5.3%
8a	Subtotal	678.5	689.3	10.8	1.6%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	7.9	39.5	31.6	80.0%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(2.4)	(2.4)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	684.1	726.4	42.4	5.8%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	183.1	183.1	0.0	0.0%
2b	Benefits	367.6	379.3	11.8	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	106.6	106.6	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(12.3)	(12.3)	0.0	0.0%
6b	Workers' Compensation	15.8	17.0	1.1	6.7%
7b	Non-Specifics	48.9	48.9	0.0	0.0%
8b	Subtotal	709.7	722.6	12.9	1.8%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	0.0	31.8	31.8	100.0%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(2.4)	(2.4)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	707.3	752.0	44.7	5.9%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Ad Valorem Taxes	300.3	334.1	33.8	10.1%
2a	Payroll Taxes	77.0	77.0	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	19,482.5	19,686.2	203.8	1.0%
4a	*Effective Local Franchise Tax Rate*	*1.200%*	*1.200%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	233.7	236.1	2.4	1.0%
5a1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	611.0	647.2	36.2	5.6%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	21,568.2	22,540.4	972.2	4.3%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*1.200%*	*12.512%*	*10.4%*
9a	Franchise Taxes-Proposed Rates	258.7	270.4	11.7	4.3%
9a1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10a	Total Taxes Other Than Income, At Proposed Rates	636.0	681.4	45.5	6.7%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Ad Valorem Taxes	296.9	363.6	66.6	18.3%
2b	Payroll Taxes	79.5	79.5	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	21,573.3	22,545.1	971.8	4.3%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*1.200%*	*12.512%*	*10.4%*
5b	Franchise Taxes-Present Rates	258.8	270.4	11.7	4.3%
5b1	Business License-Present Rates	0.0	0.0	0.0	0.0%
6b	Total Taxes Other Than Income, At Present Rates	635.3	713.5	78.3	11.0%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	21,646.7	22,915.5	1,268.7	5.5%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*1.200%*	*12.512%*	*10.4%*
9b	Franchise Taxes-Proposed Rates	259.7	274.9	15.2	5.5%
9b1	Business License-Proposed Rates	0.0	0.0	0.0	0.0%
10b	Total Taxes Other Than Income, At Proposed Rates	636.1	718.0	81.8	11.4%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	19,490.5	19,699.6	209.0	1.1%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	13,841.4	13,851.6	10.3	0.1%
3	Uncollectibles Expense	8.0	13.3	5.3	39.7%
4	A&G Expenses	684.1	726.4	42.4	5.8%
5	G.O. Prorated Expenses	2,205.6	2,355.4	149.8	6.4%
6	G.O. Book Depreciation (to be excluded)	(244.6)	(302.3)	(57.7)	19.1%
7	Transportation Deprec. Expense (to be excluded)	(25.3)	(42.0)	(16.7)	39.7%
8	Taxes On Other Than Income	611.0	647.2	36.2	5.6%
8a	Non-deductible Meals	(10.0)	(9.9)	0.0	-0.3%
9	Interest Expense	777.5	962.4	184.9	19.2%
10	Total Common Deductions	17,847.7	18,202.3	354.6	1.9%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	1,743.5	3,512.7	1,769.2	50.4%
12	Tax Depreciation - G.O.	157.7	253.8	96.1	37.9%
13	Subtotal	1,901.2	3,766.5	1,865.3	49.5%
14	Total State Deductions, incl. Common Deductions	19,748.8	21,968.7	2,219.9	10.1%
	Federal Tax Deductions				
16	Book Depreciation - District	1,422.2	1,614.1	191.8	11.9%
17	Book Depreciation - G.O.	244.6	302.3	57.7	19.1%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(22.8)	(200.6)	(177.8)	88.6%
20	Subtotal	1,644.0	1,715.7	71.7	4.2%
21	Total Fed. Deductions, incl. Common Deductions	19,491.7	19,918.0	426.3	2.1%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(258.3)	(2,269.1)	(2,010.8)	88.6%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(22.8)	(200.6)	(177.8)	88.6%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	(1.2)	(218.4)	(217.3)	99.5%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	(0.2)	(45.9)	(217.3)	99.5%
28	Adjustment to FIT, Regulatory Liability	(97.2)	(97.3)	(0.1)	0.1%
29	Total FIT, with Adjustment	(97.5)	(143.2)	(45.7)	31.9%
30	Total Income Taxes for Revenues at Present Rates	(120.3)	(343.7)	(223.4)	65.0%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	21,577.1	22,554.9	977.8	4.3%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	13,841.4	13,851.6	10.3	0.1%
3	Uncollectibles Expense	8.9	14.5	5.6	38.7%
4	A&G Expenses	684.1	726.4	42.4	5.8%
5	G.O. Prorated Expenses	2,205.6	2,355.4	149.8	6.4%
6	G.O. Book Depreciation (to be excluded)	(244.6)	(302.3)	(57.7)	19.1%
7	Transportation Deprec. Expense (to be excluded)	(25.3)	(42.0)	(16.7)	39.7%
8	Taxes On Other Than Income	636.0	681.4	45.5	6.7%
8a	Non-deductible Meals	(10.0)	(9.9)	0.0	-0.3%
9	Interest Expense	777.5	962.4	184.9	19.2%
10	Total Common Deductions	17,873.5	18,237.7	364.1	2.0%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	1,743.5	3,512.7	1,769.2	50.4%
12	Tax Depreciation - G.O.	157.7	253.8	96.1	37.9%
13	Subtotal	1,901.2	3,766.5	1,865.3	49.5%
14	Total State Deductions, incl. Common Deductions	19,774.7	22,004.1	2,229.4	10.1%
	Federal Tax Deductions				
16	Book Depreciation - District	1,422.2	1,614.1	191.8	11.9%
17	Book Depreciation - G.O.	244.6	302.3	57.7	19.1%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	159.3	48.7	(110.6)	-227.2%
20	Subtotal	1,826.2	1,965.0	138.8	7.1%
21	Total Fed. Deductions, incl. Common Deductions	19,699.7	20,202.7	502.9	2.5%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	1,802.4	550.8	(1,251.6)	-227.2%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	159.3	48.7	(110.6)	-227.2%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	1,877.4	2,352.2	474.9	20.2%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	394.2	494.0	99.7	20.2%
28	Adjustment to FIT, Regulatory Liability	(97.2)	(97.3)	(0.1)	0.1%
29	Total FIT, with Adjustment	297.0	396.7	99.7	25.1%
30	Total Income Taxes for Revenues at Proposed Rates	456.3	445.4	(11.0)	-2.5%

TABLE 7-1
UTILITY PLANT IN SERVICE

Test Year 2023 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	61,780.5	68,004.0	6,223.5	9.2%
2a	Adjustments	11.8	11.8	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	653.0	2,576.5	1,923.4	74.7%
4a	Advances	0.0	0.0	0.0	0.0%
5a	Contributions	235.9	235.9	0.0	0.0%
6a	Total Gross Additions	889.0	2,812.4	1,923.4	68.4%
8a	Retirements	169.5	169.5	0.0	0.0%
9a	Net Additions	1,058.5	2,981.9	1,923.4	64.5%
10a	Plant in Service - End of Year	62,850.8	70,997.7	8,146.9	11.5%
11a	*Plant Weighting Factor*	*41.01%*	*41.01%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	62,214.6	69,226.9	7,012.3	10.1%

Escalation Year 2024 ($000)		**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	62,850.8	70,997.7	8,146.9	11.5%
2b	Adjustments	10.8	10.8	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	1,075.5	3,046.2	1,970.7	64.7%
4b	Advances	0.0	0.0	0.0	0.0%
5b	Contributions	235.9	235.9	0.0	0.0%
6b	Total Gross Additions	1,311.4	3,282.2	1,970.7	60.0%
8b	Retirements	135.1	135.1	0.0	0.0%
9b	Net Additions	1,446.6	3,417.3	1,970.7	57.7%
10b	Plant in Service - End of Year	64,308.2	74,425.8	10,117.6	13.6%
11b	*Plant Weighting Factor*	*41.01%*	*41.01%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	63,444.0	72,399.2	8,955.2	12.4%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Depreciation Reserve - Beginning of Year	23,590.9	23,631.0	40.1	0.2%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(15.6)	(23.4)	(7.7)	33.1%
3a	Contributed Plant	(180.8)	(182.5)	(1.7)	0.9%
4a	Depreciation Accrual	1,618.680	1,819.9	201.2	11.1%
5a	Total Accruals	1,422.2	1,614.1	191.8	11.9%
	Retirements				
6a	Net Retirements	(169.483)	(169.5)	0.0	0.0%
8a	Total Retirement	(169.5)	(169.5)	0.0	0.0%
9a	Net Additions	1,449	1,650.4	201.2	12.2%
7a	Carry Forward Adjustment	0.0	(31.7)	(31.7)	100.0%
10a	Depreciation Reserve - End of Year	25,040.1	25,249.7	209.6	0.8%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	24,315.5	24,424.5	109.0	0.4%
13a	*Deprec. expense for summary of earnings calc.*	1,422.2	1,614.1	191.8	11.9%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Depreciation Reserve - Beginning of Year	25,040.1	25,249.7	209.6	0.8%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(16.1)	(24.2)	(8.1)	33.4%
3b	Contributed Plant	(186.7)	(187.7)	(1.0)	0.5%
4b	Depreciation Accrual	1,645.7	1,891.1	245.5	13.0%
5b	Total Accruals	1,442.9	1,679.2	236.4	14.1%
	Retirements and Adjustments:				
6b	Net Retirements	(135.1)	(135.1)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(135.1)	(135.1)	0.0	
					0.0%
9b	Net Additions	1,510.5	1,756.0	245.5	14.0%
10b	Depreciation Reserve - End of Year	26,550.7	27,005.7	455.1	1.7%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	25,795.4	26,127.7	332.3	1.3%
13b	* *Deprec. expense for summary of earnings calc.*	1,442.9	1,679.2	236.4	14.1%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	62,214.6	69,226.9	7,012.3	10.1%
3	Weighted Average Depreciation Reserve	(24,315.5)	(24,424.5)	(109.0)	0.4%
4	Net Utility Plant	37,899.0	44,802.4	6,903.3	15.4%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	3,126.1	3,123.8	(2.3)	-0.1%
5	Advances in Construction	976.0	976.0	0.0	0.0%
6	Reserve for Amortization of Intangibles	630.6	658.5	27.8	4.2%
7	Deferred Taxes	4,300.8	4,818.9	518.1	10.8%
8	Unamortized Investment Tax Credits	59.4	59.4	0.0	0.0%
9	Total Deductions from Rate Base	9,093.0	9,636.5	543.6	5.6%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	332.7	332.7	0.0	0.0%
10a	Tank Painting	204.9	204.9	0.0	0.0%
11	Working Cash, Lead-Lag	265.6	328.9	63.3	19.3%
12	Amount Withheld from Employees	(6.3)	(6.2)	0.0	-0.7%
13	Total Working Capital	797.0	860.3	63.4	7.4%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	35.6	35.6	0.0	0.0%
17	Total Additions to Rate Base	832.5	895.9	63.4	7.1%
18	Weighted Average Rate Base, District	29,638.6	36,061.8	6,423.2	17.8%
19	Weighted Average Rate Base, G.O. Allocation	1,411.9	2,247.5	835.6	37.2%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	31,050.5	38,309.3	7,258.8	18.9%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*30,253.540*	*37,449.0*	*7,195.4*	*19.2%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*777.5*	*962.4*	*184.9*	*19.2%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	63,444.0	72,399.2	8,955.2	12.4%
3	Weighted Average Depreciation Reserve	(25,795.4)	(26,127.7)	(332.3)	1.3%
4	Net Utility Plant	37,648.6	46,271.5	8,622.8	18.6%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	3,178.3	3,174.6	(3.7)	-0.1%
5	Advances in Construction	813.2	813.2	0.0	0.0%
6	Reserve for Amortization of Intangibles	640.0	704.7	64.7	9.2%
7	Deferred Taxes	4,235.2	5,071.1	835.9	16.5%
8	Unamortized Investment Tax Credits	60.4	60.4	0.0	0.0%
9	Total Deductions from Rate Base	8,927.2	9,824.1	896.9	9.1%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	332.7	332.7	0.0	0.0%
10a	Tank Painting	166.2	166.2	0.0	0.0%
11	Working Cash, Lead-Lag	260.4	335.6	75.2	22.4%
12	Amount Withheld from Employees	(6.3)	(6.2)	0.0	-0.7%
13	Total Working Capital	753.1	828.3	75.2	9.1%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	60.5	60.5	0.0	0.0%
17	Total Additions to Rate Base	813.6	888.8	75.2	8.5%
18	Weighted Average Rate Base, District	29,535.1	37,336.2	7,801.1	20.9%
19	Weighted Average Rate Base, G.O. Allocation	1,428.8	2,433.8	1,005.0	41.3%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	30,963.9	39,770.0	8,806.1	22.1%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*30,210.8*	*38,941.7*	*8,730.9*	*22.4%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*776.4*	*1,000.8*	*224.4*	*22.4%*

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REVENUE INCREASES	Cal Advocates	CWS	CWS > Cal Advocates
1. Test Year 2023 Increase ($000)	960.8	1,071.8	111.0
2. Test Year 2023 Increase (%)	31.1%	34.7%	3.6%
3. Escalation Year 2024 Increase (%)	23.6%	23.9%	0.4%
4. Escalation Year 2025 Increase (%)	1.7%		

TABLE 1-1
SUMMARY OF EARNINGS - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates Present Rates	CWS Present Rates	CWS > Cal Advocates	
1a	**Operating Revenues**	**3,087.5**	**3,087.5**	**0.0**	**0.0%**
	Operating Expenses:				
2a	Operation & Maintenance	475.7	476.0	0.4	0.1%
3a	Administrative & General	430.4	445.1	14.7	3.3%
4a	Payroll	505.8	505.8	0.0	0.0%
5a	General Office - *prorated expenses*	640.9	668.0	27.1	4.1%
6a	Depreciation Expense	684.4	717.2	32.8	4.6%
7a	Taxes Other Than Income	196.8	205.5	8.7	4.2%
8a	California Corporate Franchise Tax	(25.1)	(95.4)	(70.3)	73.7%
9a	Federal Income Tax	(102.8)	(109.1)	(6.3)	5.8%
10a	Total Operating Expenses	2,806.0	2,813.1	7.0	0.3%
11a	Net Operating Revenues	281.4	274.4	(7.0)	-2.6%
12a	Weighted Average Rate Base	12,847.7	13,803.4	955.7	6.9%
13a	***Return on Rate Base***	***2.19%***	***1.99%***	***-0.20%***	***-10.2%***

	Test Year 2023 ($000)	Cal Advocates Proposed Rates	CWS Proposed Rates	CWS > Cal Advocates	
1b	**Operating Revenues**	4,048.3	4,159.3	**111.0**	**2.7%**
	Operating Expenses:				
2b	Operation & Maintenance	481.8	482.8	1.1	0.2%
3b	Administrative & General	430.4	445.1	14.7	3.3%
4b	Payroll	505.8	505.8	0.0	0.0%
5b	General Office - *prorated expenses*	640.9	668.0	27.1	4.1%
6b	Depreciation Expense	684.4	717.2	32.8	4.6%
7b	Taxes Other Than Income	207.8	217.8	10.0	4.6%
8b	California Corporate Franchise Tax	58.3	(2.3)	(60.6)	2623.6%
9b	Federal Income Tax	77.8	92.4	14.6	15.8%
10b	Total Operating Expenses	3,087.3	3,126.8	39.5	1.3%
11b	Net Operating Revenues	961.0	1,032.5	71.5	6.9%
12b	Weighted Average Rate Base	12,848	13,803.4	955.7	6.9%
13b	***Return on Rate Base***	***7.48%***	***7.48%***	***0.00%***	***0.0%***
14	**Increase in Operating Revenues (1b - 1a)**	**960.8**	**1,071.8**	**111.0**	**10.4%**

TABLE 1-2
SUMMARY OF EARNINGS - ESCALATION YEARS

	For Illustrative Purposes ($000)	Cal Advocates 2024	Cal Advocates 2025 *	2024-2025 Increase	
1	Operating Revenues	4,137.3	4,208.8	71.6	1.7%
2	Operating Expenses:*				
3	Operation & Maintenance	498.6	508.5	10.0	2.0%
4	Administrative & General	457.0	466.1	9.1	2.0%
5	Payroll	522.5	533.0	10.5	2.0%
6	G.O. Prorated Expenses	637.9	650.7	12.8	2.0%
7	Depreciation Expense	695.0	708.9	13.9	2.0%
8	Taxes Other Than Income	212.5	216.7	4.2	2.0%
9	California Corporate Franchise Tax	60.5	60.46	0.0	0.0%
10	Federal Income Tax	81.3	81.31	0.0	0.0%
11	Total Operating Expenses	3,165.1	3,225.6	60.5	1.9%
12	Net Operating Revenues	972.1	983.2	11.1	1.1%
13	Weighted Average Rate Base	12,996.3	13,144.9	148.6	1.1%
14	***Return on Rate Base***	***7.48%***	***7.48%***	***0.0***	***0.0%***

* *Assume 2% escalation factors, for illustrative purposes.*

TABLE 2-1
WATER SALES PER CUSTOMER (OR PER CONNECTION)

Test Year 2023 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Residential	148.2	148.2	0.0	0.0%
2a	Business	342.8	342.8	0.0	0.0%
3a	Multiple Family	1,094.3	1,094.3	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	492.5	492.5	0.0	0.0%
6a	Other	143.9	143.9	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Residential Flat	0.0	0.0	0.0	0.0%
10a	Private Fire Protection	0.0	0.0	0.0	0.0%
11a	Public Fire Protection	0.0	0.0	0.0	0.0%

Escalation Year 2024 (CCF/connection/year)*		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Residential	148.2	148.2	0.0	0.0%
2b	Business	342.8	342.8	0.0	0.0%
3b	Multiple Family	1,094.3	1,094.3	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	490.5	490.5	0.0	0.0%
6b	Other	131.9	131.9	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Residential Flat	0.0	0.0	0.0	0.0%
10b	Private Fire Protection	0.0	0.0	0.0	0.0%
11b	Public Fire Protection	0.0	0.0	0.0	0.0%

** Hundred cubic feet per connection per year.*

TABLE 2-2
AVERAGE NUMBER OF CUSTOMERS (SERVICE CONNECTIONS)

	Test Year 2023	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1a	Residential	2,048	2,048	0	0%
2a	Business	263	263	0	0%
3a	Multiple Family	35	35	0	0%
4a	Industrial	0	0	0	0%
5a	Public Authority	50	50	0	0%
6a	Other	11	11	0	0%
7a	Irrigation	0	0	0	0%
8a	Recycled	0	0	0	0%
9a	Total Number of Metered Connections	2,406	2,406	0	0%
	Unmetered Connections:				
10a	Residential Flat	0	0	0	0%
11a	Private Fire Protection	29	29	0	0%
12a	Public Fire Protection	8	8	0	0%
13a	Total Number of Unmetered Connections	37	37	0	0%
	Total Number of Connections:				
14a	Including Fire Protection	2,443	2,443	0	0%
15a	Excluding Fire Protection	2,406	2,406	0	0%

	Escalation Year 2024	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections:				
1b	Residential	2,052	2,052	0	0%
2b	Business	263	263	0	0%
3b	Multiple Family	35	35	0	0%
4b	Industrial	0	0	0	0%
5b	Public Authority	50	50	0	0%
6b	Other	12	12	0	0%
7b	Irrigation	0	0	0	0%
8b	Recycled	0	0	0	0%
9b	Total Number of Metered Connections	2,412	2,412	0	0%
	Unmetered Connections:				
10b	Residential Flat	0	0	0	0%
11b	Private Fire Protection	29	29	0	0%
12b	Public Fire Protection	8	8	0	0%
13b	Total Number of Unmetered Connections	37	37	0	0%
	Total Number of Connections:				
14b	Including Fire Protection	2,449	2,449	0	0%
15b	Excluding Fire Protection	2,412	2,412	0	0%

TABLE 2-3
TOTAL SALES AND SUPPLY

	Test Year 2023 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1a	Residential	303.5	303.5	0.0	0.0%
2a	Business	90.1	90.1	0.0	0.0%
3a	Multiple Family	38.5	38.5	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	24.4	24.4	0.0	0.0%
6a	Other	1.6	1.6	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Connections' Sales	458.1	458.1	0.0	0.0%
10a	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11a	Total Sales	458.1	458.1	0.0	0.0%
12a	*Unaccounted For Water Rate*	*9.7%*	*9.7%*	*0.0%*	*0.0%*
13a	Unaccounted For Water (UAF)	49.1	49.1	0.0	0.0%
14a	**Total Requirement (Sales + UAF) ***	**507.2**	**507.2**	**0.0**	**0.0%**
15a	Total Requirement in Acre Feet	1,164.3	1,164.3	0.0	0.0%
	WATER SUPPLY MIX:				
16a	Well Water	507.2	507.2	0.0	0.0%
17a	Purchased Water	0.0	0.0	0.0	0.0%
18a	Surface Supply	0.0	0.0	0.0	0.0%
18aa	Reclaimed Supply	0.0	0.0	0.0	0.0%
19a	**Total Supply ***	**507.2**	**507.2**	**0.0**	**0.0%**

	Escalation Year 2024 (KCCF)	Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Connections' Sales:				
1b	Residential	304.1	304.1	0.0	0.0%
2b	Business	90.1	90.1	0.0	0.0%
3b	Multiple Family	38.5	38.5	0.0	0.0%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	24.4	24.4	0.0	0.0%
6b	Other	1.6	1.6	0.0	0.0%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Connections' Sales	458.7	458.7	0.0	0.0%
10b	Total Unmetered Connections' Sales	0.0	0.0	0.0	0.0%
11b	Total Sales	458.7	458.7	0.0	0.0%
12b	*Unaccounted For Water Rate*	*9.7%*	*9.7%*	*0.0%*	*0.0%*
13b	Unaccounted For Water	49.2	49.2	0.0	0.0%
14b	**Total Requirement (Sales + UAF) ***	**508.0**	**508.0**	**0.0**	**0.0%**
15b	Total Requirement in Acre Feet	1,166.1	1,166.1	0.0	0.0%
	WATER SUPPLY MIX:				
16b	Well Water	508.0	508.0	0.0	0.0%
17b	Purchased Water	0.0	0.0	0.0	0.0%
18b	Surface Supply	0.0	0.0	0.0	0.0%
18bb	Recalimed Supply	0.0	0.0	0.0	0.0%
19b	**Total Supply ***	**508.0**	**508.0**	**0.0**	**0.0%**

** Total Requirement and Total Supply may differ slightly due to rounding.*

TABLE 2-4
OPERATING REVENUES AT PRESENT RATES

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1a	Residential	1,142.9	1,142.9	0.0	0.0%
2a	Business	383.6	383.6	0.0	0.0%
3a	Multiple Family	163.7	163.7	0.0	0.0%
4a	Industrial	0.0	0.0	0.0	0.0%
5a	Public Authority	104.0	104.0	0.0	0.0%
6a	Other	6.7	6.7	0.0	0.0%
7a	Irrigation	0.0	0.0	0.0	0.0%
8a	Recycled	0.0	0.0	0.0	0.0%
9a	Total Metered Revenues	1,800.9	1,800.9	0.0	0.0%
	Unmetered Revenues:				
10a	Service Charge	1,251.9	1,251.9	0.0	0.0%
11a	Residental Flat	0.0	0.0	0.0	0.0%
12a	Total Unmetered Revenues	1,251.9	1,251.9	0.0	0.0%
	Other Revenues:				
13a	Private Fire Protection	21.9	21.9	0.0	0.0%
14a	Public Fire Protection	0.0	0.0	0.0	0.0%
15a	Other	12.7	12.7	0.0	0.0%
16a	Total Other Revenues	34.6	34.6	0.0	0.0%
17a	Total Revenues at Present Rates, Test Year 2023	3,087.5	3,087.5	0.0	0.0%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
	Metered Revenues:				
1b	Residential	1,255.8	1,130.8	(125.0)	-11.1%
2b	Business	420.6	378.7	(41.9)	-11.1%
3b	Multiple Family	179.8	161.9	(17.9)	-11.1%
4b	Industrial	0.0	0.0	0.0	0.0%
5b	Public Authority	114.0	102.7	(11.4)	-11.1%
6b	Other	7.4	6.7	(0.7)	-11.1%
7b	Irrigation	0.0	0.0	0.0	0.0%
8b	Recycled	0.0	0.0	0.0	0.0%
9b	Total Metered Revenues	1,977.6	1,780.7	(196.9)	-11.1%
	Unmetered Revenues:				
10b	Service Charge	1,330.5	1,639.4	308.9	18.8%
11b	Residental Flat	0.0	0.0	0.0	0.0%
12b	Total Unmetered Revenues	1,330.5	1,639.4	308.9	18.8%
	Other Revenues:				
13b	Private Fire Protection	23.6	23.6	0.0	0.0%
14b	Public Fire Protection	0.0	0.0	0.0	0.0%
15b	Other	16.7	16.7	0.0	0.0%
16b	Total Other Revenues	40.3	40.3	0.0	0.0%
17b	Total Revenues at Present Rates, Escal. Year 2021	3,348.5	3,460.4	112.0	3.2%

TABLE 3-1
OPERATIONS & MAINTENANCE EXPENSES - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	116.3	116.3	0.0	0.0%
4	Purchased Chemicals	8.6	8.6	0.0	0.0%
5	Payroll	321.0	321.0	0.0	0.0%
6	Postage	8.2	7.8	(0.5)	-6.0%
7	Transportation	18.1	18.1	0.0	0.0%
	Purchased Services:				
8	Source of Supply	(0.0)	(0.0)	0.0	0.0%
9	Pumping	8.5	8.5	0.0	0.0%
10	Water Treatment	108.9	108.9	0.0	0.0%
11	Transmission & Distribution	30.8	30.8	0.0	0.0%
12	Customer Accounting	47.8	47.8	0.0	0.0%
13	Conservation	15.6	16.5	0.8	5.0%
14	Total Operations Exp. excluding Uncollectibles	684.1	684.4	0.4	0.1%
	Maintenance Expenses:				
15	Payroll	70.0	70.0	0.0	0.0%
16	Transportation	3.7	3.7	0.0	0.0%
17	Stores	6.7	6.7	0.0	0.0%
18	Contracted Maintenance	82.5	82.5	0.0	0.0%
19	Total Maintenance Expenses	162.9	162.9	0.0	0.0%
	At Present Rates				
20	Operating Revenues	3,087.5	3,087.5	0.0	0.0%
21	*Uncollectible Rate*	0.6373%	0.6373%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	19.7	19.7	0.0	0.0%
23	Total O&M Expenses including Uncollectibles	866.7	867.0	0.4	0.0%
	At Proposed Rates				
25	Operating Revenues	4,048.3	4,159.3	111.0	2.7%
26	*Uncollectible Rate*	0.6373%	0.6373%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	25.8	26.5	0.7	2.7%
28	Total O&M Expenses including Uncollectibles	872.8	873.8	1.1	0.1%

TABLE 3-2
OPERATIONS & MAINTENANCE EXPENSES - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
	Operations Expenses:				
1	Purchased Water	0.0	0.0	0.0	0.0%
2	Groundwater Charges	0.0	0.0	0.0	0.0%
3	Purchased Power	120.2	120.2	0.0	0.0%
4	Purchased Chemicals	8.9	8.9	0.0	0.0%
5	Payroll	331.6	331.6	0.0	0.0%
6	Postage	8.3	7.8	(0.5)	-6.0%
7	Transportation	18.6	18.6	0.0	0.0%
	Purchased Services:				
8	Source of Supply	(0.0)	(0.0)	0.0	0.0%
9	Pumping	8.8	8.8	0.0	0.0%
10	Water Treatment	115.1	115.1	0.0	0.0%
11	Transmission & Distribution	31.6	31.6	0.0	0.0%
12	Customer Accounting	49.0	49.0	0.0	0.0%
13	Conservation	16.5	16.5	0.0	0.0%
14	Total Operations Exp. excluding Uncollectibles	708.5	708.1	(0.5)	-0.1%
	Maintenance Expenses:				
15	Payroll	72.3	72.3	0.0	0.0%
16	Transportation	3.8	3.8	0.0	0.0%
17	Stores	6.9	6.9	0.0	0.0%
18	Contracted Maintenance	84.6	84.6	0.0	0.0%
19	Total Maintenance Expenses	167.6	167.6	0.0	0.0%
	At Present Rates				
20	Operating Revenues	3,348.5	3,460.4	112.0	3.2%
21	*Uncollectible Rate*	0.6373%	0.6373%	*0.0000%*	*0.0%*
22	Uncollectibles Expense	21.3	22.1	0.7	3.2%
23	Total O&M Expenses including Uncollectibles	897.4	897.7	0.2	0.0%
	At Proposed Rates				
25	Operating Revenues	4,137.3	4,288.3	151.0	3.5%
26	*Uncollectible Rate*	0.6373%	0.6373%	*0.0000%*	*0.0%*
27	Uncollectibles Expense	26.4	27.3	1.0	3.5%
28	Total O&M Expenses including Uncollectibles	902.5	903.0	0.5	0.1%

TABLE 4-1
ADMINISTRATIVE & GENERAL EXPENSES

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1a	Payroll	114.8	114.8	0.0	0.0%
2a	Benefits	159.6	165.8	6.1	3.7%
3a	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4a	Rents, Acct. 8110	36.6	36.6	0.0	0.0%
5a	Admin. Charges Transferred, Acct. 8120	(3.9)	(3.9)	0.0	0.0%
6a	Workers' Compensation	6.8	7.5	0.7	9.2%
7a	Non-Specifics	17.5	16.9	(0.6)	-3.4%
8a	Subtotal	331.5	337.8	6.3	1.9%
	Miscellaneous Expenses				
9a	Amortization of Limited Term Investment	213.9	222.3	8.4	3.8%
9aa	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10a	Dues & Donations Adjustments	(0.2)	(0.2)	0.0	0.0%
11a	Total A&G and Miscellaneous Adjustments	545.2	559.9	14.7	2.6%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
	Administrative & General Expenses:				
1b	Payroll	118.6	118.6	0.0	0.0%
2b	Benefits	173.5	179.1	5.6	3.1%
3b	Transportation Expenses	0.0	0.0	0.0	0.0%
	Purchased Services:				
4b	Rents, Acct. 8110	36.6	36.6	0.0	0.0%
5b	Admin. Charges Transferred, Acct. 8120	(4.0)	(4.0)	0.0	0.0%
6b	Workers' Compensation	7.0	8.0	1.0	12.9%
7b	Non-Specifics	16.1	16.1	0.0	0.0%
8b	Subtotal	347.9	354.5	6.6	1.9%
	Miscellaneous Expenses				
9b	Amortization of Limited Term Investment	227.9	235.8	7.9	3.4%
9bb	Acquisition Synergies	0.0	0.0	0.0	0.0%
	Ratemaking Adjustments				
10b	Dues & Donations Adjustments	(0.2)	(0.2)	0.0	0.0%
11b	Total A&G and Miscellaneous Adjustments	575.6	590.1	14.5	2.5%

TABLE 5-1
TAXES OTHER THAN INCOME

Test Year 2023 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1a	Ad Valorem Taxes	125.0	133.7	8.7	6.5%
2a	Payroll Taxes	36.3	36.3	0.0	0.0%
	At Present Rates				
3a	Operating Revenue *EXCLUDING* Uncollectibles	3,067.8	3,067.8	0.0	0.0%
4a	*Effective Local Franchise Tax Rate*	*0.000%*	*0.000%*	*0.000%*	*0.0%*
5a	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5a1	Business License-Present Rates	35.4	35.4	0.0	0.0%
6a	Total Taxes Other Than Income, At Present Rates	196.8	205.5	8.7	4.2%
	At Proposed Rates				
7a	Operating Revenue *EXCLUDING* Uncollectibles	4,022.5	4,132.8	110.3	2.7%
8a	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9a	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9a1	Business License-Proposed Rates	46.5	47.7	1.3	2.7%
10a	Total Taxes Other Than Income, At Proposed Rates	207.8	217.8	10.0	4.6%

Escalation Year 2024 ($000)		Cal Advocates	CWS	CWS > Cal Advocates	
1b	Ad Valorem Taxes	127.4	134.7	7.2	5.4%
2b	Payroll Taxes	37.5	37.5	0.0	0.0%
	At Present Rates				
3b	Operating Revenue *EXCLUDING* Uncollectibles	3,327.1	3,438.4	111.2	3.2%
4b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
5b	Franchise Taxes-Present Rates	0.0	0.0	0.0	0.0%
5b1	Business License-Present Rates	38.4	39.7	1.3	3.2%
6b	Total Taxes Other Than Income, At Present Rates	203.4	211.9	8.5	4.0%
	At Proposed Rates				
7b	Operating Revenue *EXCLUDING* Uncollectibles	4,110.9	4,260.9	150.0	3.5%
8b	*Effective Local Franchise Tax Rate*	*1.074%*	*0.000%*	*-107.440%*	*0.0%*
9b	Franchise Taxes-Proposed Rates	0.0	0.0	0.0	0.0%
9b1	Business License-Proposed Rates	47.5	49.2	1.7	3.5%
10b	Total Taxes Other Than Income, At Proposed Rates	212.5	221.4	8.9	4.0%

TABLE 6-1
TAXES BASED ON INCOME - TEST YEAR AT PRESENT RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Present Rates	3,087.5	3,087.5	0.0	0.0%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	847.0	847.3	0.4	0.0%
3	Uncollectibles Expense	19.7	19.7	0.0	0.0%
4	A&G Expenses	545.2	559.9	14.7	2.6%
5	G.O. Prorated Expenses	640.9	668.0	27.1	4.1%
6	G.O. Book Depreciation (to be excluded)	(71.1)	(85.7)	(14.6)	17.1%
7	Transportation Deprec. Expense (to be excluded)	(18.2)	(25.9)	(7.8)	29.9%
8	Taxes On Other Than Income	196.8	205.5	8.7	4.2%
8a	Non-deductible Meals	(2.7)	(2.7)	0.0	-1.7%
9	Interest Expense	321.3	345.4	24.1	7.0%
10	Total Common Deductions	2,478.8	2,531.4	52.6	2.1%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	846.8	1,562.9	716.1	45.8%
12	Tax Depreciation - G.O.	45.8	72.0	26.2	36.3%
13	Subtotal	892.6	1,634.9	742.2	45.4%
14	Total State Deductions, incl. Common Deductions	3,371.5	4,166.3	794.8	19.1%
	Federal Tax Deductions				
16	Book Depreciation - District	684.4	717.2	32.8	4.6%
17	Book Depreciation - G.O.	71.1	85.7	14.6	17.1%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	(25.1)	(95.4)	(70.3)	73.7%
20	Subtotal	730.4	707.5	(22.8)	-3.2%
21	Total Fed. Deductions, incl. Common Deductions	3,209.2	3,239.0	29.8	0.9%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	(284.0)	(1,078.8)	(794.8)	73.7%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	(25.1)	(95.4)	(70.3)	73.7%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	(121.7)	(151.5)	(29.8)	19.6%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	(25.6)	(31.8)	(29.8)	19.6%
28	Adjustment to FIT, Regulatory Liability	(77.2)	(77.3)	(0.1)	0.1%
29	Total FIT, with Adjustment	(102.8)	(109.1)	(6.3)	5.8%
30	Total Income Taxes for Revenues at Present Rates	(127.9)	(204.5)	(76.6)	37.5%

TABLE 6-2
TAXES BASED ON INCOME - TEST YEAR AT PROPOSED RATES

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Operating Revenues at Proposed Rates	4,048.3	4,159.3	111.0	2.7%
	Common Deductions:				
2	O&M Expenses less Uncollectibles Expense	847.0	847.3	0.4	0.0%
3	Uncollectibles Expense	25.8	26.5	0.7	2.7%
4	A&G Expenses	545.2	559.9	14.7	2.6%
5	G.O. Prorated Expenses	640.9	668.0	27.1	4.1%
6	G.O. Book Depreciation (to be excluded)	(71.1)	(85.7)	(14.6)	17.1%
7	Transportation Deprec. Expense (to be excluded)	(18.2)	(25.9)	(7.8)	29.9%
8	Taxes On Other Than Income	207.8	217.8	10.0	4.6%
8a	Non-deductible Meals	(2.7)	(2.7)	0.0	-1.7%
9	Interest Expense	321.3	345.4	24.1	7.0%
10	Total Common Deductions	2,496.0	2,550.6	54.6	2.1%
	Calif. Corporation Franchise Tax Deductions				
11	Tax Depreciation - District	846.8	1,562.9	716.1	45.8%
12	Tax Depreciation - G.O.	45.8	72.0	26.2	36.3%
13	Subtotal	892.6	1,634.9	742.2	45.4%
14	Total State Deductions, incl. Common Deductions	3,388.6	4,185.4	796.8	19.0%
	Federal Tax Deductions				
16	Book Depreciation - District	684.4	717.2	32.8	4.6%
17	Book Depreciation - G.O.	71.1	85.7	14.6	17.1%
18	Domestic Production Activity Deductions	0.0	0.0	0.0	0.0%
19	Calif. Corporation Franchise Tax (current year)	58.3	(2.3)	(60.6)	2623.6%
20	Subtotal	813.8	800.6	(13.2)	-1.6%
21	Total Fed. Deductions, incl. Common Deductions	3,309.8	3,351.2	41.4	1.2%
	California Corporate Franchise Tax (CCFT)				
22	Taxable Income for CCFT	659.6	(26.1)	(685.8)	2623.6%
23	*CCFT Rate*	8.84%	8.84%		
24	Total CCFT	58.3	(2.3)	(60.6)	2623.6%
	Federal Income Tax (FIT)				
25	Taxable Income for FIT	738.5	808.1	69.7	8.6%
26	*FIT Rate*	21.00%	21.00%		
27	Total FIT	155.1	169.7	14.6	8.6%
28	Adjustment to FIT, Regulatory Liability	(77.2)	(77.3)	(0.1)	0.1%
29	Total FIT, with Adjustment	77.8	92.4	14.6	15.8%
30	Total Income Taxes for Revenues at Proposed Rates	136.2	90.1	(46.1)	-51.1%

TABLE 7-1
UTILITY PLANT IN SERVICE

	Test Year 2023 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1a	Plant in Service - Beginning of Year	28,057.3	29,054.1	996.9	3.4%
2a	Adjustments	2.6	2.6	0.0	0.0%
	Gross Additions:				
3a	Company-funded plant	472.6	690.5	217.9	31.6%
4a	Advances	0.0	0.0	0.0	0.0%
5a	Contributions	877.4	877.4	0.0	0.0%
6a	Total Gross Additions	1,350.0	1,567.9	217.9	13.9%
8a	Retirements	188.5	188.5	0.0	0.0%
9a	Net Additions	1,538.5	1,756.5	217.9	12.4%
10a	Plant in Service - End of Year	29,598.4	30,813.2	1,214.8	3.9%
11a	*Plant Weighting Factor*	*43.37%*	*43.37%*	*0.00%*	*0.0%*
12a	Weighted Average Plant in Service	28,724.6	29,815.9	1,091.4	3.7%

	Escalation Year 2024 ($000)	**Cal Advocates**	**CWS**	**CWS > Cal Advocates**	
1b	Plant in Service - Beginning of Year	29,598.4	30,813.2	1,214.8	3.9%
2b	Adjustments	2.3	2.3	0.0	0.0%
	Gross Additions:				
3b	Company-funded plant	167.2	314.2	147.0	46.8%
4b	Advances	0.0	0.0	0.0	0.0%
5b	Contributions	877.4	877.4	0.0	0.0%
6b	Total Gross Additions	1,044.6	1,191.6	147.0	12.3%
8b	Retirements	162.4	162.4	0.0	0.0%
9b	Net Additions	1,207.0	1,354.0	147.0	10.9%
10b	Plant in Service - End of Year	30,807.6	32,169.4	1,361.8	4.2%
11b	*Plant Weighting Factor*	*43.37%*	*43.37%*	*0.00%*	*0.0%*
12b	Weighted Average Plant in Service	30,121.8	31,400.4	1,278.6	4.1%

TABLE 8-1
DEPRECIATION RESERVE & EXPENSE

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1a	Depreciation Reserve - Beginning of Year	7,513.2	7,548.8	35.6	0.5%
1aa	Adjustments to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2a	Transportation Equipment	(15.4)	(20.7)	(5.3)	25.6%
3a	Contributed Plant	(232.7)	(231.8)	0.9	-0.4%
4a	Depreciation Accrual	932.481	969.7	37.2	3.8%
5a	Total Accruals	684.4	717.2	32.8	4.6%
	Retirements				
6a	Net Retirements	(188.528)	(188.5)	0.0	0.0%
8a	Total Retirement	(188.5)	(188.5)	0.0	0.0%
9a	Net Additions	744	781.2	37.2	4.8%
7a	Carry Forward Adjustment	0.0	(10.4)	(10.4)	100.0%
10a	Depreciation Reserve - End of Year	8,257.2	8,319.5	62.4	0.7%
11a	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12a	Weighted Average Depreciation Reserve	7,885.2	7,928.9	43.8	0.6%
13a	*Deprec. expense for summary of earnings calc.*	684.4	717.2	32.8	4.6%

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1b	Depreciation Reserve - Beginning of Year	8,257.2	8,319.5	62.4	0.7%
1bb	Adjustment to Reserve Balance	0.0	0.0	0.0	0.0%
	Accruals:				
2b	Transportation Equipment	(19.6)	(25.4)	(5.9)	23.1%
3b	Contributed Plant	(261.1)	(260.8)	0.3	-0.1%
4b	Depreciation Accrual	975.6	1,022.5	46.9	4.6%
5b	Total Accruals	695.0	736.3	41.3	5.6%
	Retirements and Adjustments:				
6b	Net Retirements	(162.4)	(162.4)	0.0	0.0%
7b	Adjustments	0.0	0.0	0.0	0.0%
8b	Total Retirement and Adjustments	(162.4)	(162.4)	0.0	
					0.0%
9b	Net Additions	813.2	860.1	46.9	5.4%
10b	Depreciation Reserve - End of Year	9,070.4	9,179.6	109.2	1.2%
11b	*Depreciation Reserve Weighting Factor*	*50.00%*	*50.00%*	*0.00%*	*0.0%*
12b	Weighted Average Depreciation Reserve	8,663.8	8,749.6	85.8	1.0%
13b	* *Deprec. expense for summary of earnings calc.*	695.0	736.3	41.3	5.6%

TABLE 9-1
WEIGHTED AVERAGE RATE BASE - TEST YEAR

	Test Year 2023 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	28,724.6	29,815.9	1,091.4	3.7%
3	Weighted Average Depreciation Reserve	(7,885.2)	(7,928.9)	(43.8)	0.6%
4	Net Utility Plant	20,839.4	21,887.0	1,047.6	4.8%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	6,284.9	6,285.2	0.3	0.0%
5	Advances in Construction	1,137.0	1,137.0	0.0	0.0%
6	Reserve for Amortization of Intangibles	125.3	138.1	12.8	9.3%
7	Deferred Taxes	1,314.9	1,639.2	324.2	19.8%
8	Unamortized Investment Tax Credits	5.1	5.1	0.0	0.0%
9	Total Deductions from Rate Base	8,867.2	9,204.5	337.4	3.7%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	55.4	55.4	0.0	0.0%
10a	Tank Painting	0.0	0.0	0.0	0.0%
11	Working Cash, Lead-Lag	293.7	311.9	18.2	5.8%
12	Amount Withheld from Employees	(1.8)	(1.8)	0.1	-3.1%
13	Total Working Capital	347.2	365.5	18.2	5.0%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	118.0	118.0	0.0	0.0%
17	Total Additions to Rate Base	465.3	483.5	18.2	3.8%
18	Weighted Average Rate Base, District	12,437.5	13,166.0	728.5	5.5%
19	Weighted Average Rate Base, G.O. Allocation	410.3	637.4	227.2	35.6%
19a	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	12,847.7	13,803.4	955.7	6.9%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*12,500.498*	*13,437.9*	*937.4*	*7.0%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*321.3*	*345.4*	*24.1*	*7.0%*

TABLE 9-2
WEIGHTED AVERAGE RATE BASE - ESCALATION YEAR

	Escalation Year 2024 ($000)	Cal Advocates	CWS	CWS > Cal Advocates	
1	Construction Work In Progress	0.0	0.0	0.0	0.0%
2	Weighted Average Plant In Service	30,121.8	31,400.4	1,278.6	4.1%
3	Weighted Average Depreciation Reserve	(8,663.8)	(8,749.6)	(85.8)	1.0%
4	Net Utility Plant	21,458.1	22,650.8	1,192.8	5.3%
	Deductions from Rate Base:				
4a	Contribution In Aid of Contruction	6,915.5	6,916.4	0.9	0.0%
5	Advances in Construction	1,105.3	1,105.3	0.0	0.0%
6	Reserve for Amortization of Intangibles	156.7	179.1	22.4	12.5%
7	Deferred Taxes	1,267.6	1,725.9	458.3	26.6%
8	Unamortized Investment Tax Credits	4.7	4.7	0.0	0.0%
9	Total Deductions from Rate Base	9,449.8	9,931.4	481.6	4.8%
	Additions to Rate Base:				
	Working Capital:				
10	Materials & Supplies	55.4	55.4	0.0	0.0%
10a	Tank Painting	0.0	0.0	0.0	0.0%
11	Working Cash, Lead-Lag	302.5	324.5	22.0	6.8%
12	Amount Withheld from Employees	(1.8)	(1.8)	0.1	-3.1%
13	Total Working Capital	356.1	378.1	22.0	5.8%
15	Taxes on Advances	0.0	0.0	0.0	0.0%
16	Taxes on Contributions	216.8	216.8	0.0	0.0%
17	Total Additions to Rate Base	572.9	594.9	22.0	3.7%
18	Weighted Average Rate Base, District	12,581.2	13,314.3	733.2	5.5%
19	Weighted Average Rate Base, G.O. Allocation	415.2	690.2	275.1	39.9%
19b	Weighted Average Rate Base, RDOM/RDV Allocation	0.0	0.0	0.0	0.0%
20	Total Weighted Average Rate Base	12,996.3	14,004.6	1,008.3	7.2%
	Interest Calculation (for Tax Deductions):				
21	*Weighted Avg. Rate Base, excl. Working Capital*	*12,640.2*	*13,626.4*	*986.2*	*7.2%*
22	*Weighted Cost of Debt*	*2.57%*	*2.57%*	*0.00%*	*0.0%*
23	*Interest Expense*	*324.9*	*350.2*	*25.3*	*7.2%*

Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	Andrew Sweeney
Witness(es)	:	

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

PUBLIC

REPORT ON ADMINISTRATIVE AND GENERAL EXPENSES

California Water Service Company

General Rate Case

A.21-07-002

San Francisco, California
February 4, 2022

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MEMORANDUM

The Public Advocates Office at the California Public Utilities Commission ("Cal Advocates") examined application materials, data request responses, and other information presented by California Water Service Group ("Cal Water") in Application ("A.21-07-002") to provide the California Public Utilities Commission ("Commission" or "CPUC") with recommendations in the interests of ratepayers for safe and reliable service at the lowest cost. Andrew Sweeney is the witness and author of this testimony. His qualifications can be found on Attachment 1 of this testimony. Brian Yu is Cal Advocates project lead for this proceeding. Syreeta Gibbs is the oversight supervisor, and Marybelle Ang and Caryn Mandelbaum are the legal counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any particular issue connotes neither agreement nor disagreement of the underlying request, methodology, or policy position related to that issue.

CHAPTER 1 ADMINISTATIVE AND GENERAL EXPENSES

I. INTRODUCTION

This report contains analysis and recommendations for Cal Water's Test-Year (TY) 2023 Administrative and General (A&G) Expenses.

Cal Water requests $160,029,584 for TY 2023[1, 2] in combined A&G Expenses, including rents, which is approximately 1.8%[3, 4] higher than the amount recorded for those same expenses for 2020.[5] A&G Expenses include (1) payroll expenses such as proposed positions and performance-based compensation for executives, (2) benefits expenses such as healthcare plans, (3) costs related to rent expenses, (4) costs related to workers compensation, (5) administrative charges transferred expenses related to Non-Tariffed Products and Services (NTP&S) revenue, such as billing and meter reading services, and (6) costs related to non-specific expenses such as Covid-19 impacts.

II. SUMMARY OF RECOMMENDATIONS – OVERALL A&G

The Commission should adopt $145,372,326 for TY 2023 A&G Expenses as reflected below in Table 1-1 because Cal Water's proposal overestimates its forecasted A&G Expenses by $14,657,258.[6]

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[1] Payroll + Benefits + Workers' Compensation + Rent + Administrative Charges Transferred + Non-Specifics.

[2] $91,362,741+$30,538,341+$1,509,656+$2,050,642-$3,664,537+$38,268,741= $160,029,584.

[3] $79,714,566+$41,260,594+$710,003+$2,930,805-$3,167,523+$35,740,237=$157,188,682.

[4] ($160,029,584/$157,188,682)= 1.0181.

[5] This is the 2020 expense in all relevant categories.

[6] Cal Water Recommended Total Budget $160,029,584 - Public Advocates Recommended Total Budget $145,372,326 = $14,657,258.

Table 1-1: Itemized A&G Expenses Budget TY 2023

Expense Category	Recommended	Requested	Difference
Payroll Expenses	$85,928,831	$91,326,741[7, 8, 9]	$5,343,910
Benefits Expenses	$29,405,982	$30,538,341[10]	$1,132,359
Workers Compensation Expenses	$1,221,082	$1,509,656[11]	$288,574
Rent Expenses	$2,050,642	$2,050,642[12] [13]	$0
Admin Charge Expenses	($3,664,537)	($3,664,537)[14]	$0
Non-Specifics Expenses	$30,376,326	$38,268,741[15]	$7,892,415
Total A&G Expenses	$145,372,326	$160,029,584	$14,657,258

Cal Water's Payroll and Benefits expenses should be adjusted to take into account the number of positions authorized rather than the number requested by Cal Water, while performance-based executive compensation should be eliminated to protect ratepayers from unreasonably burdensome rates. Workers' Compensation and Non-Specific Expenses, which are not under the direct influence of an outside entity, should be set based on an inflation-adjusted 2016-2020 average. The Commission should authorize a TY 2023 budget of $145,373,326 for Cal Water's total TY 2023 A&G expenses for the

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[7] CH05_OM_FDR_Payroll, Tabs Final Payroll Adj. Exp WS-5 cell I78.

[8] This is the adjusted figure. Adding the O, M, and A&G figures (M73 on all workbooks) together without adjustment gives $93,779,854. $93,779,854 = A.21-07-003 CH05_OM_FDR_Payroll ('AG Payroll w-Adj WS-8' M73+'Maint Payroll w-Adj WS-7'!M73+'Oper Payroll w-Adj WS-6'!M73).

[9] Executive Compensation: DR ASW_007 Response Attachment 1, cell F10.

[10] A.21-07-002 General Report, p.122. CH05 OM FDR Rents, Tab Final Benefits Adj. Exp WS-3 cell I78.

[11] A.21-07-002 General Report, p.64. CH05_OM_FDR_Workers Comp, Tabs Final Work Comp Adj. Exp WS-2 cell H80.

[12] CH05_OM_FDR_Rents, Tabs Final Rent Exp wAdj WS-2 cell H80.

[13] A.21-07-002 General Report, p.62 gives a value of $2,103,732.

[14] A.21-07-002 General Report, p.69. CH05_OM_FDR_Admin Charges Trf, Tabs Final Admin Chg Trf w-Adj. WS-5 cell H77.

[15] CH05_OM_RO, Tab Rec-Proj O&M WS-7.

1 necessary funds to conduct reliable and safe utility service and protect ratepayers from
2 unreasonably burdensome rates.

CHAPTER 2 PAYROLL

I. INTRODUCTION

In A.21-07-002, Cal Water requests $91,362,741 in payroll expenses-for Test Year (TY) 2023 based on its last recorded year expenses. This budget represents a $11,648,175 (14.61%)[16] increase over the $79,714,566 in payroll expenses recorded for TY2020.[17]

II. SUMMARY OF RECOMMENDATIONS

The Commission should:

- Authorize the 1 Customer Support Services (CSS) and 13 district positions Cal Water filled between General Rate Case (GRC) applications, with adjustments.-[18]
- Reject Cal Water's request for 23 Customer Support Services and 2 district positions in 2021-2023 because Cal Water's past payroll requests do not accurately reflect hiring activity.
- Reject Cal Water's forecasted capitalized payroll budget and instead authorize a budget calculated using a five-year average percentage of capitalized payroll.
- Approve Cal Water's requested TY 2023 executive base pay of $5,679,965.
- Reject Cal Water's overall executive compensation amount of $12,152,630 because the total amount of performance-based compensation awarded is not guaranteed, and ratepayers are not the primary beneficiary.

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[16] (91,362,741/79,714,566) – 1 = 14.61%.

[17] Adding the recorded O, M, and A&G figures (K77 on all workbooks) together without adjustment gives $79,714,566. $79,714,566 = A.21-07-003 CH05_OM_FDR_Payroll ('In_Rec OM by SOE 1a' K77+' In_Rec OM by SOE 1b '!K77+' In_Rec OM by SOE 1c '!K77). The escalated figure (Q77 in all workbooks) is $81,807,074, and the 2020 adjusted figure is $80,536,502 CH05_OM_FDR_Payroll, tab Total Payroll Adj WS-2, cell I77 is $80,536,502.

[18] A.21-07-002 General Report, pp.112-118 shows 14 district positions hired between GRCs. The RO model shows 13 CH05_OM_FDR_Payroll, Tab IN_Between GRCs. Cells G31-G90.

- The Commission should adopt $85,928,831 for TY2023 payroll expenses because Cal Water's estimate is based on the number of positions it proposed rather than the positions Cal Advocates recommends and an excessive executive compensation amount.

Table 2-1 below compares Cal Water's requested and Cal Advocates' recommended payroll expenses.

Table 2-1: Test Year 2023 Payroll Estimate Differences

Expense Category	Recommended	Requested	Difference
Total Payroll Amount	$85,928,831	$91,326,741	$5,397,910
Capitalized Payroll Amount	$26,405,930	$29,181,326	$2,775,396
Expensed Payroll Amount	$59,522,901	$64,598,528	$5,075,627

III. ANALYSIS

A. The Commission Should Approve 1 CSS and 13 District Positions Cal Water Hired Between Rate Cases, With Adjustments

The Commission should approve the 1 CSS and 13 district positions Cal Water hired between the previous and current GRCs. These positions have a combined annual salary of $2,893,101,[19] resulting in a Payroll Expense adjustment of $1,324,696.[20] Between the TY2020 and TY2017 GRCs, the utility similarly hired 23 positions later approved and included in rates in the TY2020 GRC.[21] In response to discovery, Cal Water stated those positions were "too important to wait until the next GRC, and Cal Water's Shareholders will be absorbing the payroll costs through 2022."[22] This is a reasonable justification for approving these positions for TY 2023. Actual payroll

[19] CH05_OM_FDR_Payroll, Tabs IN_Between GRCs. Cell N88.

[20] CH05_OM_FDR_Payroll, Tabs IN_Between GRCs. Cell Q95.

[21] A.18-07-001 General Report, p.100, ln.1-2 (CSS), p.107, ln.21-22 (Districts).

[22] A.21-07-002 General Report, p.113, ln.1-3.

expenses may contain expenses for unauthorized positions. However, Cal Water's Pension Balancing Account and Health Care Cost Balancing Account, which compare actual costs to authorized costs, should be adjusted for the 1 CSS and 13 district positions filled between GRCs.

B. The Commission Should Deny 25 New Positions Cal Water Requests in 2021-2022 Because Cal Water Has Many Unfilled Positions

Cal Water requests to include 25 new positions in rates for TY2023.[23] However, Cal Water's requests for new positions have been overestimated in its two most recent GRCs. In the 2018 GRC, Cal Water requested 20 new Customer Support Services positions and 10 new district positions, of which the Commission approved 13 positions, not including the six approved for the Travis district. [24, 25] Of these 19 positions, 6 remain unfilled, and Cal Water claims that it intends to fill them at its discretion.[26] Similarly, of the 23.5 additional, specified General Office (CSS) positions authorized in the TY2014 GRC, Cal Water has filled 15.5, along with 10 additional positions that were unspecified.[27] There is a significant disconnect between Cal Water's requests for new positions from the previous GRC and actual positions filled.

1. Cal Water Overestimates its Labor Needs

Based on Cal Water's pattern of overestimating its labor needs, it would be imprudent for the Commission to approve the 25 new positions requested in this GRC.

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[23] Section A references positions hired between GRCs that the utility paid for out of pocket until authorized in the next GRC. Section B refers to Cal Water asking for additional budget for additional positions that it has not and may not hire.

[24] A.21-07-002 General Report, p.119, ln.1-2, ln.25-26.

[25] DR-ASW007 Q4. Approved 13 positions and 6 additional positions related to Travis AFB.

[26] A.21-07-002 General Report, p.119, ln.17-20.

[27] A.15-07-015 Report on Payroll and Benefits (Julia Ende), p.9, ln.7-11.

Excluding the new positions reduces the projected TY 2023 expenses by $1,412,302[28] ($2,471,941[29], salary RO). Also, Cal Water's average number of metered connections per employee over the 2016-2020 period (443) is already far lower than the California class A utility average.[30] Cal Water's past GRCs have demonstrated that the utility is willing to exercise its management discretion to hire additional positions.[31] [32] Fourteen positions were filled between the current GRC and the TY 2020 GRC alone, without prior funding authorization from the Commission. Therefore, the utility should hire staff when necessary to ensure safe and reliable service and fully justify including them in rates in its next GRC rather than estimating the number of positions for the current GRC.

C. The Commission Should Require Cal-Water to Justify its Increasing Capitalized Labor Costs

Capitalized labor is labor tied directly to a product as opposed to the internal functions of the utility. The utility can depreciate it over the life of the asset it is tied to rather than expensing it in that same year.[33] The Commission should require Cal Water to justify any changes in the percentage of its capitalized versus expensed labor costs and bring its capitalized labor percentage in line with historical precedent. Cal Water should list the overall percentage of capitalized payroll for the utility as a whole and for each district. The utility should also justify any changes in the percentage of capitalized labor in its previous GRC period. The Commission should authorize a total capitalized payroll amount of $26,405,930 (30.73%) based on a 2016-2020 average percentage.[34]

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[28] CH05_OM_FDR_Payroll, Tab IN_2021 GRC Positions, J37.

[29] CH05_OM_FDR_Payroll, Tab IN_2021 GRC Positions, H37.

[30] See Attachment 2, Table 2-3.

[31] A.18-07-001, Report on Payroll, Benefits, and Worker's Compensation (Roy Keowen), p.5, ln.13-16.

[32] A.15-07-015 Report on Payroll and Benefits (Julia Ende), p.9, ln.11-13.

[33] https://www.accountingtools.com/articles/what-is-a-capitalized-cost.html

[34] D.04-06-018. (As modified by D.07-05-062 at p.A.24, Footnote 7.) States that, for test year expenses, a utility must present "an inflation-adjusted simple five-year average for all administrative, Operational

1. Cal Water Should Set its Capitalized Labor Percentage Based on a 5-Year Average

Several of the new positions, Cal Water requests, including a Contracts and Procurement Analyst (100% capital salary[35]) and Main Replacement Program Engineer (100% capital salary[36]), have salaries that are entirely or almost entirely capitalized. These new positions contribute to Cal-Water's projected TY 2023 capitalized payroll percentage increasing to 31.94% of the total payroll. Between 2016 and 2020, Cal Water's capitalized versus total payroll percentage increased by about 2.2% (4.9 million), with a projected increase of 2.86% (9.14 million) by TY 2023 despite the positions not yet being filled.[37, 38] This translates to a total capitalized payroll increase from $20,043,488 in 2016 to $24,941,609 in 2020, and a projected increase to $29,181,326 in TY2023. Instead, the Commission should authorize a capitalized payroll amount of $26,405,930 (30.73%) based on a 5-year 2016-2020 average.

D. The Commission Should Reject Cal Water's Executive Compensation because it is Excessive Compared to Previously Approved Amounts

Cal Water's executive officers receive annual compensation including a base salary, short-term incentives (STI), and long-term incentives (LTI). Base salary and STI

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and Maintenance Expenses" in addition to any other method used., p.7. I have chosen to use this stated average so that all expenses both within Cal Water and across other water utilities for later comparison can be fairly compared.

[35] A.21-07-002 General Report, Attachment C, page 20 of 102.

[36] A.21-07-002 General Report, Attachment C, page 51 of 102.

[37] CH05_OM_FDR_Payroll, Tab Capitalized Payroll-MDR, 2016 (F77) = 20,043,488 2020 (J77) = 24,941,609.2, ASW-001 Attachment 1, Tab "Final Payroll" 2016 (B37) = 68,928,755, 2020 (F37) = 79,714,566 (24,941,609/79,714,566) = 31.29% (2020): Cap (20,043,488/68,928,755) = 29.08% (2016) 31.29%-29.08% = 2.2%.

[38] CH05_OM_FDR_Payroll, Tab Capitalized Payroll-MDR, 2020 capitalized (J77) = 24,941,609.2, 2020 overall (F37) = 79,714,566. Capitalized = 31.29%. 2023 capitalized (J77) = 29,181,326.3, 2023 projected overall (F37) = 91,362,741. Capitalized = 31.94%. Difference is 31.94%-29.08% = 2.86%.

are included in payroll expenses. In contrast LTI[39] are included in A&G non-specifics.[40] Cal Water states that this base salary is within +/- 20% of Cal Water's competitors' median salaries.[41] However, this is not the case.[42] In this GRC, Cal Water proposes using its $8,044,630[43],[44] 2020 executive compensation expense as a proxy for forecasting purposes adjusted to estimate the 2023 expense. Cal Water's 2020 executive compensation was more than 7.5 times the amount approved in the previous GRC's settlement; therefore, it should not serve as a proxy for TY 2023. This value also represents a 172%[45] and 111%[46] increase in the Chief Executive Officer (CEO)/four Named Executive Officer's (NEO)'s salary and a 108%[47] increase in the average executive's gross pay over the past five years, which is substantially greater than the 21.89%[48] increase in gross pay enjoyed by the average non-executive at Cal Water over the same time period. In contrast, the increase due to inflation from 2016-2020 accounted for roughly 7.8%.[49] The disparity in pay ratio, particularly at a time when the U.S. economy shrank to historic lows, highlights the unreasonableness of Cal Water's

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[39] I also included the "Other" Executive Compensation in the non-specific expenses.

[40] DR ASW-009 Response Q1-a, page 2.

[41] California Water Service Group 2021 Proxy Statement, p.43.

[42] See Attachment 2, Table 2-4.

[43] Cal Water's response to Public Advocates DR ASW-005 question 1d, total executive compensation = $8,044,630.

[44] DR ASW-005 Attachment Q1b cell G10 (CEO + 4 NEO's = $6,509,062).

[45] DR ASW-005 Q1-b attachment #1 (G5/C5) gives a value of ($3,294,390/$1,209,308)-1 = 1.724.

[46] DR ASW-005 Q1-b attachment #1 (G6-G9/C6-C9) gives a value of ($3,214,672/$1,521,039)-1 = 1.113.

[47] DR ASW-005 Q1-c attachment #2 (G6/C6) gives a value of ($766,800/$369,219)-1 = 1.0768.

[48] DR ASW-005 Q1-c attachment #2 (G7/C7) gives a value of ($105,165/$86,278)-1 = 0.2189.

[49] https://www.usinflationcalculator.com/

proposed executive compensation.[50] The Commission should, therefore, deny Cal-Water's requested amount.

E. Ratepayers Should Not Pay for Performance-Based Compensation That Primarily Benefits Shareholders.

The Commission should exclude performance-based compensation (STI/LTI) from Cal Water's forecast of executive compensation that is tied to meeting specific performance targets that primarily benefit shareholders rather than ratepayers. More than half of Cal-Water's proposed executive compensation is performance-based, with 1.92% of the **<<BEGIN CONFIDENTIAL>>** [redacted] **<<END CONFIDENTIAL>>** total allocated to affiliates rather than Cal Water.[51, 52] Cal Water's executive compensation projection assumes that all executive officers become fully vested and meet or exceed the performance criteria, meaning that if Cal Water's projection were accepted, ratepayers would still bear the burden of the cost, even if the targets were not met. Each officer's executive compensation is summarized in Table 2-2 below.

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[50] Due to the COVID pandemic. See here: "*US economy shrank 3.5% in 2020 after growing 4% last quarter (apnews.com)*"

[51] DR ASW-008 Q3-a.

[52] CH05_OM_RO, Tabs REF_Four Factor, cell Q77, Q78.

Table 2-2: Test Year 2023 Projected Executive Compensation [53]

Executive Officer	Base Salary	Short-Term Incentive	Long-term Equity Incentive	Other	Total
<<BEGIN CONFIDENTIAL>>					
[redacted]					

<<END CONFIDENTIAL>>

Recovering performance-based compensation will result in the portion of the overall executive compensation being recovered via rates even if Cal Water executives fail to meet the relevant performance targets. Indeed, in the recent past, the overall performance goal achievement,[54] and therefore the amount of STI compensation awarded compared to base salary, ranged from 130% CEO/32.5% NEO in 2018 to 175% CEO/52.5% NEO in 2020, compared to the "target" payout of 100% CEO/30% NEO, despite threshold (unsatisfactory) performance being recorded in several categories over that time period.[55] Therefore, this policy would result in the utility receiving a portion of the extra budget without any benefit to ratepayers.

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[53] All numbers come from DR ASW-007, Attachment 1.

[54] Calculated based on each Executive's degree of achievement in the five categories listed in the following paragraph.

[55] California Water Service Group Proxy Statements 2017-2021 "Summary of Short-Term Performance

1. Cal Water's Proxy Statement

Cal Water's proxy statement lists five broad categories for short-term performance targets, three of which – water quality,[56] customer service,[57] and emergency preparedness and safety[58] – the utility is required by law to meet specific standards for.[59] Ratepayers should not have to pay bonuses for performance targets the utility must meet for continued regulatory compliance. The other two categories – utility plant investment and return on equity – are primarily tied to shareholder investment earnings. Two of the categories by which long-term performance and time-based equity compensation are determined – return on equity and growth in stockholders' equity[60] are also tied to shareholder investment earnings. The third, environmental leadership is tied to industry standards.[61] [62] Ratepayers should not have to pay for bonuses that primarily benefit shareholders, and more than half of Cal Water's projected TY 2023 executive compensation is tied to performance in these categories. Therefore, to ensure that Cal Water's executives are fairly compensated without overburdening ratepayers, the Commission should only authorize the inclusion of $5,679,965 of base salary and no STI or LTI in the rates for Cal Water's TY 2023 executive compensation expenses (Account 791).[63]

Goals for 2016-2020. p.49 in 2021 proxy statement.

[56] https://docs.cpuc.ca.gov/PUBLISHED/Graphics/107118.PDF, General Order 103-A, Attachment 1 (water quality pp.9-12), (emergency preparedness p.12-13). See Attachment 6.

[57] https://docs.cpuc.ca.gov/PUBLISHED/Graphics/107118.PDF, General Order 103-A, Attachment 1, pp.32-35. See Attachment 6.

[58] California Water Service Group 2021 Proxy Statement, pp.47-48.

[59] California Water Service Group 2021 Proxy Statement, pp.45-50.

[60] California Water Service Group 2021 Proxy Statement, p.51

[61] California Water Service Group 2021 Proxy Statement, p.52

[62] California Water Service Group 2021 Proxy Statement, p.5. Cal Water's Environmental, Social, and Governance Report aligns with the Sustainability Accounting Standards Board (SASB) Water Utilities & Services Industry Standards and references Global Reporting Initiative (GRI) Standards.

[63] CEO + four named NEOs (VP/CFO, VP Corporate Development, VP Engineering, VP General

IV. CONCLUSION

The Commission should deny Cal Water's requested payroll expenses and instead adopt the recommended TY 2023 payroll expenses. Consistent with the recommendations listed below, the Commission should approve TY 2023 payroll expense of $85,928,831. In addition, the Commission should:

- Approve the positions filled between this GRC and the previous one with adjustments for employee costs recorded in Cal Water's Pension and Healthcare Cost Balancing Accounts.
- Reject Cal Water's forecasted budget request for new positions seeing as the utility's forecast for labor needs has proven to be unreliable.
- Reject Cal Water's forecasted capitalized payroll budget and instead authorize a budget calculated using a five-year average percentage of capitalized payroll.
- Reject Cal Water's executive compensation budget and instead authorize a budget for an adequate executive base salary while eliminating performance-based compensation and protecting ratepayers from unreasonably burdensome rates.

Council) + other executives

CHAPTER 3 BENEFITS

I. INTRODUCTION

Cal Water requests changes to various benefits categories, including but not limited to pension expenses, group insurance (medical) expenses, and retirement obligations over previously adopted amounts. [64] The increases in these expenses are driven primarily by Cal Water's requests for unreasonable additional new positions. In total, Cal Water requests $30,538,341 in benefits expenses in TY 2023, while the Commission should adopt a figure of $29,405,982.

II. SUMMARY OF RECOMMENDATIONS

The Commission should reduce Cal Water's forecasted pension and medical expenses by calculating benefits on a per-employee basis using the final number of authorized positions and final payroll expense approved in this proceeding.[65] Table 3-1 below summarizes Cal Water's proposed TY 2023 expenses and the amount the Commission should adopt instead.

Table 3-1: Test-Year 2023 Benefits Estimate Differences

Expense Category	Recommended	Requested	Difference
Benefits Expense	$29,405,982	$30,538,341	$1,132,359

[64] The estimated TY 2023 benefits expense is much less than the expense recorded for the previous test year (2020) GRC 30.5M vs. 43M. CH05_OM_FDR_Benefits, Tab IN_Rec O&M by SOE, Q77.

[65] The cost per employee for Cal Water's requested payroll amount and number of positions is ($30,538,341/1104)= $27,662. For the recommended payroll amount and number of positions: $27,662*($85,982,831/$91,362,741)= $26,033/(1079/1104)= $26,636 in benefits expenses per employee. Cal Water's 2020 annual report (p.56), schedule C-3 lists 1065 employees + 14 hired between GRCs =1079 employees recommended. Cal Water requests an additional 25 employees 1079 + 25 = 1104.

III. ANALYSIS

The Commission should authorize benefits expenses, including pension, group medical insurance, and retiree group health insurance, based on the number of employees and final payroll expense authorized in this proceeding as established by the previous chapter's adjustments to the number of authorized employees for payroll expenses.

A. Ernst & Young Actuarial Forecast

Cal Water's forecast for the pension plan, Postretirement Benefits Other than Pensions plan (PBOP), and medical expenses are based on an actuarial forecast from Ernst & Young, LLP (EY).[66, 67, 68] EY's forecast for each category is driven by several variables, the most easily quantifiable of which is the number of employees involved. Given that EY's forecast is based on data from Cal Water which assumes all of the utility's proposed positions will be accepted, it should be adjusted to reflect the number of positions approved in this proceeding.[69]

B. The Commission Should Authorize Cal-Water's Benefits on a per Position Basis

The Commission should authorize the 14 positions listed in the previous chapter and base its total benefits expense on the total number of positions the Commission approves in this proceeding for TY 2023.[70] Once the total number of positions is established, EY's estimates the benefits expenses listed in the previous paragraph should be recalculated on a per-person basis. Cal Water's requested expense amount suggests $27,662 versus our recommended $26,636, to generate the new figure. Based on this

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[66] A.21-07-002 General Report, Attachment E, page 13 of 15.

[67] A.21-07-002 General Report, Attachment E, page 10 of 15.

[68] A.21-07-002 General Report, Attachment E, page 7 of 15.

[69] This recommendation applies to any expense based on the number of Cal Water's Commission authorized positions.

[70]. Section C3 (p.56) of Cal Water's 2020 Annual Report states the utility has 1,065 employees were charged to expense. See Attachment 7.

1 information, the Commission should adopt an amount of $29,405,982 for Cal Water's
2 TY2023 benefits expenses.

3 **IV. CONCLUSION**

4 The Commission should reduce Cal Water's forecasted pension and medical
5 expenses by recalculating the benefits on a per-employee basis using the new number of
6 authorized positions approved in this proceeding.

CHAPTER 4 WORKERS' COMPENSATION

I. INTRODUCTION

Cal Water used an actuarial study to estimate a provision of $1,509,656 for its TY 2023 worker's compensation expense.[71, 72] A provision is not the same as an expense; however, it is an estimate of what the expense should be, similar to a provision for bad debt (i.e., it is not an actual cash outlay). The provision may take into account additional factors that may not materialize as an expense. The actuarial report estimates the per-employee cost for worker's compensation and then applies it to Cal Water's projected labor force to calculate the TY 2023 provision estimate.

II. SUMMARY OF RECOMMENDATIONS

The Commission should reject Cal Water's worker's compensation forecast because it is inconsistent with historical expenses. Instead, the Commission should authorize a lower worker's compensation amount to align with Cal Water's historical expenses. Table 4-1 below summarizes Cal Water's proposed TY 2023 expenses and Cal Advocates' recommendations.

Table 4-1: Test Year 2023 Workers' Compensation

Expense Category	Recommended	Requested	Difference
Workers' Compensation	$1,221,082[73, 74]	$1,509,656	$288,574

[71] A.21-07-002 General Report, p.64. gives a figure of $1,508,068.

[72] CH05_OM_FDR_Workers Comp, Tab Final Work Comp w-Adj WS-2, 2023 (H80) = $1,509,656.

[73] CH05_OM_FDR_Workers Comp, Tab Final Work Comp w-Adj WS-2, 2023 (H77) = $1,221,082. Cal Water DR response ASW-001 Attachment 1 Tab (Workers Comp).

[74] 2016-2020 Inflation-adjusted Worker's Compensation average*2021-2023 composite escalation rates.

III. ANALYSIS

The Commission should reject Cal Water's forecast of workers' compensation expense because it is provided by an external actuary and contains provisions for expenses such as defense costs and claim handling fees, which may not materialize, rather than being based purely on historical levels of expense.

A. The Commission Should Authorize Cal-Water's Worker's Compensation Budget Based on A 5-Year Average

This estimate is "intended to cover Cal Water's retained claim costs and expenses for claims that are paid during the calendar year, regardless of when claims or expenses are incurred."[75] In this case, the estimate provided by Milliman Inc. is substantially higher, in absolute terms and in terms of dollars of workers' compensation per employee, than both the (2016-2020) historical average and any singular year within that time period apart from 2016.[76] This expense has also had a distinct downward trend over the past five years, with the 2020 value being less than half the 2016 value. Therefore, the Commission should reject Milliman Inc.'s actuarial estimate for workers' compensation because it is both unreasonably high and runs counter to the downward trend in Cal Water's workers' compensation expenses. Instead, the Commission should adopt $1,221,082 for workers' compensation expenses, calculated using a five-year historical average expense, adjusted for escalation.[77]

Table 4-2: Workers' Compensation Expense per Employee

2016	2017	2018	2019	2020	2023 Estimated	2023 Calculated
$1477	$1048	$774	$1024	$667	$1367	$1,132

[75] A.21-07-002 General Report, p.64, ln.7-9.

[76] Cal Water Response to Cal Advocates data request ASW-001. Attachment 1, Tab Workers Comp, Cell B37-F37.

[77] D.07-05-062 at p, A.24, Footnote 7.

IV. CONCLUSION

The Commission should reject Cal Water's forecast of workers' compensation expense and instead use an escalated five-year average to estimate the expense.

CHAPTER 5 RENTS

I. INTRODUCTION

For TY 2023, Cal Water requests $2,050,642 for rent expenses.[78] This budget represents an increase of $1,163,095 (131%)[79] over the $887,547 in rents expenses proposed for TY2020.[80] Cal Water projects changes in rents expense due to new lease agreements, the cessation of PSPS generator leases, and various other forecasted rents adjustments. Cal Water's requested amount of $2,050,642 is reasonable.

II. SUMMARY OF RECOMMENDATIONS

Table 5-1 below summarizes Cal Water's proposed TY 2023 rent expenses for the districts under debate and the amounts the Commission should adopt instead.

Table 5-1: TY 2023 Rent Expense Recommendation

	East Los Angeles	King City	Los Altos	Visalia	Total
2020 Expense	(4,560)	35,012	116,945	9,247	161,204
Requested	852	13,175	66,589	63,648	144,264
Recommended	852	13,175	66,589	63,648	144,264
Adjustment	0	0	0	0	0

III. ANALYSIS

Cal Water states that it bases its TY 2023 rent estimates on the rent expenses from the last recorded year, in this case (2020), adjusted for inflation except in instances where the utility has entered into a new lease agreement, there are issues regarding the

[78] CH05_OM_FDR_Rents, Tab Final Rent Exp w-Adj WS-2, 2023 (H77) = $2,050,642.

[79] ($2,050,642/$887,547)-1 = 131%.

[80] A.18-007-001, CH05_OM_FDR_Rents, Tab Final Rent Exp w-Adj WS-2, 2020 (H80) = $887,547.

enforcement of contract terms, and the continuation of the provisions from Decision ("D".) 04-04-041.[81, 82]

A. District Specific Changes for TY 2023

Cal Water requests $852 in rent expenses for East Los Angeles for TY 2023, despite the district's 2019 and 2020 expenses being $8,816 and ($4,758) respectively.[83] Cal Water claims that this adjustment was to remove expenses recorded erroneously to account 811000. However, it appears the utility is instead using an escalated 2016-2020 average to determine the expense going forward. This is reasonable given the degree to which the rent expense varies in 2019 and 2020.[84] King City and Los Altos have leases that expire on March 1, 2024, and December 31, 2024, respectively.[85] Cal Water distributed them evenly across the whole 2023-2025 GRC cycle rather than recording those districts' rent expenses as usual up to those dates and as zero afterward, which is reasonable. Cal Water states that the increase in the Visalia district's rent expenses, from $9,468[86] in 2020 to $63,648[87] in TY 2023, and provided supporting documentation.[88] [89]

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[81] A.21-07-002 General Report, p.62, ln.8-10, p.63, ln.1-2. The provision of the settlement is to continue to include in rates the pre-merger costs of customer service and operations facilities for the Dominguez, Hermosa Redondo, and Palos Verdes districts and to exclude current rental costs for the Rancho Dominguez.

[82] A.21-07-002 General Report, p.62, ln.8-10. As modified by D.06-08-011.

[83] CH05_OM_RO_Rents, Tabs Proj Escalated O&M by SOE, cell P32, Q32. This is the escalated value. The recorded values are $8,449 and -$4,560 for 2019 and 2020. J32 and K32, respectively.

[84] TY 2019 + TY 2020 = ($8,816-$4,758)/5 = $812 for 2021, escalated to $852 for TY2023.

[85] DR-ASW007 Q2a. #4, #5.

[86] CH05_OM_RO_Rents, Tabs IN_Rec O&M by SOE, cell K44 = 9,247 (recorded), cell Q44 = $9,648 (escalated).

[87] CH05_OM_RO_Rents, Tabs Final Rent Exp w-Adj WS-2, cell H44.

[88] ASW DR-007. Q2a. #8. ASW DR-007.

[89] Cal Water Response to Cal Advocates DR ASW-009. Attachment 1:Visalia Lease Contracts, p.1.

IV. CONCLUSION

Consistent with the recommendations listed above, the Commission should accept Cal Water's request to increase rents expense costs to $2,050,642. This recommendation will allow Cal Water to collect the funds necessary to provide safe and reliable utility service while protecting ratepayers from unnecessarily burdensome rates.

CHAPTER 6 ADMINISTRATIVE CHARGES TRANSFERRED

I. INTRODUCTION

Administrative and General (A&G) revenue sharing concerns credits for unregulated activity, specifically Administrative Charges Transferred, which take the form of Non-Tariffed Products and Services (NTP&S). D.10-10-019, as modified by D.11-10-034, lays out Commission rules for Class A and B water utilities related to NTP&S revenue, specifically the revenue sharing between ratepayers and investors.[90] Cal Water's NTP&S amounts were calculated using the forecasting methodology Cal Water identified in its testimony, using the 2020 balance as a basis for the TY2023 projections, and escalation factors that conform to the conditions specified in the utility's NTP&S contracts.[91] The utility applied this forecasting methodology consistently across all rate-making districts. Therefore, the Commission should authorize Cal Water's methodology for net revenue sharing across all districts for TY 2023.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize ($3,664,537)[92] TY 2023 for the estimated Administrative Charges (Revenue Sharing) Expense.

III. ANALYSIS

A. Cal Water's Passive and Active NTP&S Revenue Sources

Cal Water has five primary sources of NTP&S revenue. Of these, one is "passive," and the other four are "active." Passive revenue accrues from antenna leases,

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[90] D.10-10-019, Discussion 2323, Rule I.A. (Applicability to Different Utility Classes 3434): "These Rules apply to all Class A and B California public utility water and sewer corporations or companies subject to regulation by the California Public Utilities Commission (Commission)." pp. 34-35.

[91] A.21-07-002 General Report, p.70, ln 7-11.

[92] A.21-07-002 General Report, p.69. CH05_OM_FDR_Admin Charges Trf w-Adj WS-5, cell H77

whereas active revenues accrue from O&M services, billing and meter reading services with various water and sewer systems, the billing service contract with Home Service USA, and lab service contracts for water quality testing. The most relevant part of D.10-10-019[93] for these expenses is Rule X which provides a uniform methodology for tracking and accounting for NTP&S activities when Class A/B water utilities use regulated resources to generate additional revenues. According to rule X(c), the gross revenue from those activities should be shared between ratepayers and shareholders. The first $100,000 of that unregulated revenue, along with 30% of the remaining "passive" revenue and 10% of the "active" revenue, should go to ratepayers.[94, 95] Cal Advocates and Cal Water do not differ in their categorization of each of these services as active or passive in accordance with D.10-10-019.

B. Administrative Charge Estimation Methodology

Cal Water states that it used the 2020 balance as the basis for the projections to TY2023 and assumes that its revenue from unregulated operations will be the same as in 2020, barring adjustments for escalation for the forecasted years.[96] The majority of Cal Water's NTP&S revenue-generating contracts have a provision for an annual adjustment of service charges utilizing the factors used by the Utility Workers Union of America ("UWUA"). Cal Water records the share of NTP&S gross revenues allocated to the ratepayers in the form of a credit to the regulated A&G expense account 8120.[97] In doing so, the total regulated test year expense estimate is reduced by the amount of estimated NTP&S revenue to be shared. This methodology is applied consistently across all

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[93] A.21-07-002 General Report, p.70, ln.7. D.10-10-019 further amended by D.11-10-034+D.12-01-042.

[94] Rule X.C.3 states an activity should be designated as "active" if the activity incurs an incremental shareholder investment in excess of $125,000. Otherwise, the activity is classified as passive. (Appendix A of D.10-10-019, p.A-12)

[95] Rule X.C.5 of Appendix A of D.10-10-019, p.A-12.

[96] A.21-07-002 General Report, p.70, ln.10-11.

[97] A.21-07-002 General Report, p.131, ln.20-22.

1 districts correctly and uses the escalation factors agreed to with the UWUA negotiated in
2 the settlement agreement approved in the last GRC.[98]

3 **IV. CONCLUSION**

4 The Commission should adopt Cal Water's proposals regarding NTP&S revenue
5 for the TY 2023 GRC cycle. Cal Water's amounts were calculated using the forecasting
6 methodology Cal Water identified in its testimony with escalation factors that conform to
7 the conditions specified in the utility's NTP&S contracts. Cal Advocates' calculations
8 are aligned with the amounts Cal Water proposed. Therefore, the Commission should
9 authorize ($3,664,537) in TY 2023 for the estimated Administrative Charges (Revenue
10 Sharing) Expense.

[98] A.21-07-002 General Report, p.111, footnote 38. Cal Water and the Utility Workers Union of America agreed to a new 59-month contract in May 2021, covering 2021-2026. Cal Water and the International Federation of Professional and Technical Employees are still following the contract from Feb 2015.

CHAPTER 7 NON-SPECIFICS

I. INTRODUCTION

The Commission should authorize $30,376,326, based on the five-year (2016-2020) historical average adjusted for inflation for non-specific A&G expenses rather than the $38,268,741[99] requested by Cal Water. The non-specifics expense account represents miscellaneous A&G expenditures, including the LTI for executive compensation, and encompasses several sub-accounts. The Antelope Valley, Bakersfield, Bay Area Region, Customer Support Services, Dominguez, Hermosa Redondo, Kern River Valley, Marysville, and Palos Verdes Districts have various additional adjustments to their non-specific expenses addressed below in subsections "a" through "e."

II. SUMMARY OF RECOMMENDATIONS

For districts without specific, additional adjustments, noted above, to their non-specific expenses, the Commission should reject Cal Water's forecast and authorize a lower non-specific expense amount based on a 2016-2020 average to align with Cal Water's historical expenses. Table 7-1 below summarizes Cal Advocates' recommended TY 2023 budget.

Table 7-1: 2023 Non-Specific Expenses

District	Recommended	Adjusted for LTI/Other	Requested	Difference
Antelope Valley	8,622	7,747	8,632	885
Bakersfield	-333,346	-299,512	(334,654)	-35,142
Bayshore	121,110	108,817	151,839	43,022
Bear Gulch	57,218	51,410	57,261	5,851
Chico	131,688	118,322	131,802	13,480
Dixon	40,838	36,693	40,865	4,172
Dominguez	805,432	723,681	1,425,648	701,967
East Los Angeles	107,424	96,520	107,661	11,141
Hermosa Redondo	501,891	450,949	545,446	94,497

[99] CH05_OM_RO, Tab Rec-Proj O&M WS-7.

District	Recommended	Adjusted for LTI/Other	Requested	Difference
Kern River Valley	28,303	25,431	28,350	2,919
King City	25,320	22,750	25,329	2,579
Livermore	56,126	50,429	56,232	5,803
Los Altos	105,855	95,110	105,855	10,745
Marysville	23,515	21,128	22,077	949
Oroville	25,958	23,324	26,026	2,702
Palos Verdes	589,354	529,535	641,128	111,593
Salinas	166,980	150,031	165,010	14,979
Selma	30,549	27,448	30,549	3,101
Stockton	202,206	181,682	202,277	20,595
Visalia	198,240	178,118	198,773	20,655
Westlake	50,152	45,062	50,288	5,226
Willows	16,872	15,160	16,894	1,734
Customer Support Services	30,640,179	27,530,201	34,372,311	6,842,110
Coast Springs	32,607	29,297	32,690	3,393
Lucerne	160,379	144,101	141,402	-2,699
Unified Area	27,881	25,051	28,218	3,167
Travis	11,770	10,576	(3,407)	-13,983
Rancho Dominguez	-4,505	-4,048	(4,359)	-311
Redwood Valley	-20,798	-18,687	(1,405)	17,282
Total	33,807,819	30,376,326	38,268,741	7,892,415

III. ANALYSIS

A. Bakersfield and Kern River Valley Districts

Cal-Water excluded the non-recurring costs incurred during the July 2016 Erskine fire[100] when calculating the five-year inflation-adjusted period and instead tracked those costs using the Catastrophic Event Memo Account (CEMA). This exclusion from the standard forecasting methodology is reasonable because it serves to avoid double recovery, and an expense such as a fire in a specific location that the utility does not expect to recur is considered a non-recurring event.[101]

[100] Cal Water General Report, p.66, ln.9-11.

[101] Cal Water General Report, p.66, ln.9-11.

B. Drought Recovery Memorandum Account (DRMA)

Cal Water excluded non-recurring DRMA expenses in calculating the standard inflation-adjusted five-year average for all districts in 2015-2017, stating, [102] "it's appropriate to exclude non-recurring expenses from the 5-year inflation adjusted average used in projecting expenses. If an expense is non-recurring and recovered in a memo account, Cal Water does not plan to incur the expense in the future and should remove the expense from projected expenses for the test year 2023 to avoid double charging our customers." Cal Water has also recovered these expenses through advice letters, 2226-B for 2015 and 2301-A for 2016-2017.[103] This break from the standard forecasting methodology is reasonable.

C. Public Safety Power Shut Off (PSPS) Account

The expenses incurred in 2019 related to PSPS for the Marysville district should not be excluded from the five-year inflation-adjusted average estimate calculation for non-specific expenses. Pacific Gas and Electric (PG&E) PSPS have been occurring regularly, during fire season, since October of 2018,[104] and it is highly improbable that they will cease to be regular events until PG&E buries all vulnerable power lines, which is unlikely to happen before the next GRC. Therefore, the Commission should authorize $21,128 for Marysville's TY 2023 Non-Specific expenses rather than $20,077 and not collect the 2019 expenses through memorandum account amortization.

D. COVID-19 Impacts

The Commission should adopt a four-year 2016-2019 inflation-adjusted average rather than a five-year 2016-2020 average for calculating non-specific expenses related to Covid-19 impacts.[105] Specifically, the accounts tied to conferences, travel, and meals in

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[102] Cal Water General Report, p.67, ln.17-22.

[103] Cal Water General Report, p.67, ln.22-26.

[104] https://www.pge.com/en_US/residential/outages/public-safety-power-shuttoff/psps-reports.page

[105] Cal Water General Report, p.68, ln.6-9.

2020 will be substantially less than they would be in a typical year.[106] Therefore, the Commission should authorize $2,273,735[107] rather than $2,029,274[108] for these non-specific expenses for TY 2023.

IV. CONCLUSION

Consistent with the recommendations listed above, the Commission should reject Cal Water's requests to increase non-specific expense costs and instead adopt a TY 2023 non-specific expenses amount of $30,376,326. This recommendation will allow Cal Water to collect the funds necessary to provide safe and reliable utility service while protecting ratepayers from unnecessarily burdensome rates.

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[106] A.21-07-002 General Report, p.68, ln.6-9.

[107] 2021 Cal-Water GRC ASW Workpaper (1), Tab Conferences, Meals, Etc. Cell Z70.

[108] 2021 Cal-Water GRC ASW Workpaper (1), Tab Conferences, Meals, Etc. Cell Y70.

ATTACHMENTS

ATTACHMENT 1: STATEMENT OF QUALIFICATIONS – ANDREW SWEENEY

Q1. Please state your name, business address, and position with the California Public Utilities Commission ("Commission").

A1. My name is Andrew Sweeney, and my business address is 505 Van Ness Avenue, San Francisco, California 94102. I am a Public Utilities Regulatory Analyst I in the Water Branch of the Public Advocates Office.

Q2 By whom are you employed and in what capacity?

A2. I am currently employed by the California Public Utilities Commission Public Advocates Office as a Public Utilities Regulatory Analyst I in the Rates & Revenue Section.

Q3. Please summarize your educational background and professional experience.

A3. I graduated from the University of California San Diego with a Bachelor of Science in Environmental Systems and a Minor in Business. I later graduated from the Rady School of Management with a Masters of Finance. Before joining the Public Advocates Office, I worked as a corporate governance research associate for Glass Lewis & Co. and as an Accounting Clerk for several companies. In my time at the Public Advocates Office, I have analyzed bill arrearages for Class A water utilities. I have written testimony for East Pasadena Water Company and Warring Water Service's proposed mergers with California-American Water and written the O&M report for San Jose Water Company's TY2022 GRC.

Q4. What is your responsibility in this proceeding?

A4. Analyzing the utility's Operations and Maintenance Expenses and writing testimony to present my analysis.

Q5. Does this conclude your prepared direct testimony?

A5. Yes, it does.

ATTACHMENT 2: ADDITIONAL FIGURES

Table 2-3: Metered Residential and Commercial Connections per Employee

	2016	2017	2018	2019	2020	Average
Apple Valley	489.73	542.10	575.15	560.51	578.40	549.18
California Water	450.16	449.08	451.07	433.26	430.56	442.83
California American	625.49	626.41	627.62	627.78	616.68	624.80
Golden State	411.89	411.56	432.89	427.34	429.95	422.73
Great Oaks	1205.76	1082.74	1089.21	1098.63	1112.16	1117.70
Park	577.80	581.64	582.20	594.88	633.02	593.91
San Gabriel	367.24	360.37	361.70	360.75	358.31	361.67
San Jose	787.54	810.99	793.25	791.14	791.70	794.92
Suburban Water	608.90	627.10	656.73	635.21	590.30	623.65
Average	613.84	610.22	618.87	614.39	615.68	614.60

Table 2-4: Cal Water Peer Group 2020 Base Salaries

Utility	CEO	NEO Average	CEO % Difference	NEO % Difference
Cal Water	$1,021,545	$400,200	0	0
San Jose Water Company	$780,000	$446,250	(23.65)	11.51
American States Water Company	$860,409	$406,794	(15.77)	1.65
Essential Utilities	$875,000	$423,742	(14.35)	5.88
Middlesex Water Co.	$636,540	$287,784	(37.69)	(28.09)
Competitor Average	$787,987	$391,143	(22.86)	(2.26)

ATTACHMENT 3: CAL WATER'S 2021 PROXY STATEMENT

Environmental, Social, and Governance Highlights

As a company, we have always stood for "doing the right thing." We strive to make the world a better place and take pride in our long-standing efforts to provide safe water at affordable rates, plan for our customers' future water needs, be responsible stewards of the environment, invest and give back to our communities, have the best-trained employees, and maintain high ethical standards. This commitment is instilled in our shared purpose, which is to enhance the quality of life for our customers, communities, employees, and stockholders.

2020 ENVIRONMENTAL, SOCIAL, AND GOVERNANCE REPORT

We made significant progress on our environmental, social, and governance (ESG) efforts. In 2020, we conducted an in-depth materiality assessment to identify and prioritize the ESG topics most relevant to our internal and external partners. After a rigorous process of researching and benchmarking, mapping topics across our business processes, conducting internal and external interviews, analyzing external sources, and scoring and validating results, we prioritized our top ESG topics. This process will inform our ESG strategy, reporting, and resource allocation going forward.

We also produced an Environmental, Social, and Governance Report that aligns with the Sustainability Accounting Standards Board (SASB) Water Utilities & Services Industry Standards and references Global Reporting Initiative (GRI) Standards. The full report may be accessed at www.calwatergroup.com/esg2020. Web links are provided throughout this proxy statement for convenience and are inactive textual references only. The content on the referenced websites does not constitute a part of and is not incorporated by reference into this proxy statement.

In addition to completing the materiality assessment and upgrading our report to align with SASB and GRI, we established a new Water Resource Sustainability Department and completed the first phase of a water resource monitoring and adaptation plan, both of which are expected to better enable us to address the risks posed by climate change. Our efforts to further mature our climate change strategy will be guided by the framework from the Task Force on Climate Related Financial Disclosures (TCFD).

Additionally, in February, our Board of Directors adopted four new policies: Environmental Sustainability; Diversity, Equality, and Inclusion; Political Engagement; and Human Rights. In 2021, we will continue to refine our ESG strategy, data collection, and reporting.

Elements of Compensation

The material elements of our officer compensation program for 2020 included:

- Base Salary
- Annual Short Term Performance Based Incentive Compensation
- Performance and Time Based Long Term Equity Compensation
- Basic and Supplemental Pension Plan Benefits
- Deferred Compensation Plan Benefits
- Limited Perquisites

In determining compensation, the Committee is mindful that as a holding company for a California regulated utility, the Group's financial performance is substantially dependent upon CPUC regulation plus other factors, which to a large extent are beyond the control of officers. Therefore, the Committee's decisions regarding overall compensation are determined largely by evaluation of factors that are within the officers' control and its comparisons with companies in its peer group. As discussed below, the metrics used to determine our officers' annual short term performance based incentive compensation and the vesting of long term performance based equity compensation awards are appropriate metrics that align officer performance in a manner beneficial to both stockholders and customers and do not encourage imprudent risk taking.

Base Salary

The only guaranteed portion of executive total compensation is in the form of fixed base salaries commensurate with the performance of primary roles and responsibilities. The Committee reviews base salaries for our officers annually and determines whether or not to recommend adjustments to salaries based on performance. To assist the Committee in this review, our President & CEO provides an assessment of each officer's performance and contribution towards the key corporate goals. Recommendations regarding base salary adjustments are provided to the Committee for each of our officers other than himself based on the competitive data and the other factors described below under "Determining Executive Compensation."

The Committee has and continues to target fixed base salaries for each officer that are appropriate for the performance, skills, capabilities, tenure, and individual contributions in his/her position. The base salary levels are established by reference to the competitive data described below.

Consistent with established practice, the 2020 base salaries for our officers were compared to the base salaries for similar positions within the competitive data. Similarly, the total target cash compensation for our officers (taking into account annual short term incentive compensation targets) was compared to the competitive market data for target total cash compensation. Each officer's 2020 base salary was within the competitive range (defined as plus or minus 20% from the median compensation level, based upon available survey data) of target total cash compensation.

Each year, our officers establish a number of corporate goals and objectives that promote the long term growth and align the interests of stockholders, customers, and employees. The objectives are communicated internally and monitored quarterly. Changes in base salary levels for our President & CEO and other NEOs are generally based on progress against certain of these key corporate goals and individual officer performance. For 2020, the following corporate goals were used to evaluate 2020 compensation based on performance for our current President & CEO and NEOs:

Corporate Goals	Achievement
Employee Retention and Development: Implement key strategic projects in the area of employee retention and development	► Implemented Workday human capital and payroll management application ► Implemented a preventable vehicle accident reduction program including the rollout of our hand-on heavy equipment driving course ► Recognized with a Silver Stevie Award in the category of Most Valuable Employer for COVID-19 response by the Stevie Awards for Great Employers ► Named a "Top 100 Workplace" in the San Francisco Bay Area for the ninth consecutive year by the Bay Area News Group ► Named a "Top Workplace" by Top Workplaces, LLC for the first time ► Received recertification as a Great Place to Work® by the Great Place to Work® Institute for the fifth consecutive year

Once the Committee assesses the business results for each long-term goal as described above, the Committee then reviews and discusses the overall performance of each officer and the competitive data provided by the independent consultant retained by the Committee. Once reviewed and agreed upon, the Committee recommends to the Board the base salaries for our officers (including the President & CEO).

Any increase to salaries is intended to compensate NEOs for inflationary changes, job performance and overall leadership while being within the "competitive range" of the market data for target total cash compensation for similar positions ("competitive range" is described in more detail above and below) when taking into account the short-term incentive compensation described below.

Performance-Based Short-Term Incentive (STI) Compensation

As strategic goals are long-term in nature, we maintain an annual performance-based short-term incentive compensation program for officers designed to align annual performance and achievement with the long-term strategic goals of the Group. The performance-based short-term incentive compensation is fully at risk with payout dependent upon achievement of certain performance objectives over a one-year performance period.

The Committee considered a number of factors when establishing the 2020 performance metrics including our long-term strategic plan, historical performance, the regulatory environments it operates in, feedback from our independent compensation consultant, stockholder feedback, and management discussions. The performance metrics are intended to foster and enhance cross-functional integration, customer relationships, continuous improvement, and team accountability while focusing on key corporate goals and initiatives. Targets for each of the performance metrics were designed to be challenging but achievable given strong management performance.

For 2020, the Committee granted the opportunity for our officers (other than our President & CEO) to receive short-term performance incentive awards with a target payout equal to 30% of base salary with an actual payout range of 0% to 200% of target, based on performance. For our President & CEO, the Committee granted the opportunity to receive a short-term performance-based incentive award in 2020 with a target payout equal to 100% of base salary, with an actual payout range of 0% to 200% of target, based on performance.

Payment of the short-term performance incentive awards is typically made in March, following the Group's receipt of audited financial statements and the subsequent certification of the Group's performance by the Committee. See below for additional information regarding the performance goals and resulting payouts under the annual short-term incentive program for 2020.

The following section provides a more detailed look at each performance metric, along with the maximum, target, and threshold levels for each and the benefits derived by our customers:

- **Water Quality:** This metric evaluates performance based on number of procedural violations and violations of primary and secondary drinking water standards. The CPUC has authority to set drinking water standards for Cal Water. It has adopted the California State Water Resources Control Board, Division of Drinking Water (DDW) standards, which also incorporate U.S. Environmental Protection Agency (EPA) drinking water standards. Similarly, the Group's subsidiaries in Washington, Hawaii, and New Mexico are regulated by the EPA and their respective state health regulators. We have continued to include all state operations in the performance metric for primary water quality. The secondary and procedural water quality metrics measure activity in the California subsidiary only, but in the future, secondary and procedural water quality metrics could include other states' compliance.

  - A primary drinking water standard violation is related to public health, either acute or long-term
  - A secondary drinking water standard violation is related to taste or aesthetics, such as excessive iron and manganese, and can generate customer complaints
  - A procedural violation is a missed sample or other non-compliance item that is not a violation of a primary or secondary standard

We make it a priority to meet all water quality standards, every day, in every service area. For this reason, the target performance level was set for no primary water standard violations, two or fewer secondary water standard violations, and no more than four procedural violations.

Performance Level*	Primary Water Standards Violations (all states)	Secondary Water Standards Violations (California only)	Procedural Violations (California only)	Goal Achieved
Maximum	0	0	0	200%
Target	0	2 or fewer	Up to 4	100%
Threshold	1 or fewer	4 or fewer	Up to 8	50%

* An additional tier applies between the target and maximum level.

- **Customer Service:** A combination of CPUC standards and three internal performance indicators for all California districts, Hawaii, New Mexico, and Washington which encompass key measurements for telephone responsiveness, service responsiveness, billing accuracy and timeliness, and general levels of customer complaints comprises this metric. CPUC customer service standards are found in the CPUC's General Order 103-A.

  An additional target was initially included in the performance metric, to decrease shut off for non-payment activities by 1% each year starting in 2020. Due to the coronavirus pandemic, the state prohibited shut-offs and we eliminated that target because it was no longer achievable and outside of management's control.

The Customer Service metric is evaluated each quarter for 10 measurements in 20 California service areas, Hawaii, New Mexico, and Washington for an annual target of 863 – 848 and a maximum annual metric measurement of 920.

Performance Level*	Criteria	Goal Achieved
Maximum	99.1% of maximum annual metric	200%
Target	92.1.% of maximum annual metric	100%
Threshold	90.0% of maximum annual metric	50%

* Multiple tiers apply between the threshold and target level and between the target and maximum level.

- **Utility Plant Investment:** The annual Board-approved capital expenditures budget is the target for this metric. Investment in utility plant, property, and equipment is a driver of stockholder return and a key component of providing reliable, high-quality water service to customers. This metric is updated each year to reflect the annual approved capital program and budget for the Group and its subsidiaries and is tied to regulatory approvals. For 2020, the annual Board-approved capital expenditure budget and target performance level was set at $275 million.

Performance Level*	2020 (In Millions)	Goal Achieved
Maximum	$325	200%
Target	$275	100%
Threshold	$245	25%

* Multiple tiers apply between the threshold and target level and between the target and maximum level.

- **Earnings per Share (EPS):** This metric measures the annual budget-to-actual performance of the Company. Specifically, this measure compares the actual diluted earnings per share to the forecasted diluted earnings per share for the calendar year. The forecasted diluted earnings per share is adopted during the budget process by the Board of Directors each year at its January meeting. By adhering to budgets, management is able to demonstrate to the Board, stockholders and customers that the Company is effective at managing controllable costs and has the ability to efficiently execute its business plan.

Performance Level*	EPS Variance from Budget	Goal Achieved
Maximum	Over 10%	200%
Target	−2.5% to 2.5%	100%
Threshold	−7.6% to −10%	25%

* Multiple tiers apply between the threshold and target level and between the target and maximum level.

- **Emergency Preparedness and Safety:** This metric is measured annually and is comprised of five safety program components. These five components include Community Emergency Operations Center (EOC) training, full attendance at Cal Water mandated safety training for all employees (minimum of five training topics annually), Total Case Incident Rate (TCIR) which represents the average number of work-related injuries incurred by 100 workers during a one-year period as measured against California companies, the number of preventable vehicle accidents, and the number of unannounced site safety audit and immediate onsite reviews. The five safety components are weighted as follows:

  - EOC Training measure – 20%
  - Training attendance rate measure – 20%
  - TCIR measure – 20%
  - Preventable vehicle accident measure – 20%
  - Unannounced site safety audit and immediate onsite review – 20%

Focused on improving the management of these safety programs, our officers have set this metric to improve performance from current conditions towards industry averages, where applicable, and performance expectations.

Performance Level*	Community EOC Training Performance Target	Goal Achieved
Maximum	Conduct 12 community EOC trainings	200%
Target	Conduct 10 community EOC trainings	100%
Threshold	Conduct eight community EOC trainings	25%

* An additional tier applies between the target and maximum level.

Performance Level*	Training Rate Measure Performance Target	Goal Achieved
Maximum	100% of applicable employees	200%
Target	85% of applicable employees	100%
Threshold	70% of applicable employees	25%

* Multiple tiers apply between the threshold and target level and between the target and maximum level.

Performance Level*	TCIR Measure Performance Target	Numeric Equivalent	Goal Achieved
Maximum	25% improvement over 2019 achieved results	2.78	200%
Target	5% improvement over 2019 results	3.52	100%
Threshold	90% of 2019 achieved results	4.07	25%

* Multiple tiers apply between the threshold and target level and between the target and maximum level.

Performance Level*	Preventable Vehicle Accident Measure Performance Target	Numeric Equivalent	Goal Achieved
Maximum	20% improvement over 2019 achieved results	34	200%
Target	Maintain 2019 achieved results	42	100%
Threshold	85% of 2019 achieved results	48	25%

* Multiple tiers apply between the threshold and target level and between the target and maximum level.

Performance Level*	Unannounced Site Safety Audits and Immediate Onsite Review Measure Performance Target	Goal Achieved
Maximum	144 audits	200%
Target	72 audits	100%
Threshold	18 audits	25%

* Multiple tiers apply between the threshold and target level and between the target and maximum level.

Summary of Short-Term Performance Goal Achievements for 2020

The following charts set forth the performance goals used for short-term incentive-based compensation for 2020, and the achievement of each metric as certified by the committee for 2020.

Performance Metric	Minimum Threshold Performance	Target Performance	Maximum Performance	Achieved Results
Water Quality	Up to one primary (all states), up to four secondary (California only), up to eight procedural violations (California only)	No primary (all states), up to two secondary (California only), up to four procedural violations (California only)	No primary (all states), no secondary (California only), no procedural violations (California only)	200% – No primary, no secondary, or procedural violations
Customer Service	90.0% of the maximum annual metric	92.1% of the maximum annual metric	99.1% of the maximum annual metric	175% – Achieved 98.7% of the maximum annual metric
Utility Plant	$245 million in company-funded capital expenditures	$275 million in company-funded capital expenditures	$325 million in company-funded capital expenditures	150% – $298.7 million in capital expenditures, of which $294 million was company-funded
Earnings per Share (EPS)	Negative 10% EPS variance from budget	+/- 2.5% EPS variance from budget	Positive10% EPS variance from budget	200% – Positive 21% EPS variance from budget
Safety	▶ Conduct eight community EOC trainings, ▶ 70% of applicable employees trained ▶ 90% of 2019 achieved TCIR results ▶ 85% of 2019 preventable vehicle accident achieved results ▶ 18 unannounced site safety audits and immediate onsite reviews	▶ Conduct 10 community EOC trainings, ▶ 85% of applicable employees trained ▶ 5% improvement over 2019 achieved TCIR results, ▶ Maintain 2019 preventable vehicle accident achieved results, ▶ 72 unannounced site safety audits and immediate onsite reviews	▶ Conduct 12 community EOC trainings ▶ 100% of applicable employees trained ▶ 25% improvement over 2019 achieved TCIR results ▶ 20% improvement over 2019 preventable vehicle accident achieved results ▶ 144 unannounced site safety audits and immediate onsite reviews	▶ 150% ▶ Conducted eight community EOC trainings ▶ 96% of applicable employees trained ▶ 11% improvement over 2019 TCIR results, ▶ 19% improvement over 2019 preventable vehicle accident achieved results ▶ 188 unannounced site safety audits and immediate onsite reviews

(1) Company-funded capital expenditures were $294 million. The Group's 2020 achieved capital expenditures was $298.7 million as reported in Item 7 of the Group's Form 10-K for the year ended December 31, 2020 as filed with the SEC. Excluding developer funded expenditures of $18.9 million and including an increase in accounts payable accrual of $14.2 million for capital project spend, the Group spent $294 million on company-funded capital expenditures for the 2020 performance period.

The table below summarizes the total performance-based short-term incentive compensation earned by our officers for the fiscal year ended December 31, 2020.

Name	2020 Short-Term Incentive Award ($)[1]
Martin A. Kropelnicki	$1,787,704
Thomas F. Smegal	249,795
Paul G. Townsley	220,238
Robert J. Kuta	189,000
Lynne P. McGhee	161,385

(1) The short-term incentive compensation is paid out annually following certification of the prior year's results by the Committee.

2020 Long-term Performance and Time-Based Equity Compensation

The purpose of our long-term equity incentive compensation is to better align executive compensation with the interests of both stockholders and customers, to create incentives for officer recruiting and retention, to encourage long-term performance by our officers, and to promote stock ownership. Risk is taken into account in determining the aggregate amount of incentive compensation and performance criteria, including assessment of risk management and risk mitigation.

As with target short-term incentive compensation, the Committee reviewed the competitive range of long-term equity compensation and total direct compensation for similar positions within the competitive market in making decisions regarding long-term equity compensation awards for 2020. However, the Committee also believes that, in the interest of strengthening and rewarding teamwork and collaboration within the officer team, the annual equity incentive awards granted to each of our officers (other than our President & CEO) should be based on the same objectives and methodology. The Committee recommended awarding our President & CEO a greater value of equity awards in 2020 than our other officers because of his substantially greater level of responsibility and ability to influence Group's operational results.

Based on the methodology described above, for 2020, the Committee set the total value for the equity compensation awards at $920,000 for our President & CEO, $160,000 for the Group's vice presidents, and $95,000 for all other officers, assuming a target level of performance. All equity awards for officers were granted 47% (40% for our President & CEO) in the form of time-based RSAs vesting over three years and 53% (60% for our President & CEO) in the form of performance-based RSUs with a three-year performance period and the opportunity to earn up to 200% of the target performance-based RSU award based on achievement with respect to Committee-approved objectives.

The performance-based RSUs awarded to our officers provide for a three-year performance period with vesting based solely upon the achievement of objective performance criteria. For the performance metrics applicable to the 2020 performance-based RSUs, the Committee approved a three-year performance metric and will certify the level of achievement at the end of the three-year performance period. The number of shares awarded at the end of the three-year performance period is based on the extent the performance criteria is met over such time and subject to the officer's continued employment through such date. The following section provides a more detailed look at each revised performance metric, along with the maximum, target, and threshold levels for each and the benefits derived by our customers:

- **Return on Equity:** This metric measures return on equity (ROE) as shown in the public financial statements of California Water Service Group. It is defined as net income divided by average common stockholders' equity for the three-year performance period. The final three-year achievement will be certified at the end of the three-year performance period. Stockholders expect the Company to earn its authorized return on equity for its regulated business. For this reason, the metric uses the authorized ROE as the target for 100% performance achievement. The rationale for tiers above and below the authorized ROE is to account for regulatory mechanisms and lag.

Performance Level*	Annual Return on Common Stockholders' Equity	Goal Achieved
Maximum	Target plus 50 basis points	200%
Target	California authorized ROE	100%
Threshold	Target minus 200 basis points	20%

* An additional tier applies between the target and maximum level.

- **Growth in Stockholders' Equity:** This metric measures growth in stockholders' equity by the accumulation of two factors over the performance period, growth in total stockholders' equity and actual dividends paid in the calendar year. These growth values can be objectively validated using the Company's audited annual financial statements. The metric, in a stock-price neutral way, measures the growth in stockholders' equity created by the Company over the performance period. Investors in water utilities are interested in value creation along with dividend growth.

Performance Level*	Accumulation of Stockholder Value Over the Performance Period	Goal Achieved
Maximum	$450 million	200%
Target	$350 million	100%
Threshold	$275 million	25%

* Multiple tiers apply between the threshold and target level and between the target and maximum level.

- **Environmental Leadership:** An increasing number of investors and other stakeholders prioritize the Company's Environmental, Social, and Governance (ESG) reporting and performance. Management has adopted corporate objectives in 2020 to improve reporting, study climate change impacts to water supply, and manage supply and conservation holistically. Improving ESG disclosures will be a multi-year effort.

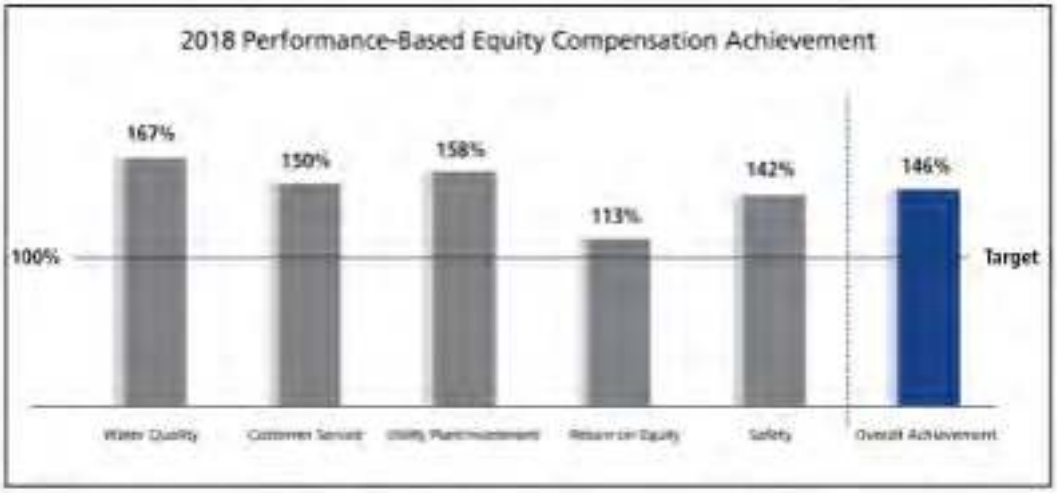
Performance Level*	Performance Target	Goal Achieved
Maximum	Annual framework-compliant reporting of material ESG data, completion of water supply risk assessment from climate change and signing agreements or beginning construction on with three water supply diversification projects by 2022	200%
Target	Annual framework-compliant reporting of material ESG data, completion of water supply risk assessment from climate change	100%
Threshold	Annual framework-compliant reporting of material ESG data	50%

* An additional tier applies between the target and maximum level.

2018 Performance-Based Equity Compensation Achievement

In 2018, we granted performance-based equity in the form of RSUs to our officers for the three-year performance period ending on December 31, 2020. The component weighting is 20% for each of the five performance metric. The payouts are summarized below:

Performance Metric	Annual Threshold Performance	Annual Target Performance	Annual Maximum Performance
Water Quality	Up to one primary, up to four secondary, up to eight procedural violations	No primary, up to two secondary, up to four procedural violations	No primary, no secondary, no procedural violations
Customer Service	92.5% of maximum annual metric	95.5% of maximum annual metric	99.5% of maximum annual metric
Utility Plant	$195 million in 2018, $240 million in 2019, $245 in million in 2020	$210 million in 2018, $255 million in 2019, $275 million in 2020	$230 million in 2018, $275 million in 2019, $325 million in 2020
Return on Equity	7.20% in 2018, 2019 and 2020	CPUC authorized ROE: 9.20% in 2018, 2019, and 2020	9.70% in 2018, 2019, and 2020
Safety	10% improvement in TCIR, in preventable accidents measures over 2017 results, and 65% applicable employees trained	25% improvement in TCIR, in preventable accidents measures over 2017 results, and 80% of applicable employees trained	40% improvement in TCIR, in preventable accidents measures over 2017 results, and 100% of applicable employees trained



Certified results for each perspective year of the three year performance are as follows:

The table below summarizes the total performance-based equity compensation earned by our officers for the three-year performance period ended December 31, 2020

Name	2018 Performance Stock Earned ($)[1]
Martin A. Kropelnicki	$579,065
Thomas F. Smegal	151,095
Paul G. Townsley	151,095
Robert J. Kuta	151,095
Lynne P. McGhee	151,095

(1) The shares for the 2018 performance stock award, which is comprised of the years 2018, 2019, and 2020, were awarded following the end of the three-year performance period on March 5, 2021.

2021 Performance Based Compensation

There was no increase to the target value of the performance-based equity compensation awards for 2021 under the annual long-term incentive program or to the short-term incentive-based compensation awards.

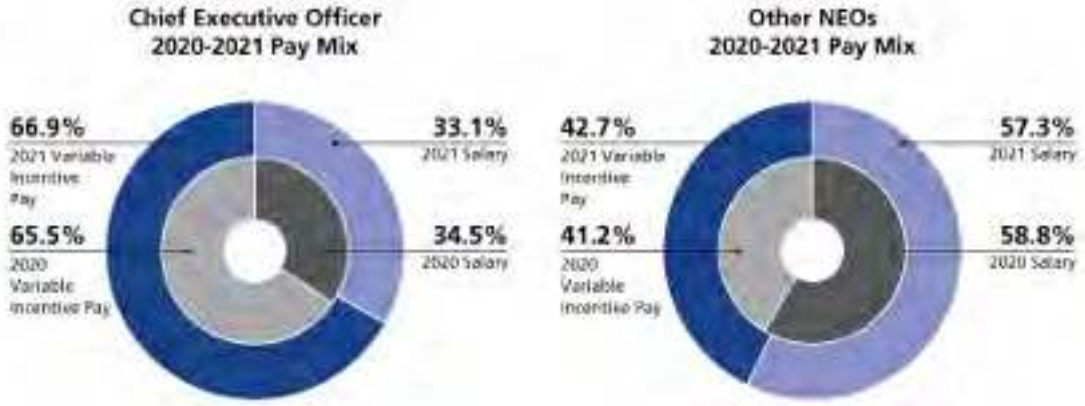
For the CEO, the equity awards vest over three years respectively, with 60% subject to the achievement of long-term performance-based metrics and 40% subject to time-based vesting and continued employment. For all other officers, the equity awards vest over three years respectively, with 53% subject to the achievement of long-term performance-based metrics and 47% subject to time-based vesting and continued employment.

On March 2, 2021, the following awards were granted for the 2021 through 2023 performance period:

- President & CEO – 6,428 shares of RSAs and 9,642 RSUs
- Group's Vice Presidents – 1,311 shares of RSAs and 1,485 RSUs
- Other officers – 787 shares of RSAs and 874 RSUs

All RSUs are subject to performance-based vesting.

The following charts illustrate target variable incentive pay as a percentage of compensation for 2020 and 2021:



5 Other Compensation Programs

Basic and Supplemental Pension Plan Benefits (SERP)

In addition to the tax qualified defined benefit plan that covers all permanent employees, supplemental retirement benefits are provided to our officers under the SERP. The SERP is designed primarily to compensate for limitations imposed by the Internal Revenue Code (Code) on allocations and benefits that may be paid to officers under the Group's tax qualified plan. Because the Code restricts benefits under the tax qualified plan, our officers otherwise would not be eligible to receive the retirement benefits that are proportional to the benefits received by our employees. The benefits under the SERP are obtained by applying similar benefit provisions of the Pension Plan to all compensation included under the Pension Plan, without regard to these limits, reduced by benefits actually accrued under the Pension Plan. The SERP is structured as such that benefits are paid to our officers on a "pay as you go" basis. The SERP is an unfunded, unsecured obligation of the Group and is designed to assist in attracting and retaining key officers while providing a competitive, total compensation program. The annual expenses of the pension and SERP have allowable costs recovered in rates through the regulatory process in California and other states. We believe that pension benefits are an important recruitment and retention tool for our employees and is consistent with practice among most of our peers.

No pension benefits will be paid to any participant until after retirement. Any pension amounts listed in this Proxy Statement are the year-over-year, non-cash, changes in the actuarial present value of the accrued pension liability and do not represent actual cash compensation paid. During 2020, the SERP was amended, increasing the plan's unreduced retirement age from 60 to 65.

Deferred Compensation Plan

The Group maintains a deferred compensation plan for its directors, officers, and eligible employees. The plan is intended to promote retention by providing eligible employees, including the officers, with a long-term savings opportunity on an income tax-deferred basis. This plan is voluntary and funded by the individuals who elect to participate in the program. There are no company or company-matching contributions.

401(k) Plan

All employees satisfying the eligibility requirements are entitled to participate in our 401(k) plan and receive matching contributions from the Group. Pursuant to the plan, all employees, including officers, are entitled to contribute up to the statutory limit set by the Internal Revenue Service (IRS) and the Group matches 75% for each dollar contributed up to eight percent for a maximum company-matching contribution of six percent of employee's eligible earnings.

ATTACHMENT 4: US INFLATION CALCULATOR

US Inflation Calculator

Easily calculate how the buying power of the US dollar has changed from 1913-present, get inflation rates and inflation news

US INFLATION HOME | INFLATION AND PRICES | ENERGY, FOOD & HEALTH CARE INFLATION | ITEMS ADJUSTED FOR INFLAT

RESOURCE LINKS

- Bureau of Labor Statistics
- Percent Calculators
- Reserve Monetary Policy
- Reuters Inflation News

This US Inflation Calculator measures the buying power of the dollar over time. To use it, just enter any two dates from 1913 to 2021, an amount, and then click 'Calculate'. (Inflation data for 2022 will be available Feb. 10 when pricing data for January is released.)

Inflation Calculator

If in 2016 (enter year)

I purchased an item for $ 100.00

then in 2020 (enter year)

that same item would cost **$107.83**

Cumulative rate of inflation **7.8%**

CALCULATE

ATTACHMENT 5: APNEWS

US economy shrank 3.5% in 2020 after growing 4% last quarter

By MARTIN CRUTSINGER January 28, 2021

WASHINGTON (AP) — Stuck in the grip of a viral pandemic, the U.S. economy grew at a 4% annual rate in the final three months of 2020 and shrank last year by the largest amount in 74 years.

For 2020 as a whole, a year when the coronavirus inflicted the worst economic freeze since the end of World War II, the economy contracted 3.5% and clouded the outlook for the coming year. The economic damage followed the eruption of the pandemic 10 months ago and the deep recession it triggered, with tens of millions of Americans left jobless.

Thursday's report from the government estimated that the nation's gross domestic product — its total output of goods and services — slowed sharply in the October-December quarter from a record 33.4% surge in the July-September quarter. That gain had followed a record-shattering 31.4% annual plunge in the April-June quarter, when the economy sank into a free-fall.

The outlook for 2021 remains hazy. Economists warn that a sustained recovery won't likely take hold until vaccines are distributed and administered nationwide and government-enacted rescue aid spreads through the economy — a process likely to take months. In the meantime, millions of Americans continue to struggle.

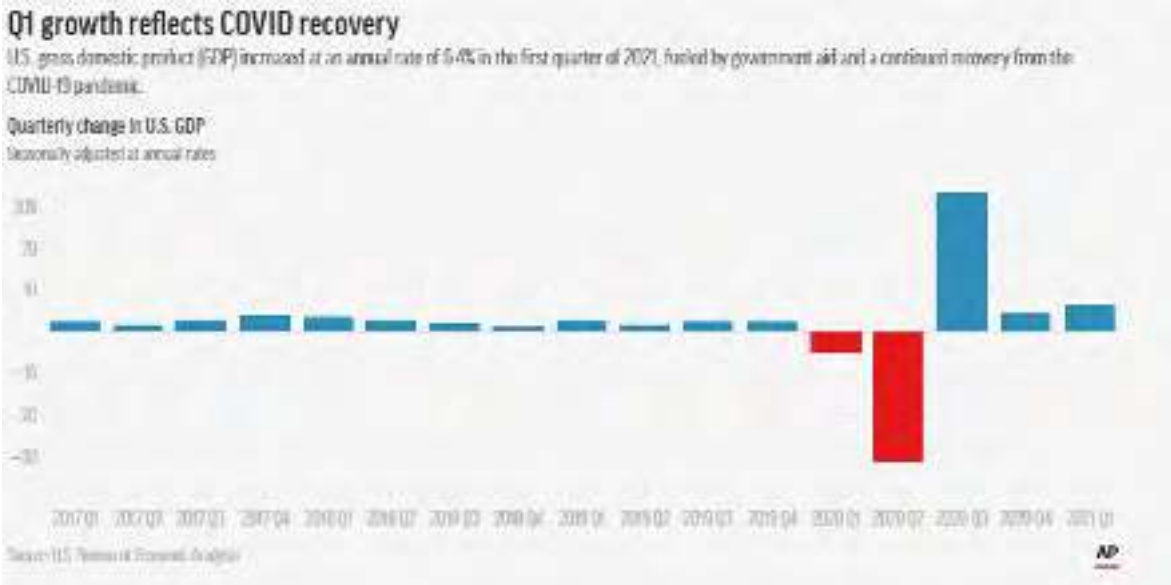
On Thursday, for example, the government reported that while applications for unemployment benefits declined last week, they remained at a historically high 847,000, evidence that companies keep cutting jobs as the pandemic continues to rage. Before the virus erupted in the United States in March, weekly applications for jobless aid had never topped 700,000, even during the Great Recession.

IMPACT ON THE ECONOMY:

- Fed stresses its commitment to low rates as economy stumbles
- Home prices rise at fastest pace in more than 6 years
- This Week: Consumer confidence, Apple earns, new home sales

Even as the economy shrank last year, the stock market managed to rise sharply, with the S&P 500 index gaining 16%. The disparity between the two reflected a time-tested adage: The stock market is a forward-looking indicator, with investors focused on prospects for future corporate profits and economic health rather than on the current state of the economy. So even as the economy was sinking last year, investors looked ahead to hopes for vaccines and government aid and to solid company profits, especially among tech companies, which drove last year's gains.

The pandemic's blow to the economy early last spring ended the longest U.S. economic expansion on record — nearly 11 years. The damage from the virus caused GDP to contract at a 5% annual rate in last year's January-March quarter. Since then, thousands of businesses have closed, nearly 10 million people remain out of work and more than 400,000 Americans have died from the virus.



The government's report Thursday was its first of three estimates of growth last quarter; the figure will be revised twice in the coming weeks. The report showed that consumer spending, which accounts for about 70% of the economy, slowed sharply last quarter to a 2.5% annual gain from a 41% surge in the July-September quarter.

Last quarter's economy was instead driven in part by business investment and housing, which has been a star performer during the past year, reflecting record-low mortgage rates and a demand for more household space. Housing grew at a sizzling 33.5% annual rate, business investment at a 13.8% rate. Government spending, though, shrank at a 1.2% rate last quarter. State and local governments have started to resort to layoffs in response to falling tax revenue.

The estimated drop in GDP for 2020 was the first such decline since a 2.5% fall in 2009, during the recession that followed the 2008 financial crisis. That was the deepest annual setback since the economy shrank 11.6% in 1946, when the economy was demobilizing after World War II.

The GDP report showed that former President Donald Trump ended his presidency with GDP averaging annual gains of 1% during his four years. That was lower than the 1.6% annual GDP gains during the Obama administration, a period that also included a recession.

In the coming months, as vaccines become widely distributed and administered, growth is expected to revive. But until then, many Americans will struggle as consumers and businesses hunker down and hold back on spending even though the economy will likely keep growing. Gregory Daco, chief economist at Oxford Economics, said he expects growth to weaken in the current quarter to a roughly 2% annual rate.

But Daco foresees a brightening outlook for the rest of this year. His view assumes a widespread use of vaccines, increased government aid from Congress' approval of at least part of President Joe Biden's $1.9 trillion relief package and pent-up spending from a savings buildup among higher-income families during the pandemic. A $900 billion rescue aid package that the government enacted late last year is also providing some support.

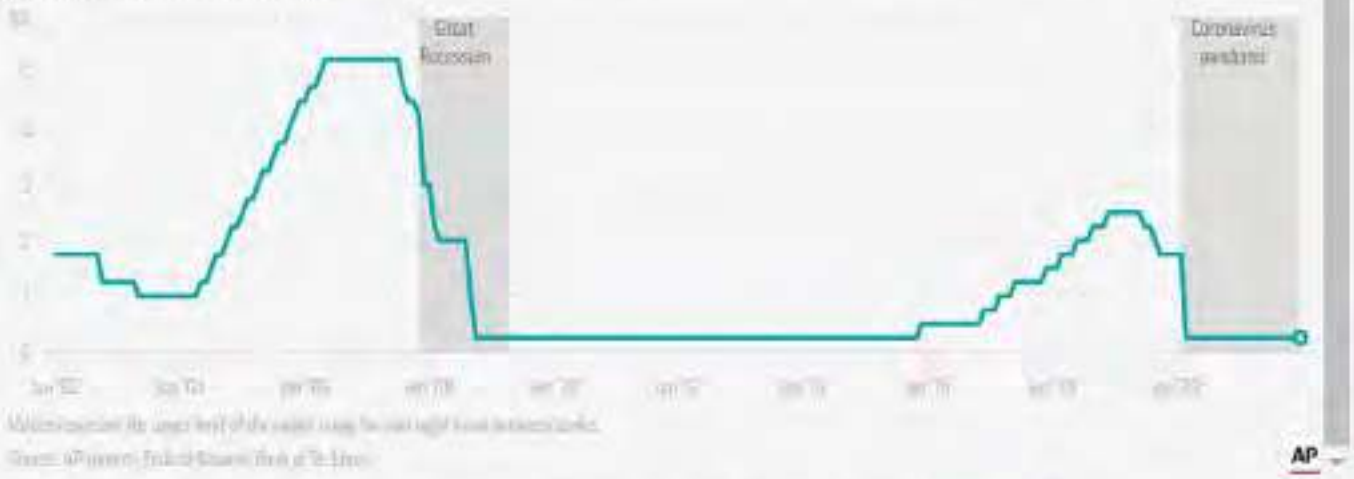
"The vaccine rollout is essential," Daco said. "Without an improving health situation, we are not going to get any improvement in the economic situation."

Daco said he thinks an economic rebound will produce annual growth this year of 5%. Earlier this week, the International Monetary Fund forecast that the U.S. economy will grow 5.1% this year and 2.5% in 2022.

On Wednesday, the Federal Reserve took note of the economic threats. It kept its benchmark interest rate at a record low near zero and stressed that it would keep pursuing its low-rate policies until a recovery is well underway. The Fed acknowledged that the economy has faltered in recent months, with hiring weakening especially in industries affected by the raging pandemic, notably restaurants, bars, hotels and others involved in face-to-face public contact.

Fed signals rate hike coming

The Federal Reserve, which has kept its benchmark federal funds rate near zero since the coronavirus pandemic disrupted the economy in 2020, has indicated it may soon raise rates to tame inflation.



Hiring in the United States has slowed for six straight months, and employers shed jobs in December for the first time since April. The job market has sputtered as the pandemic and colder weather have discouraged Americans from traveling, shopping, dining out or visiting entertainment venues. Retail sales have declined for three straight months.

Mark Zandi, chief economist at Moody's Analytics, predicts that about 5 million lost U.S. jobs will never return, forcing the unemployed in such industries as restaurants and bars to find work in other sectors.

And many economists warn that without further government financial support, the economy risks succumbing to another recession. They note that much of the aid for individuals from the $900 billion package that was enacted late last year is set to expire in mid-March.

ATTACHMENT 6: GENERAL ORDER 103-A

II. Standards of Service

1. General

A. Subject to the Commission's oversight, each utility shall operate its system so as to deliver reliable, high quality service to its customers at reasonable cost.

B. Each water utility shall ensure that it complies with the Department's permit requirements and all applicable drinking water regulations.

C. Each wastewater utility shall ensure that it complies with the State Board, Regional Board, and County Health Department permit requirements and all applicable regulations.

2. Water Quality and Supply Requirements

A. Quality of Water

(1) General. Any utility serving water for human consumption shall provide water that is not harmful or dangerous to health and, insofar as practicable, free from objectionable odors, taste, color and turbidity.

(2) The utility shall comply with applicable state and federal laws pertaining to water quality, and with related regulations of the Department and US EPA and all additional requirements of the Commission.

(3) If the Department or US EPA finds a utility to be out of compliance with the water quality regulations specified in section II.2.A(2), the utility shall promptly notify the Commission, by telephone or e-mail, with confirmation in writing. Any report submitted to the Department or US EPA in such circumstances shall be submitted concurrently to the Commission.

(4) If a utility notifies its customers of a water quality event, it shall simultaneously provide such notice to the Commission, by telephone or e-mail, with confirmation in writing.

(5) Each utility shall have representative samples of its water analyzed by a Department accredited laboratory, as required pursuant to California Health and Safety Code Sections 116390 and 100825-100920, at intervals specified by the Department.

(6) It is not intended that any rule contained in this General Order shall supersede or conflict with the regulations of the Department or US EPA. Compliance by a utility with the regulations of the Department or US EPA on a particular subject matter shall constitute compliance with such of these rules as relate to the same subject matter except as otherwise ordered by the Commission.

(7) In accordance with the Commission's Decision 07-05-062 or subsequent order, in each general rate case of a Class A water utility, the Presiding Officer shall appoint a water quality expert to assist the Commission in making specific findings and recommendations concerning the Class A water utilities' water quality compliance, unless good cause exists to forego such appointment.

(8) Appointment of a water expert may not be necessary if the utility has met all sampling and testing requirements, and has no test results on facilities in active service that exceed the maximum contaminant levels (MCLs) established by the Department, and no party raises concerns of merit.

(9) Recycled water shall meet the Department's recycled water requirements of Article 4, Chapter 7, Part 12 of Division 104 of the California Health and Safety Code.

(10) Any unauthorized waste discharge (as defined in the utility's tariff rules) into a utility's wastewater system shall be grounds for disconnection at the customer service lateral from the utility's system.

B. Quantity of Water

(1) Source

All water supplied by the water utility shall be:

(a) Obtained from a permitted source;

(b) Obtained from a source or sources reasonably adequate to provide a reliable supply of water; or

(c) Produced from a source or sources described in the utility's Urban Water Management Plan (UWMP) that has been reviewed by the Commission in its most recent general rate case or in an

amendment to such UWMP that the utility has submitted by advice letter for review by the Division of Water and Audits, or its successor.

(2) Operation of Supply System

(a) The potable water supply system, including wells, reservoirs, pumping equipment, treatment and filtration works, mains, meters and service pipes shall be free from sanitary defects.

(b) No physical connection between the distribution system of a public potable water supply and that of any other water supply shall be permitted except in compliance with the Regulations Relating to Cross Connections of the Department contained in the CCR, Title 17, Division 1, Chapter 5, Subchapter 1, Group 4, Articles 1 and 2, or its successor.

(c) Production from groundwater and surface water sources shall comply with relevant Waterworks Standards and, in the case of a utility that has submitted a UWMP for Commission review, shall be conducted in accordance with a UWMP that has been reviewed by the Commission in the utility's most recent general rate case or in accordance with an amendment to such UWMP that the utility has submitted by advice letter for review by the Division of Water and Audits, or its successor.

(3) Potable Water System Capacity

(a) A system's facilities shall have the capacity to meet the source capacity requirements as defined in the Waterworks Standards, CCR Title 22, Section 64554, or its successor. If, at any time, the system does not have this capacity, the utility shall request a service connection moratorium until such time as it can demonstrate the source capacity has been increased to meet system requirements.

(b) If a system provides potable water for fire protection service, new portions of the system shall have supply and storage facilities that are designed to meet MDD plus the required fire flow at the time of design. *See*, Section VI of this General Order for fire flow guidelines.

(c) The system's MDD and PHD shall be determined in accordance with Waterworks Standards, CCR Title 22, Section 64554, or its successor.

(4) Sewer System Capacity

Once use of a utility sewer system's facilities has reached 80 % of design average daily flow as specified in the permit as issued by the Regional Board, the utility shall request a service connection moratorium until such time as it can demonstrate the system capacity has been increased to meet system requirements.

3. Continuity of Service

A. Emergency Interruptions

(1) Each utility shall make all reasonable efforts to prevent interruptions to service and when such interruptions occur shall reestablish service with the shortest possible delay consistent with the safety of its customers, its employees, and the general public.

(2) If an emergency interruption of service affects the service to any public fire protection device, within 120 minutes of discovery of the interruption by the utility, the utility shall notify the Fire Chief or other public official responsible for fire protection of such interruption and of subsequent restoration of normal service.

B. Scheduled Interruptions

(1) Whenever any utility finds it necessary to schedule an interruption to its service, it shall notify all customers to be affected by the interruption, stating the approximate time and anticipated duration of the interruption. Scheduled interruptions shall be made at such hours as will provide the least inconvenience to the customers consistent with reasonable operations.

(2) Where public fire protection is provided by the facilities affected by the interruptions, the utility shall report to the Fire Chief or other officials responsible for fire protection when the interruption is scheduled, the approximate time, and anticipated duration. In addition, the Fire Chief or other official responsible for fire protection shall be notified within 60 minutes upon restoration of service.

C. Minimum Standards for Repairs

All repairs associated with a utility's water and wastewater system shall include, as a minimum:

(1) a determination whether temporary service can be provided;

(2) the proper used of road hazard signs, traffic cones, and barriers;

(3) a call to the regional underground service alert center to identify buried utilities in the area;

(4) hydrostatic testing per applicable AWWA pipe standard, and bacteriological testing according to AWWA C651;

(5) disinfection of mains, and the Department's or County Health's permission to return the line to service;

(6) backfill and pipe bedding shall be per applicable AWWA pipe installation standard;

(7) ground surface shall be repaired to at least its original condition.

D. Records of Interruptions

Each utility shall keep a complete record of all interruptions, both emergency and scheduled, when more than 10 service connections are interrupted. These records of interruptions shall include the information listed in Appendix C to this General Order and shall be kept with the utility's records in accordance with the retention schedule listed in Appendix C.

E. Reports to Commission

All emergency interruptions involving an entire system, an entire separately operated system of a multi-system utility or a major portion of an entire or separately operated system shall be reported to the Commission by the utility as soon as possible after occurrence, by telephone or e-mail stating the cause, date, time, estimated duration, location, approximate number of customers affected and remedial steps being taken to restore service.

4. Water Supply Measurement

A. Measuring Devices

Measuring devices known as source flow meters are required for each water system source, except at any inactive source. In accordance with Waterworks Standards, CCR Title 22, Section 64561, the utility shall, for each water system:

(1) Install a flow meter at a location between each water source and the entry point to the distribution system;

(2) Meter the quantity of water flow from each source to determine total production; and

VIII. Customer Service and Reporting Standards for Water and Wastewater Utilities

1. General

Consumers expect and should receive service that is consistently adequate, reliable, and in compliance with applicable water quality standards. Standardized reporting requirements and regular reporting are necessary for regulators to be able to monitor service quality and changes in performance. Reporting requirements should be carefully designed to yield accurate data that is uniform and consistent.

2. Reporting

When a utility is required to report the following information it shall do so in accordance with Appendix E of this General Order or the utility's tariffs.

(A) Performance results including meter reading and work completion standards shall be aggregated quarterly, and shall be reported annually to the Commission in the utility's annual report.

(B) Reports on company-wide performance shall be made in conjunction with each utility's annual report to the Commission's Division of Water and Audits (or its successor), with copies provided to the DRA (or its successor).

(C) Reports shall include both annual and quarterly averages. Annual averages shall be derived from raw data, not by averaging quarterly averages.

(D) Where quarterly performance is substantially out of compliance with an applicable standard (defined in the context of each performance measure), the utility shall within 30 days of the end of the quarter in which this provision is triggered, submit a plan to Division of Water and Audits, or its successor, indicating how it will remedy the deficiency.

(E) Performance shall be evaluated and reported as a percentage to one decimal place for all performance areas unless otherwise specified. Actual performance shall be rounded up when the relevant decimal place is 5 or more. The utility shall retain all of its reports that support the results for each of the performance areas for a period of not less than 36 months after the results are reported. The utility shall provide these reports upon request to the Commission.

(F) The utility shall explain in its annual report any change to the utility's measurement protocol or to the internal reporting methods that are used to obtain the data measured.

(G) The utility's annual report shall identify any missing data or events that could reasonably affect the quality of the data reported.

(H) The utility may seek a variance from any applicable performance standard in accordance with Section I.8.A of this General Order. A variance may be granted for demonstrated good cause, such as where the circumstances causing the failure were beyond the utility's control, and the utility can demonstrate that its level of preparedness and response was reasonable in light of the cause of the failure.

3. Telephone Performance Standards

Each utility shall provide emergency telephone access, including after-hours access, for its customers. If a telephone complaint pertains to an urgent service issue presenting health or safety concerns, the utility shall respond within 24 hours. Class A and B water utilities shall comply with telephone performance standards set forth in Appendix E of this General Order.

4. Billing Performance Standards

(A) Class A and B water utilities shall establish billing performance standards as set forth in Appendix E of this General Order.

(B) Performance results shall be reported in accordance with Section VIII.B.

5. Meter Reading Performance Standards

(A) Class A and B water utilities shall establish meter reading performance standards in accordance with Appendix E of this General Order.

(B) Each utility shall report their performance results in accordance with Section VIII.B.

6. Work Completion Performance Standards

(A) When scheduling appointments, the utility will provide the customer with a four-hour period during which the utility representative will be at the customer's premises. The utility must attempt to notify the customer as soon as it is aware that the meeting time must be changed. Class A and B water utilities shall determine the performance of the scheduled appointment in accordance with Appendix E of this General Order.

(B) Class A and B water utilities shall determine the percentage of customer-requested work not completed on or before the scheduled date in accordance with Appendix E of this General Order.

(C) The utility must correct all problems that result from the flooding of sewers for which it is responsible within 48 hours of being informed of the flooding event. Extreme precipitation events, such as 100 or 500 year floods, shall be addressed on a best efforts basis by the utility.

7. Response to Customer and Regulatory Complaint Performance Standards

(A) Upon complaint to the utility by a customer communicated to the utility's office, by letter, by telephone, or by email or to the utility's internet web page if it supplies a site for customer service, the utility shall make every reasonable effort to contact the customer within three business days to acknowledge receipt of the complaint.

(B) The utility shall provide, within 10 business days of receipt, a substantive response to customer complaints expressed directly to the utility by any method of contact.

(C) The utility shall provide a substantive response to informal customer complaints to the Commission within 20 business days after the complaint has been forwarded to the utility by the Commission.

(D) If the utility needs additional time to respond fully to a complaint received directly from a customer or indirectly by way of the Commission, the utility shall within the initial response period request a specific additional

time for response and shall provide a final response within the requested additional time.

(E) The utility shall keep a record of each complaint, categorized by the nature of the complaint, that shows the name and address of the complainant, the date and nature of the complaint, and the nature and date of adjustment or disposition, for a period lasting from the time the complaint is filed with the utility until issuance of the principal decision in its next general rate case.

(F) After issuance of the general rate case final decision subsequent to the filing of the complaint, the utility shall retain, at its option, either the original complaints or a summary of such complaints. Inquiries with reference to rates or charges, which require no further action by the utility, need not be recorded. Complaints that are determined to be out of the direct control of the utility (including but not limited to complaints relating to natural disasters) may be recorded in a summary list only.

(G) Class A and B water utilities shall establish a customer and regulatory complaint performance measure as set forth in Appendix E.

ATTACHMENT 7: CALIFORNIA WATER SERVICE CO. 2020 ANNUAL REPORT. SCHEDULE C-3 EMPLOYEES AND THEIR COMPENSATION

SCHEDULE C-3
Employees and Their Compensation
(Charged to Account 502 - Operating Expenses - Schedule B-2)

Line No.	Classification (a)	Number at End of Year (b)	Total Salaries and Wages Paid During Year (c)
1	Employees - Source of supply		
2	Employees - Pumping		
3	Employees - Water treatment		
4	Employees - Transmission and distribution		
5	Employees - Customer account	705	
6	Employees - Sales		
7	Employees - Administrative		
8	General officers	14	
9	General office	346	
10	Total	1,065	$ 111,821,287

ATTACHMENT 8: VISALIA LEASE CONTRACTS

FIRST AMENDMENT
TO
LEASE AGREEMENT WITH OPTION TO PURCHASE

THIS FIRST AMENDMENT TO LEASE AGREEMENT WITH OPTION TO PURCHASE (this ***Amendment***), effective this December 31, 2020, is made by and between **N. ROBERT NIELSEN, INC.**, a California corporation (as ***Lessor***) and **CALIFORNIA WATER SERVICE COMPANY**, a California corporation (as ***Lessee***).

RECITALS

A. Lessor leases to Lessee the Premises, being the real property, building improvements (approx. 9,766 sf), fixtures, and appurtenances located at 132 N. Valley Oaks Drive, Visalia, California 93292 and more particularly defined under the terms of that *Lease Agreement With Option to Purchase*, dated January 1, 2016 (i.e., the ***Lease***).

B. The Lease expired by its terms on December 31, 2020, but Lessor permitted Lessee to remain on the Premises as a holdover tenant on a month-to-month basis under the Lease.

C. Lessee desires to continue leasing the Premises, and Lessor and Lessee desire to amend the provisions for rent, maintenance, and repairs, among other things, on the terms and conditions below.

AGREEMENT

NOW, THEREFORE, In consideration of the mutual promises between the parties and for other good and valuable consideration, the receipt and sufficiency of which is acknowledged, the parties agree as follows.

1. **TERM**. The Term of the Lease is extended for an additional one (1) year, so that the Lease will expire by its terms on December 31, 2021. In addition, Lessee will have two, one-year options to extend the term of the Lease up to two successive years. Lessee may exercise its options to extend the Term of the Lease by providing Lessor with at least sixty (60) days' notice prior to the expiration of the then-current term of the Lease.

2. **RENT** Commencing January 1, 2021 and for the remaining term of the Lease, the Base Rent set forth in Section 2 of the Lease shall be:

PERIOD	BASE RENT
1/1/2021 to 12/31/2021	$5,000.00/month
1/1/2022 to 12/31/2022 *(option period 1)*	$5,150.00/month
1/1/2023 to 12/31/2023 *(option period 2)*	$5,304.50/month

ATTACHMENT 9: PG&E PSPS REPORTS

Review reports filed with the California Public Utilities Commission

PG&E files a report with the California Public Utilities Commission (CPUC) after each Public Safety Power Shutoff (PSPS) event. We also submit progress reports on our continued efforts to develop best practices for PSPS events, improve community preparedness and regional coordination, and use technology to improve safety.

2021 Reports

October 14-16, 2021 PSPS Event

PUBLIC SAFETY POWER SHUTOFF OCT. 14, 2021 REPORT (PDF, 5.4 MB) >

PUBLIC SAFETY POWER SHUTOFF OCT. 14, 2021 REPORT – SUPPLEMENTAL EXCEL FILE (XLSX, 168 KB) >

OCTOBER 14, 2021 PSPS EVENT POLYGONS OF DE-ENERGIZED AREAS GEODATABASE FILE (ZIP, 59 KB) >

OCTOBER 14, 2021 PSPS EVENT DAMAGE POINTS GEODATABASE FILE (ZIP, 22 KB) >

October 11-12, 2021 PSPS Event

PUBLIC SAFETY POWER SHUTOFF OCT. 11, 2021 REPORT (PDF, 6.7 MB) >

PUBLIC SAFETY POWER SHUTOFF OCT. 11, 2021 REPORT – SUPPLEMENTAL EXCEL FILE (XLSX, 353 KB) >

OCTOBER 11, 2021 PSPS EVENT POLYGONS OF DE-ENERGIZED AREAS GEODATABASE FILE (ZIP, 748 KB) >

OCTOBER 11, 2021 PSPS EVENT DAMAGE POINTS GEODATABASE FILE (ZIP, 22 KB) >

September 20-21, 2021 PSPS Event

PUBLIC SAFETY POWER SHUTOFF SEP. 20, 2021 REPORT (PDF, 6.5 MB) >

PUBLIC SAFETY POWER SHUTOFF SEP. 20, 2021 REPORT – SUPPLEMENTAL EXCEL FILE (XLSX, 325 KB) >

SEPTEMBER 20, 2021 PSPS EVENT POLYGONS OF DE-ENERGIZED AREAS GEODATABASE FILE (ZIP, 211 KB) >

NOTE: THERE WERE NO DAMAGES OR HAZARDS FOUND IN POST-WEATHER PATROLS FOR THIS PSPS EVENT.

August 17-19, 2021 PSPS Event

PUBLIC SAFETY POWER SHUTOFF AUG. 17, 2021 REPORT (PDF, 6.8 MB) >

PUBLIC SAFETY POWER SHUTOFF AUG. 17, 2021 REPORT – SUPPLEMENTAL EXCEL FILE (XLSX, 363 KB) >

AUGUST 17, 2021 PSPS EVENT POLYGONS OF DE-ENERGIZED AREAS GEODATABASE FILE (ZIP, 1.3 MB) >

AUGUST 17, 2021 PSPS EVENT DAMAGE POINTS GEODATABASE FILE (ZIP, 22 KB) >

January 19, 2021 PSPS Event

PUBLIC SAFETY POWER SHUTOFF JAN. 19, 2021 REPORT (PDF, 10.6 MB) >

2020 Reports

Download the Pacific Gas and Electric Company (PG&E) Wildfire & Public Safety Power Shutoff (PSPS) Outreach Workplan and Budget (PDF, 1.5 MB)

Download the Public Safety Power Shutoff Oct. 21, 2020 Report (PDF, 10 MB)

Download the Public Safety Power Shutoff Dec. 7, 2020 Report (PDF, 2.2 MB)

Download the Public Safety Power Shutoff Oct. 14, 2020 Report (PDF, 6.0 MB)

Download the Public Safety Power Shutoff Dec. 2, 2020 Report (PDF, 4.7 MB)

Download the Public Safety Power Shutoff Sep. 27, 2020 Report (PDF, 5.6 MB)

Download the Public Safety Power Shutoff Oct. 25, 2020 Report (PDF, 5.3 MB)

Download the Public Safety Power Shutoff Sep. 7, 2020 Report (PDF, 3.5 MB)

2019 Reports

Download the Public Safety Power Shutoff Nov. 20-21, 2019 Report, Amended (PDF, 3.2 MB)

Download the Public Safety Power Shutoff Oct. 5-6, 2019 Report, Second Amendment (PDF, 3.2 MB)

Download the Public Safety Power Shutoff Oct. 26 - Nov. 1, 2019 Report, Second Amendment (PDF, 3.3 MB)

Download the Public Safety Power Shutoff Sep. 23-26, 2019 Report, Amended (PDF, 1.8 MB)

Download the Public Safety Power Shutoff Oct. 23-25, 2019 Report, Amended (PDF, 4.2 MB)

Download the Public Safety Power Shutoff Jun. 8-9, 2019 Report, Amended (PDF, 4.8 MB)

Download the Public Safety Power Shutoff Oct. 9-12, 2019 Report, Second Amendment (PDF, 5.2 MB)

2018 Reports

Download the Public Safety Power Shutoff Nov. 6, 2018 Report (PDF, 344 KB)

Download the Public Safety Power Shutoff Oct. 14-17, 2018 Report (PDF, 1.2 MB)

Progress Reports

Download the second PSPS Phase 2 Progress report (Dec. 7, 2020) (PDF, 759kB)

Download the second Phase 1 Progress Report (Mar. 4, 2020) (PDF, 1.2 MB)

Download the first PSPS Phase 2 Progress Report (Aug. 4, 2020) (PDF, 1.9 MB)

Download the first Phase 1 Progress Report (Sep. 4, 2019) (PDF, 2.8 MB)

Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie L. Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	Kerrie Evans
Witness(es)	:	

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

REPORT AND RECOMMENDATIONS ON BALANCING AND MEMORANDUM ACCOUNTS, SPECIAL REQUESTS #11, #12, AND #13

California Water Service Company
General Rate Case
Application 21-07-002

San Francisco, California
February 4, 2022

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MEMORANDUM

The Public Advocates Office at the California Public Utilities Commission (Cal Advocates) examined requests and data presented by California Water Service Company (Cal Water) in Application (A.) 21-07-002 (Application) to provide the California Public Utilities Commission (Commission) with recommendations that represent the interests of Cal Water's ratepayers for safe and reliable service at the lowest cost. This Report is prepared by Kerrie Evans. Brian Yu is Cal Advocates' project lead for this proceeding. Syreeta Gibbs is the oversight Program & Project Supervisor, and Marybelle Ang & Caryn Mandelbaum are the legal counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect of the requests presented in the Application, the absence from Cal Advocates' testimony of any particular issue does not constitute its endorsement or acceptance of the underlying request, or the methodology or policy position supporting the request.

CHAPTER 1 EXECUTIVE SUMMARY

In this chapter, Cal Advocates addresses Cal Water's Special Requests (SR) #11, #12, #13 and other proposed actions in "Chapter 11, Other Testimony" regarding various memorandum and balancing accounts.[1] For each account, Cal Water includes a status with proposed actions, e.g., establishment, amortization, continuation, or closure of the account.

In SR #11, Cal Water requests a one-year extension (until December 31, 2025) for each of its Asbestos Litigation Memorandum Account and the 2018 Tax Accounting Memorandum Account.[2] This reasonable request should be approved.

SR #12 requests authority to amortize the totals of four balancing accounts[3] with their 2022 end of year balances, by Tier 1 Advice Letter (AL) filings. The request should be denied since the Commission should not approve unknown totals. Instead, Cal Water should be ordered to file these advice letters in 2023 with review at that time. In addition, SR #12 claims the Conservation refund process is "unnecessarily prescriptive"[4] requesting a new process. The current refund process was approved by the Commission for implementation of its conservation policy and should be retained.

In addition, SR #12 requests an ordering paragraph that the 2018 GRC Conservation, Health, Pension, General District BAs, in addition to the Lead Service Line MA, be afforded flexible recovery dates by delaying Tier 1 advice letter filings up to 180 days after the Application's final decision. This request should not provide additional interest revenue. The Commission should approve the ordering paragraph but only with cap of a maximum of 30 days of interest.

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[1] A.21-07-001, Direct Testimony of Greg Milleman, Additional Testimony Book, Chapter 11 Balancing and Memo Accounts (Chapter 11, Other Testimony)

[2] Ibid, lns. 9-11, p. 58.

[3] Conservation (CEBA4), Health (HCBA4), Pension (PCBA4) and the General Districts (District BA)

[4] Chapter 11 Other Testimony ln 22, p. 66.

SR #13 requests creation of three balancing accounts to track differences between actual and adopted amounts during the 2023-2025 GRC cycle: Conservation Expense Balancing Account ("CEBA 5"), Pension Cost Balancing Account ("PCBA 5"), and a Health Cost Balancing Account (HCBA 5").[5]

Cal Water mistakenly refers to the Lead Service Line Memorandum Account (LSLMA) as Preliminary Statement AZ.[6] Cal Water confirmed the Preliminary Statement for the LSLMA is AX.[7] Another LSLMA error proposes its status to "Remain open; no recovery requested"[8] then acknowledges, "The purpose of the LSL MA has been met"[9] and requests amortization of an acknowledged total. The recovery total is reasonable ($282,667) and should be granted but with closure of the account upon recovery.

To ascertain the net balance of Cal Water's existing Balancing and Memorandum accounts, Cal Advocates data requested Cal Water to provide a spreadsheet of its known accounts. Cal Water's reply reported on 29 of its memorandum and balancing accounts with its June 2021 consolidated net balance shown as an under-collection of $191.36 million.[10]

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[5] Ibid.

[6] Id., ln. 17, p. 58.

[7] Cal Water Partial Response #1 to Cal Advocate Data Request KKE-001, Question 1, August 2, 2021.

[8] Chapter 11, Other Testimony, ln. 22, p. 77.

[9] Id., ln. 4, p. 78.

[10] Cal Water Response to Cal Advocate Data Request KKE-001, Question 1. See spreadsheet Appendix, Table 2.

CHAPTER 2 BALANCING AND MEMORANDUM ACCOUNTS

I. INTRODUCTION

This testimony addresses the Balancing and Memorandum Accounts (BA/MAs), and related requests Cal Water makes through the Direct Testimony of Greg Milleman.[11]

Cal Water requests: to extend the life of two accounts[12] (each by 12 months); amortize four other types of accounts[13] but for totals not known until end of year 2022; and inclusion of an ordering paragraph that these four account types permitted to delay recovery up to 180 days after this GRC proceeding's final decision. SR #13 proposes to re-authorize the Health, Pension and Conservation BAs for the 2023-2025 cycle.[14]

Finally, the known total dollars requested amortized is from two accounts, the LSLMA ($282,667) and the Chromium Six MA ($1,800,740) for a total of $2.08 million.[15]

Table 1 in Appendix A summarizes Cal Advocates recommended treatment and supporting rationale for each request of the 23 BA/MAs. Table 2 is Cal Water's response to report the total net balance of the 29 BA/MAs Cal Water reported in response to a Cal Advocate data request.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize all but five of the twenty-three accounts as addressed in this testimony.

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[11] Chapter 11, Other Testimony Balancing and Memo Accounts.

[12] SR #11: ALMA and 2018 TAMA to December 31, 2015.

[13] SR #12: Recover HCBA 4, CEBA 4, PCBA 4 and General District BAs.

[14] SR #13: Health Cost: HCBA 5, Conservation Expense: CEBA 5, and Pension Cost: PCBA 5.

[15] CR6 MA amortization at $1,800,740, specifically: transfer of $64,281 (Dixon District), and $82,611 (Willows District) to relevant General District BAs plus Tier 2 advice letter recovery of a maximum $1,653,848 (Salinas Valley Region); and LSL MA recovery of $282,667.

The Commission should deny the requested ordering paragraph to delay advice letter amortization filings for these five accounts: Health, Pension, Conservation, General District Balancing Accounts and Lead Service Line Memorandum Account unless relevant Preliminary Statement language also caps to 30 days interest for each account during the delayed period. Requested authority to recover unknown end of year 2022 balances[16] should be denied and instead granted authority to file for amortization at that time through an Advice Letter, but disposition granted with each filing's review.

The Commission should require Cal Water to close, the Customer Assistance Program Memorandum Account, as rates now support permanent personnel, and the current balance is zero. This account is unnecessary and does not benefit ratepayers.

Cal Advocates review of the Application resulted in an adjustment to Cal Water's position agreeing no residuals will transfer from the Water Revenue Adjustment Mechanisms and Modified Cost Balancing Accounts.

The Commission should authorize Cal Water's requests to amortize two Memorandum Accounts, [17] for approximately $2 million. These requests are reasonable and should be approved.

III. ANALYSIS

The majority of Cal Water's requests in the Application's Chapter 11, Other Testimony (includes SR #11, #12 and #13), should be approved. The five account requests that should be amended or denied are shown in detail below. The Commission should not permit Cal Water to continue a Memorandum Account that has permanent personnel in rates.[18] Cal Water's requests that the Water Revenue Adjustment Mechanisms and Modified Cost Balancing Accounts be permitted to transfer residuals to its General District

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[16] Conservation, Health, Pension and General District BAs.

[17] Chromium-Six MA: transfer Willows and Dixon totals to General District BAs ($146,892) and amortize Salinas Valley via Tier 2 AL ($1,653,848); Lead Service Line MA ($282,667): total $2,083,407.

[18] Request left open. The Customer Assistance Program Memorandum Account, with zero balance, should be closed effective immediately.

Balancing Accounts should be formally amended as the utility agrees this outcome is no longer desired.

The 2018 Conservation, Pension and Health Balancing Accounts, plus the General District BAs request approval to recover unknown end of year 2022 balances. The Commission should deny these requests since the amortization balances will not be known until end of year 2022.

The requested amendments to the Preliminary Statements for the relevant Conservation, Pension and Health Cost Balancing Accounts should be denied or amended as recommended by Cal Advocates. In addition, the Commission's establishment of the new Pension Expense Balancing Account[19] should reflect the language of its 2015 Preliminary Statement[20] and exclude the Supplemental Executive Retirement Plan from tracking.

Finally, Cal Water's request that an ordering paragraph authorizing amortization of a balancing or memo account provide a filing deadline with a long grace period, such as delayed filing for up to 180 days past the relevant final decision, should be granted but only if amended to include a maximum of thirty days interest. Cal Water provides the following examples of this type of authorization which required an advice letter filing within 180 days of the relevant final decision: 2018 Conservation, Pension, Health Cost Balancing Accounts, the General District Balancing Accounts, and the Lead Service Line Account.[21]

A. Preliminary Statement H: Customer Assistance Program (Formerly LIRA[22]) (CAPMA): Close

The Commission should close the Customer Assistance Program Memorandum Account (CAP MA).

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[19] PCBA 5.

[20] PCBA 3.

[21] Chapter 11, Additional Testimony, lns. 1-4, p.59, D. 20-12-007, December 3, 2020.

[22] LIRA stands for Low Income Ratepayer Assistance.

This zero-balance memorandum account has been inactive for years. Cal Water stated in its 2018 GRC that it did not anticipate having any significant incremental administrative costs to track in this account.[23]

One element for an open memorandum account includes expenses must be "of a substantial nature such that the amount of money involved is worth the effort of processing a memo account."[24]

"With the stabilization of the CAP program (through ongoing low-income data sharing and re-certifications), and the hiring of a permanent employee whose time is partially dedicated to CAP program management"[25] Cal Water admits rates now cover this activity.

CAP is a mature program and there is no reason why costs cannot be estimated and included in revenue requirements. Cal Water has adequate and dedicated oversight personnel and there are policies and mechanisms in place to address and implement future Commission and Legislative mandates in the event program changes are required.

The Commission should require Cal Water to close the CAP MA account because this memorandum account does not have any recorded balance, is currently unnecessary and it does not comply with the requirements for an open memorandum account. Additionally, Cal Water now has in rates permanent personnel dedicated to the CAP program.

B. Preliminary Statement M: Water Revenue Adjustment Mechanisms and Modified Cost Balancing Accounts: Agree no Residuals

The Commission should close these accounts and deny transfer of residual amounts as Cal Water has admitted such a request is no longer applicable.

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[23] Chapter 11, Other Testimony, lns. 15-16, p. 61.

[24] SP U-27-W, p. 6.

[25] Chapter 11, Other Testimony, lns. 13-15, p. 61.

Cal Water requests to continue tracking current accounts until all balances are amortized, "and residual amounts transferred to the General District Balancing Accounts."[26] As of the end of 2020, the net WRAM/MCBA company-wide balance is under-collected by $67.8 million. Advice Letter 2408 authorized surcharges to amortize the 2020 balance-.[27]

In response to discovery concerning Cal Water's request to transfer any residual amounts, Cal Water explained the request was inadvertently included in the WRAM/MCBA section of its application and should be removed. Cal Water agrees that the full sentence on lines 9-11 of page 62 should be removed and is "no longer applicable"[28]

The Commission should require Cal Water to close these accounts upon completion of authority granted in Advice Letter 2408. In addition, no transfer of residual amounts will occur as Cal Water has admitted such a request is no longer applicable.

Regarding transfer of the Cal Water WRAM/MCBAs programs to the M-WRAMs and ICBAs please refer to Edward Scher's testimony addressing Special Request #3.

C. Conservation, Pension, and Health Cost Balancing Accounts from 2018 GRC.[29]No Delayed Recovery Unless Interest Capped at 30-Days.

The Commission must not grant advice letter recovery for these accounts in the Application's final decision. Instead, the Commission should grant Cal Water authority to file at the Water Division amortization advice letter filings for their approval process in

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[26] Chapter 11, Other Testimony, lns. 10-11, p. 62.

[27] The application includes a typo of AL 2308, corrected by email from Patrick Alexander, dated November 10, 2021, to AL 2408, accepted by the Water Division with an effective date of April 15, 2021.

[28] Partial Response #1 to KKE-001, Q. 4a and 4b, August 2, 2021.

[29] In D.20-12-007, the Commission approved three new balancing accounts in Cal Water's 2018 GRC: Conservation Expense Balancing Account #4 (CEBA4), Pension Cost Balancing Account #4 (PCBA4), and the Health Cost Balancing Account #4 (HCBA4).

2023, consistent with the requested amortization timeline.[30] Recovery should not be granted in A. 21-07-002 since final account totals will not be available until January 2023. The Commission should also deny the other requests pertaining to the Conservation, Pension, and Health Balancing Accounts. The Commission should keep current refund language in the Conservation balancing account and keep current Tier 2 advice letter amortization filings for the Health and Pension accounts.

Cal Water requests the Commission authorize it to amortize the Health[31] and Pension[32] balancing accounts at the end of their 3-year cycle (2020-2022).[33] However, the balance of these accounts will not be known until January 1, 2023; as such, no specific balance total is available in the Application. The Commission should, therefore, deny Cal Water's requests but authorize submission of advice letters for these accounts post 2022.

In Cal Water's last GRC proceeding,[34] Cal Advocates contended the balances in these accounts could not be "reviewed in their entirety during a GRC proceeding"[35] The Commission stated in D. 20-12-007, "Cal Water has not asked us to rule on the proper amount to be amortized in the currently existing balancing accounts."[36] This condition still exists as the Application requests recovery for all of 2022. Since the Application cannot provide a proper amount for purposes of amortization, recovery cannot be granted.

To be consistent with D. 20-12-007 and the Application's request, these accounts are not ripe for review nor should the Commission grant authority to recover an unknown

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[30] Chapter 11, Other Testimony, lns. 13-16, p. 58.

[31] AB4. Health Cost Balancing Account 4 (HCBA4) Section 4. Disposition.

[32] AA4. Pension Cost Balancing Account (PCBA4) Section 4. Ratemaking Procedures.

[33] Ibid., lns. 23-24, p. 65. Balances end of 2020: CEBA4 refund $3.75 million; PCBA4 under-collection $15.32 million, HCBA4 refund $3.96 million.

[34] D. 20-12-007, December 3, 2020.

[35] Ibid., p. 24.

[36] Ibid., p.25.

balance. Commission authority for recovery must occur after review of the advice letters filed by Cal Water sometime in 2023.

Cal Water also requests the Commission include an ordering paragraph to authorize recovery advice letter filings be extended up to 180 days from date of the Application's final decision. The proposed filing delay would combine delayed account rate increases with other increases "[b]ecause customers have routinely expressed frustration when their water bills increase multiple times over the course of a year."[37] General Order (G.O.) 96-B authorizes Tier 1 Advice Letter balancing account recovery.[38]

Instead, the requested delayed filing is more appropriate via an ordering paragraph only with a maximum interest calculation of 30 days.

Finally, Cal Water requests Tier 1 advice letter recovery for the pension and health balancing accounts, instead of required Tier 2 recovery. Since balancing account amortization via a Tier 1 advice letter filing is standard practice,[39] the Commission's order that these two accounts require a Tier 2 filing should not be taken lightly.

Beginning with CEBA 4, PCBA 4, and HCBA 4, Cal Water proposes Tier 1 filings for all Pension and Health Balancing Accounts going forward.[40] Cal Water suggests that successful past Tier 2 filings as the reason to change to a Tier 1.[41] As explained below, a reasonable explanation for past success is the Commission requirement these filings be reviewed at Tier 2 level.

According to G.O. 96-B, a balancing account amortization is effective pending disposition, does not require notice under General Rule 4.2, and deemed approved as a

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[37] Chapter 11, Other Testimony, lns. 21-22, p. 58.

[38] General Order 96-B, Water Industry Rules, Section 7.3.1, p.5.

[39] G.O. 96-B, Water Industry Rules, p. 5.

[40] Chapter 11, p. 66, lns. 4-6.

[41] Id., lns 1-2.

Tier 1 filing.[42] Commission creation of these Pension[43] and Health[44] balancing accounts includes explicit Preliminary Statement language that requires amortization as Tier 2 advice letter filings.[45] These filings are complicated, as shown in their Preliminary Statements, and a rationale for why the Commission ordered these accounts not permitted in the standard Tier 1 filings, making a Tier 2 filing reasonable.

The Commission should grant recovery advice letters but include disposition finalized by advice letter filings in 2023, consistent with Cal Water's request to file for these recoveries in 2023. The current Tier 2 recovery filing should continue as originally ordered by the Commission as the recovery instructions found in the relevant Preliminary Statements are complex, suggesting current success due to the required level of review. Finally, Cal Water requests for an ordering paragraph to authorize recovery of these balancing accounts via advice letter filings delayed up to 180 days from date of the Application's final decision. This request should not provide additional interest revenue. The Commission should approve the ordering paragraph but only with cap of a maximum of 30 days of interest.

D. New Conservation, Pension, and Health Cost Balancing Accounts: No Delayed Recovery Without 30-day Cap on Interest

The Commission should conditionally grant the request for establishment of Conservation (CEBA 5), Pension (PCBA 5), and Health (HCBA 5) Balancing Accounts[46] for the 3-year period of 2023-2025.

The Commission should deny requests to change the refund language used for the Conservation account. The request to change the PCBA 5 and HCBA 5 recovery from

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[42] Id.

[43] Preliminary Statement AA4. Pension Cost Balancing Account (PCBA4), 4. Rate making Procedure.

[44] Preliminary Statement AB4. Health Cost Balancing Account 4 (HCBA4), 4. Disposition.

[45] D.20-12-007

[46] Conservation Expense Balancing Account 5 (CEBA 5), Pension Cost Balancing Account #5 (PCBA 5), and the Health Cost Balancing Account #5 (HCBA 5)

Tier 2 to Tier 1 filings should also be denied for the same reasons shown above for PCBA 4 and HCBA 4 accounts. The Commission should approve an ordering paragraph to authorize recovery of these balancing accounts via advice letter filings delayed up to 180 days from date of the Application's final decision but with a maximum interest calculation of 30 days.

In addition, the Pension Cost Balancing Account (PCBA 5) should include Preliminary Statement (AA5) language to exclude relevant tracking of the Supplemental Executive Retirement Plan (SERP) expenses.

Cal Water requests to change the current CEBA refund process based solely on its suggestion that it is "unnecessarily prescriptive."[47] The Commission ordered this refund process to attain the desired quantitative results to the ratepayer. Cal Water's modified language would change the amortization periods the Commission has specifically prescribed for this account. Cal Water has processed this account multiple times as a Tier 2 advice letter, i.e., it is an established refund process, suggesting changing the refund process may provide for more billing errors, not less.

Establishing the Pension Cost Balancing Account 5 (PCBA 5) found in Preliminary Statement AA5, should continue the accounting procedures the Commission approved for the PCBA 3, (years 2017-2019) that excluded tracking the Supplemental Executive Retirement Plan (SERP) expenses.

The SERP benefit is provided only to executive officers and is in addition to the 401(k) plan, stock awards, and pension plan benefits already received by the participating officers. The SERP plan may provide additional retirement benefits to executive officers that exceed the amounts allowed for in the qualified pension plan by the IRS.

The PCBA 3 (years 2017-2019) excluded the SERP expenses from the Pension Cost Balancing Account, whereas the PCBA 4 (years 2020 – 2022) did not. The Commission should continue the PCBA 3 terms and exclude any and all tracking for the

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[47] Chapter 11, Other Testimony, ln. 22, p. 66.

Supplemental Executive Retirement Plan Costs in the PCBA 5. Those costs should instead be funded by shareholders.

The Accounting Procedures for the PCBA 5, Section 3a of Preliminary Statement AA5, should read as follows:

a. Annual pension expense, excluding the Supplemental Executive Retirement Plan (SERP) expense, as determined by Cal Water's actuarial expert according to the method prescribed by the Financial Accounting Standards Board's Codification pension trust administrative costs such as the ERISA-required Pension Benefit Guaranty Corporation (PBGC) costs. The capitalized portion of pension costs at the adopted capitalization ratio will be excluded.

The Commission should approve these three Balancing Accounts as amended, but not the other requests, and therefore should not amend CEBA's refund prescriptive language or change the PCBA and HCBA recovery to Tier 1. The Commission may include an ordering paragraph permitting a delay of up to 180 days for recovery advice letter filings but cap 30 days of interest. The Preliminary Statement AA5 for PCBA 5 should exclude tracking any SERP expenses.

E. Preliminary Statement AP: General District Balancing Accounts: No Delayed Recovery Without 30-day Cap on Interest

Cal Water's requests to leave these accounts open and grant any future recovery requested filed as Tier 1[48] advice letters should be granted. However, Cal Water's request for "authority to amortize the balances that are in the District Balancing Accounts as of December 31, 2022, via a Tier 1 advice letter as part of Special Request #12"[49] should be denied since the Commission would grant an unknown total balance.

The final request for an ordering paragraph directing delayed recovery of the District Balancing Accounts up to six months from the date of this Application's final

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[48] Consistent with G.O 96-B, Water Industry Rules, Section 7.3.1, p.5.

[49] Chapter 11, Other Testimony, lns. 9-10, p. 74.

decision is reasonable only with a term that permits a maximum of 30 days interest. The Commission should include in the requested Ordering Paragraph that any recovery includes a maximum of 30 days interest.

Cal Water states in A. 21-07-002, "Residuals totaling approximately $244K have since been transferred into the District Balancing Accounts because the initial amortizations of the following accounts have ended: Drought Memorandum Account (DRMA, Prelim. AL, under-collection of $274K), the 2018 Tax Accounting Memorandum Account (TAMA, Prelim. AV, over-collection of $15K), and the Cost of Capital Memorandum Account (CoC MA, Prelim. AW, over collection of $15K)."[50]

The requested January 2023 amortization for these accounts is not ready for review nor should the Commission grant authority to recover an unknown balance. Commission authority must occur upon review of the requested advice letters filed with the Water Division sometime in 2023. A delay of 180 days for the filing timeframe is appropriate with a maximum interest calculation of 30 days.

F. Preliminary Statement AX: Lead Service Line Memorandum Account (LSLMA): No Delayed Recovery Without 30 Day Cap on Interest

The Commission should grant the requested recovery of the $282,667[51] LSLMA consultant costs but also order closure of the account upon amortization. As part of SR # 12, Cal Water requests to leave the account open to complete its plan for resolving the lead pipe that may exist in its system and recovery of a consulting fee supported by an advice letter filing delayed up to six months after the Application's final decision.

The LSLMA was established in 2018 through Advice Letter 2331 and has been used by Cal Water to comply with the state-wide mandate to inventory all lead service lines in the distribution system and establish a plan for replacement.

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[50] Ibid., lns. 25-29, p. 73.

[51] Expense confirmed by Cal Water response to DR #1, Q. 1, updated October 12, 2021.

The first part, inventorying Cal Water's service lines, showed 48% of its service lines were of an unknown nature, the remaining not lead. Cal Water then developed a timeline to resolve the status of its service lines.

According to Cal Water, the required July 1, 2020 deadline was met indicating completion of the LSLMA inventorying requirements of the legislation.[52] Cal Water identified incremental costs of $284,396, of which $282,667 (consultant fees) is requested for recovery in this GRC.

Cal Water requests amortization of the consultant costs of $282,667 via a Tier 2 advice letter and includes the LSLMA under the requested ordering paragraph authorizing the advice letter filing for the amortization up to 180 days from the Application's final decision.

The Commission should grant the request to leave open the account until amortization is completed, then closed, and grant requested recovery of the $282,667 consultant costs by a Tier 2 advice letter but the ordering paragraph permitting the delayed filing should include language limiting the interest on the account to a maximum of thirty days.

G. Preliminary Statement T: Lucerne Balancing Account (LBA)

The Commission should continue the LBA. Review of Cal Water's Annual Reports show the Commission should order Cal Water to update its Annual Reports to correctly reflect the LBA surcharge activity between 2017 and 2021. According to Cal Water, it intended to adopt a surcharge decrease "on August 15, 2021."[53] A surcharge reduction required due to the Water Division's recent review of the LBA showing the loan has now secured its required 10-year reserve.[54] But, not clear is how a surcharge decrease can be implemented since Cal Water's 2020 Annual Report shows not a

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[52] Id., ln. 4, p. 78.

[53] Chapter 11, Other Testimony, lns. 11-13, p. 63.

[54] Id., lns 10-11, p. 63.

surcharge, but only a surcredit of $354,000.[55] Similarly, Cal Water's 2020, 2019, 2018 and 2017 Annual Reports recorded no surcharges, only surcredits. This trend is in stark contrast to Cal Water's surcharge decrease plans stated in its Application.

Table 2-1: Lucerne Balancing Account (LCBA): SDWSRF Loan and payment (AL 1963-A)[56]

YEAR	Beg Balance Rec/(Pay) $ in '000s	Offset Rev	Offset Exp	Interest	Surcharge	Surcredit	Transfer to District Balancing Account	End Balance Rec / (Pay)
2016	-5,663					236		-5,427
2017	-5,427					236		-5,191
2018	-5,191					236		-4,955
2019	-4,955					118		-4,837
2020	-4,837					354		-4,483

The Commission should continue to authorize the LBA account as required by D.08-09-002, but also require Cal Water to resolve the existing accounting conflicts between its Annual Reports across 2017 – 2020. The current accounting identification procedures suggest the account is a refund, whereas the account is actually a loan balance of $4.8 million.

Cal Advocates agree with Cal Water Requests on below Items.

Table 2-2: List of Items Cal Advocates Agrees with Cal Water Requests

Preliminary Statement AG:	Catastrophic Event Memo Account (CEMA)
Preliminary Statement S:	Water Cost of Capital Adjustment Mechanism (WCCM)
Preliminary Statement W:	TCP (1,2,3 Trichloropropane) Litigation Memo Account (TCPMA)
Preliminary Statement AJ:	Customer Assistance Program (Formerly LIRA) Balancing Account (CAPBA)
Preliminary Statement AM:	Rate Support Fund Balancing Account (RSFBA)
Preliminary Statement AN:	Infrastructure Act Memo Account (INFRAMA)

[55] Cal Advocates requested the 2020 Annual Report, Schedule E-1, which reports activities of each Memorandum and Balancing Account, please SEE DR # KKE-002, Q.1.

[56] CWS Annual Reports to the Commission, Years 2016-2020.

Preliminary Statement AO:	Water Contamination Litigation Memo Account (WCLMA)
Preliminary Statement AS:	Asbestos Litigation Memo Account (ALMA)
Preliminary Statement AT:	School Lead Testing Memo Account (SLTMA)
Preliminary Statement AU:	Sites Reservoir Phase 1 Memo Account (SITES)
Preliminary Statement AV:	2018 Tax Accounting Memo Account (TAMA)
Preliminary Statement AY:	Public Safety Power Shut-Off Memorandum Account (PSPSMA)
Preliminary Statement AZ:	2018 GRC Interim Rate Memorandum Account (2018 IRMA)
Preliminary Statement BA:	Polyfluoroalkyl Substances Memorandum Account (PFASMA)
Preliminary Statements Z3; AA3; AB3	Conservation, Pension, and Health Cost Balancing Accounts from 2015 GRC

IV. CONCLUSION

The Commission should close CAPMA as rates now include permanent personnel dedicated to the Program and current balance is zero. The Commission should not allow WRAM and MCBA surcharges to be collected from rate payers effective January 1, 2023, which is the start date of Cal Water's next GRC proceeding.

The Commission should deny all requests to delay recovery filings up to 180 days from relevant final decision unless the filings include caps of 30 days of interest.

The Commission should deny requested unknown amortization balances not available until end of year 2022. Instead, the Commission should grant advice letter filings at the end of 2022 without any assurance of a disposition until a thorough review occurs.

APPENDIX

Table 1 Summary of Recommendations

Table 2 Cal Water spreadsheet of BA and MA balances, June 2021

Qualifications and Prepared Testimony of Kerrie Evans

1 **Table 1: Summary of Recommendations**

	Preliminary Statements	Requested Status	Recommended Status & Rationale
1.	**H: CUSTOMER ASSISTANCE PROGRAM (FORMERLY LIRA) (CAPMA))**	Continue CAP MA track administrative costs may be incurred in event Commission requires program changes.	CAP MA closed as rates now include permanent personnel dedicated to the Program and balance is zero.
2.	**M: WATER REVENUE ADJUSTMENT MECHANISMS AND MODIFIED COST BAs**	Continue the WRAM/MCBAs until all balances are amortized (and authorize in their place going forward M-WRAMs and ICBAs	WRAM account closed upon completion of Advice Letter 2308. No transfer of residual amounts as Cal Water reply to Cal Advocate Data Request #1 shows this request no longer applicable.
3.	**S: WATER COST OF CAPITAL ADJUSTMENT MECHANISM (WCCM)**	Account continuation or elimination should be addressed in A.21-05-002, Cal Water's 2021 Cost of Capital Application; no action requested.	WCCM will be addressed in the Cost of Cost of Capital proceeding A.21-05-002, requiring no action in the current GRC application.
4.	**T: LUCERNE BA (LBA)**	Account must continue under D.08-09-002; no action requested.	Cal Water should review its Annual Reports to Application. The 2017-2020 Annual Reports are not consistent with the Application. No other action needed in A 21-07-002.
5.	**W: TCP LITIGATION MA (TCPMA)**	Remain open; no action requested.	Memorandum Account recovery will require reasonableness review.
6.	**2015 GRC CONSERVATION, (CEBA3) PENSION, (PCBA3) HEALTH COST (HCBA3) BAs**	Remain open; no action requested	Approve residual transfers to General District BA if residuals granted under AL recoveries: AL 2381: (CEBA3 refund $845,000); AL 2406: (HCBA3 refund $4.27M PCBA recovery of $21.47M)
7.	**2018 GRC CONSERVATION, (CEBA4) PENSION, (PCBA4) HEALTH COST (HCBA4) BAs**	After 3-year covered period (2020-2022), amortize via Tier 1 ALs.	Recovery granted with 2023 filing, not in this proceeding. Keep current Tier 2 recovery, Ordering Paragraph to delay up to 180 days after A. 21-07-002 decision must include cap on interest to 30 days.

8.	**ESTABLISH 2021 GRC CONSERVATION, (CEBA5) PENSION, (PCBA5) HEALTH COST (HCBA5) BAs**	Re-authorization of these accounts for 3-years 2023-2025.	Grant establishment. Keep current Tier 2 recovery and Ordering Paragraph to delay up to 180 days after A. 21-07-002 decision must include cap on interest to 30 days. Deny amending prescriptive refund language in Conservation account.
9.	**AG: CATASTROPHIC EVENT MA (CEMA)**	Remain open. No action requested.	Grant remain open. CEMA from Pub. Util. Code Section 459.9 with specified costs permitted. These costs recoverable after Commission approval finding reasonableness.
10.	**AI: CHROMIUM 6 MA (CR6MA)**	Remain open; transfer balances to General District Balancing Accounts and authorize amortization of large balance via a Tier 2 advice letter.	Reasonable to transfer remaining Dixon and Willows amounts ($146,892) to General District Balancing Accounts and amortization of Salinas Valley via a Tier 2 advice letter.
11.	**AJ: CUSTOMER ASSISTANCE PROGRAM (Formerly LIRA) BALANCING ACCOUNT CAPBA)**	Remain open; recalculate surcharge after final decision.	Approve request.
12.	**AM: RATE SUPPORT FUND BA (RSFBA)**	Remain open; recalculate surcharge after final decision.	Approve request.
13.	**AN: INFRASTRUCTURE ACT MA (INFRAMA)**	Remain open; no action requested.	While balance is zero, leave open as this is an ongoing process.
14.	**AO: WATER CONTAMINATION LITIGATION MA (WCLMA)**	Remain open; no action requested**.**	Leave open.
15.	**AP: GENERAL DISTRICT BAs (DISTBAs)**	Remain open; authorize recovery of outstanding balances via a Tier 1 advice letter**.**	Grant transfers to General District BAs in compliance with the amortization rules found Water Division's Standard Procedure U-27-W. Deny Ordering Paragraph to delay up to 180 days after A. 21-07-002 decision unless 30 days cap on interest.

16.	**AS: ASBESTOS LITIGATION MA (ALMA)**	Extend account for an additional 1 year to December 31, 2025.	Approve the extension.
17.	**AT: SCHOOL LEAD TESTING MA (SLTMA)**	Close account without amortization.	Approve the request.
18.	**AU: SITES RESERVOIR PHASE 1 MA (SITES)**	Remain open; no action requested.	Approve the request.
19.	**AV: 2018 TAX ACCOUNTING MA (TAMA)**	Extend to 12/31/2025; no recovery requested	Approve extension request, no recovery.
20.	**AX: LEAD SERVICE LINE MA (LSLMA)**	Remain open; amortization consultant costs of $282,667 via Tier 2 advice letter.	Approve amortization request. Deny Ordering Paragraph to delay up to 180 days after A. 21-07-002 decision unless 30 days cap on interest.
21.	**AY: PUBLIC SAFETY POWER SHUT-OFF MA (PSPSMA)**	Remain open; no action requested.	Approval of this request includes a caution for the eventual recovery as Cal Water finds an overlap between its CEMA and its PSPSMA. Recovery will need to be aware of possible double counting.
22.	**AZ: 2018 GRC INTERIM RATE MA (2018 IRMA)**	Remain open; no action requested.	Approve as amortization already authorized.
23.	**BA: POLYFLUOROALKYL SUBSTANCES MA (PFASMA)**	Remain open; no action requested.	Approve the request.

Table 2: Cal Water: 29 Memorandum & Balancing Account totals June 2021

Name	Preliminary Statement and abreviation of account	Preliminary Statement	Location in Preliminary Statement for Accounting Procedure	Based on accounting procedures, balance as of June 2021	Dollar Amount requested to be amortized in A.21-07-002	Identify Tariff sheet in A.21-07-002 where dollar Amount requested to be amortized located	Product Code	Class Code	Notes
Customer Assistance Program (Formerly LIRA)	**(Prelim. H, CAPMA)**	H	SEE Section 2 ACCOUNTING PROCEDURE	$ -	0	none	LIRA12, LIRA15, LIRALB, LIRADMN		No balance
WRAM/MCBA [added to list by CWS]	**Prelim M, WRAM/MCBA)**	M		$ 67,472,698	0	none	NOTIER, TIER1, TIER2, TIER3, WM2017,		"M WRAM-MCBA 6 30 21 Balance" "M WRAM-MCBA 6 30 21 GL Detail"
Lucerne Balancing Account	**(Prelim. T, LBA)**	T	SEE Section 3 Accounting	$ (4,074,249)	0	none			"T Lucerne BA Balance 6 30 21" and Q6 attachments
TCP Litigation Memo Account	**(Prelim. W, TCPMA)**	W	SEE Section 4 ACCOUNTING PROCEDURE	$ 9,302,339	0	none	LITTCP		"Q7_3 TCP MA Detail" (to be provided with Response #2 to KKE-001)
Conservation Expense Balancing Account #3	**(Prelim. Z3, CEBA3)**	Z3	SEE Section 3 Accounting Procedure	$ -	0	N/A Balance moved to Dist BA and Prelim eliminated	CEBA15		n/a
Conservation Expense Balancing Account *#4*	**(Prelim. Z4, CEBA4)**	Z4	SEE Section 3 Accounting Procedure:	$ 5,123,146	To be calculated after 2020-2022 GRC period	No tariff sheet because not calculated yet	A01ETC, A01PST, A02ETC, A06CPT, P30ETC, P31ETC, P32COM, P33ETC,		"Z4 CEBA4 Balance as of 6 30 21 (2018 GRC)"
Conservation Expense Balancing Account #5	**(Prelim. Z5, CEBA5)**	Z5	MISSING	$ -	0	none	n/a		Not approved yet
Pension Cost Balancing Account #3	**(Prelim. AA3, PCBA3)**	AA3	SEE Section 3 Accounting Procedure	$ 21,261,655	0	none	PCBA15		"AA3 PCBA3 Amortization (2015 GRC)"
Pension Cost Balancing Account *#4*	**(Prelim. AA4, PCBA4)**	AA4	SEE 3 Accounting Procedure:	$ 16,470,549	To be calculated after 2020-2022 GRC period	No tariff sheet because not calculated yet			"AA4 PCBA4 Balance as of 6 30 21 (2018 GRC)" "AA4 PCBA4 Interest"
Pension Cost Balancing Account #5	**(Prelim. AA5, PCBA5)**	AA5	MISSING	$ -	0	n/a	n/a		Not approved yet
Health Cost Balancing Account #3	**(Prelim. AB3, HCBA3)**	AB3	SEE Section 3 Accounting Procedure	$ 4,259,812	0	n/a	HCBA15		"AB3 HCBA3 Balance and Detail (2015 GRC)" "AB3 HCBA3
Healthcare Cost Balancing Account *#4*	**(Prelim. AB4, HCBA4)**	AB4	SEE Section 3 Accounting Procedure	$ 7,543,977	To be calculated after 2020-2022 GRC period	No tariff sheet because not calculated yet			"AB4 HCBA4 Balance as of 6 30 21 (2018 GRC)"
Health Cost Balancing Account #5	**(Prelim. AB5, HCBA5,)**	AB5	MISSING	$ -	0	n/a	n/a		Not approved yet
Catastrophic Event Memo Account **8**	**(Prelim. AG, CEMA8)**	AG	SEE Section 4 Accounting Procedure	$ 1,901,314	0	n/a	CEMA, CEMA19, CEMA20 COVIDT		"AG CEMA Balance 6 30 21" "PSPS and CEMA Analysis 12 31 2020" "2021 GRC Expense
Chromium 6 Memo Account	**(Prelim. AI, CR6MA)**	AI	SEE Section 4 Accounting Procedure	$ 1,800,741	See breakdown below:	n/a	CHROM6	CHROM6	"AI Cr6 Balance and Detail 12 31 20"
	Dixon			$ 64,281	$64,281 to be moved to District BA	No tariff sheet			
	Willows			$ 82,611	$82,611 to be moved to District BA	No tariff sheet			
	Salinas Valley Region			$ 1,653,848	$1,653,848 to be amortized	No tariff sheet			

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Name	Preliminary Statement and abreviation of account	Preliminary Statement	Location in Preliminary Statement for Accounting Procedure	Based on accounting procedures, balance as of June 2021	Dollar Amount requested to be amortized in A.21-07-002	Identify Tariff sheet in A.21-07-002 where dollar Amount requested to be amortized located	Product Code	Class Code	Notes
Customer Assistance Program (Lira) BA	**(Prelim. AJ, CAPBA)**	AJ	SEE Section 4 Accounting Procedure	$ 4,189,175	Request to update surcharge based on final rates Testimony, pp 69-70	Schedule No CAP	LIRACG, LIRACR		"AJ CAP-LIRA 6 30 21 Balance" "AJ CAP-LIRA 6 30 21 GL Detail"
Drought Memorandum Account	**(Prelim. AL, DRMA)**	AL	MISSING	$ -	0	N/A Balance moved to Dist BA and Prelim eliminated	DRMA	Drought	Closed per AL 2402
Rate Support Fund Balancing Account	**(Prelim. AM, RSFBA)**	AM	SEE Section 5 Accounting Procedure	$ 2,042,521	Request to update surcharge based on final rates Testimony, pp 70-72	Schedule No RSF	RSFCRG, RSFCRT		"AM RSF 6 30 21 Balance" "AM RSF 6 30 21 GL Detail"
Infrastructure Act Memo Account	**(Prelim. AN, INFRAMA)**	AN	SEE Section 4 Accounting Procedure	$ -	0	n/a			n/a
General District Balancing Account	**(Prelim. AP, District BAs)**	AP	SEE Section 3 Accounting Procedure	$ 5,978,152	Balance as of 12/31/2022	No tariff sheet	DSBA18		"AP District BAs" "AP Residual DRMA" "AP Residual from CEBA3 (2015 GRC)" "AP Residuals from COC
Special Asbestos Litigation Memorandum Account	**(Prelim. AS, ALMA)**	AS	SEE Section 3 Accounting Procedure	$ 283,420	0	n/a	ASBLIT		"AS Asbestos MA Balance 6 30 21" "2021 GRC Expense Adjustments for MAs"
School Lead Testing Memorandum Account	**(Prelim. AT, SLTMA)**	AT	SEE Section 2 Applicability	$ 17,497	0	n/a	LTISCH		"AT School Lead Testing MA 6 30 21" "2021 GRC Expense Adjustments for MAs"
Sites Reservoir Phase 1 Memo Account	**(Prelim. AU, SITES)**	AU	SEE Section 4 ACCOUNTING PROCEDURE	$ 798,438	0	none	SITES		"AU Sites MA Balance 6 30 21"
2018 Tax Accounting Memorandum Account	**(Prelim. AV, TAMA/TCJA)**	AV	SEE Section Section 3 and 4	$ (12,940,998)	0	N/A Residual from first amortization moved to Dist BA Second amortization is ongoing	TCJA20		"AV TCJA Balance 6 30 21" "AV TCJA Workpapers AL 2398"
Cost of Capital Memorandum Account	**(Prelim. AW, CoCMA)**	AW	MISSING	$ -	0	N/A Balance moved to Dist BA and Prelim eliminated	COC18		Closed per AL 2402
Lead Service Line Memorandum Account	**(Prelim. AX, LSLMA)**	AX	SEE Section 4 ACCOUNTING PROCEDURE:	$ 284,396	$ 282,947	No tariff sheet	LSLINV		"AX Lead Service Line MA Balance 6 30 21" "2021 GRC Expense Adjustments for MAs"
Public Safety Power Shut-Off Memorandum Account	**(Prelim. AY, PSPSMA)**	AY	SEE 4 ACCOUNTING PROCEDURE:	$ 3,795,926	0	n/a	PUBSAF		"AY PSPS MA Balance 6 30 21" "PSPS and CEMA Analysis 12 31 2020" "2021 GRC Expense
2018 GRC Interim Rate Memorandum Account	**(Prelim. AZ, IRMA)**	AZ	**SEE Section 4. Methodology *** *Authorization for these balancing accounts is disputed in A.18-07-001.**	$ 53,181,477	0	n/a	IRMA18		"AZ AL 2410-B - IRMA LIRA Credit Summary v1" "AZ AL 2410-B - IRMA Summary (all except LIRA)" "AZ IRMA Balance 6 30 21" The status of the accounts
Polyfluoroalkyl Substances Memorandum Account	**(Prelim. BA, PFASMA)**	BA	SEE Section 2 Applicability	$ 863,556	0	n/a	PFAS	PFAS	"BA PFAS Balance 6 30 21"

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QUALIFICATIONS AND PREPARED TESTIMONY OF KERRIE EVANS

Q.1 Please state your name and address.

A.1 Kerrie Evans, 505 Van Ness Avenue, San Francisco CA 94102

Q.2 By whom are you employed and what is your job title?

A.2 California Public Utilities Commission, Utilities Engineer

Q.3 Please describe your educational and professional experience.

A.3 Bachelor of Science Degree, Civil Engineering. Employed Thirty years at the Commission working in the Division of Ratepayer Advocates, Office of Ratepayer Advocates and Public Advocates Office in the Water and Energy Industries; also worked in the Water Division and the Safety Branch.

Q.4 What is your area of responsibility in this proceeding?

A.4 Chapter 11 of the Cal Water's Other Testimony

Q.5 Does that complete your prepared testimony?

A.5 Yes

Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	Suliman Ibrahim
Witness(es)		Isaac Gendler
		Justin Menda
		Niamh Murphy
		Susana Nasserie
		Zaved Sarkar

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

PUBLIC

REPORT ON COMMON PLANT ISSUES

California Water Service Company

Test Year 2020 General Rate Case

A.21-07-002

San Francisco, California
February 4, 2022

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MEMORANDUM

This Report on Common Plant Issues for California Water Service Company (Cal Water) General Rate Case (GRC) A.21-07-002 is prepared by Suliman Ibrahim, Isaac Gendler, Justin Menda, Niamh Murphy, Susana Nasserie, and Zaved Sarkar of the *Public Advocates Office (Cal Advocates) - Water Branch,* and under the general supervision of Program Manager Richard Rauschmeier, and Program & Project Supervisor Syreeta Gibbs and Project Lead Brian Yu. Marybelle Ang and Caryn Mandelbaum serve as Cal Advocates legal counsel. The witnesses' Statements of Qualifications are included as Appendix 1 to this Report.

Chapter	Subject Area	Cal Advocates Witness
1	Meter Replacement Program	Justin Menda
2	Flowmeter Replacements	Justin Menda
3	Vehicle Replacement Program	Susana Nasserie
4	Pump and Motor Replacements	Niamh Murphy
5	Tank Coatings	Justin Menda
6	Cathodic Protection Systems	Niamh Murphy
7	Control Valve Overhaul and Replacements	Niamh Murphy
8	Water Quality Analyzers	Niamh Murphy
9	Customer Meter Vault Lid Replacements	Niamh Murphy
10	SB 1398 Service Replacement Program	Niamh Murphy
11	Pressure Vessel	Zaved Sarkar
12	Water Quality Sampling Sites	Niamh Murphy
13	Wildfire Hardening Program	Isaac Gendler
14	Well Infrastructure Renewal Program	Zaved Sarkar
15	Non-Specific Capital Budgets	Zaved Sarkar
16	Contingency, Previously Funded Incomplete Projects, and Construction Management and Special Inspections	Suliman Ibrahim
17	Design and Permitting Only Projects	Justin Menda
18	Special Request #5: Multi-GRC Projects	Justin Menda
19	Special Request #6: Subsequent Rate Changes	Susana Nasserie
20	Water Quality	Susana Nasserie
21	AWIA Report and ERP Submission	Susana Nasserie

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any particular issue connotes neither agreement nor disagreement of the underlying request, methodology, or policy position related to that issue.

CHAPTER 1 Meter Replacement Program

I. INTRODUCTION

CWS requests an annual meter replacement program budget for the routine replacement of its small (5/8" to 2") and large meter (over 2") in its districts.[1] CWS provides justification that it replaces its small meters based on the General Order (GO) 103-A replacement schedule.[2] CWS also claims that it replaces large meters based on a twenty-year replacement cycle.[3] Based on meter inventory provided by CWS, a number of small meters do not warrant replacement since they do not comply with GO 103-A replacement schedule. Similarly, several large meters do not warrant replacement since they do not meet the twenty-year replacement cycle.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize $4,106,528 in 2022, $4,070,815 in 2023 and $4,117,408 in 2024 for CWS to replace meters. Four 1.5-inch meters and 102 large meters[4] do not require replacement. Table 1-1 through 1-3 below shows the cost comparison between CWS' and Cal Advocates' recommendations.

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[1] Common Plant Issues Capital Project Justification, p. 28.

[2] Common Plant Issues Capital Project Justification, p. 28.

[3] Common Plant Issues Capital Project Justification, p. 28.

[4] Four three-inch meters, six four-inch meters, 22 six-inch meters, and 70 eight-inch meters do not warrant replacement in this rate case cycle.

Table 1-1: 2022 Meter Replacement Program—Cost Comparison[5]

District	PID	Total District Cost	
		CWS	Cal Advocates
Antelope Valley	AVD0900	$ 10,334	$ 7,427
Bayshore	SMD0900 SSF0900	$ 479,140	$ 470,450
Bakersfield	BKD0900	$ 416,823	$ 390,754
Bear Gulch	BGD0900	$ 226,215	$ 226,215
Chico	CHD0900	$ 188,556	$ 188,556
Dixon	DIX0900	$ 14,189	$ 8,805
Dominguez	DOM0900	$ 755,103	$ 704,036
East Los Angeles	ELA0900	$ 183,282	$ 183,282
Hermosa Redondo	HRD0900	$ 454,177	$ 283,955
Kern River Valley	KRV0900	$ 10,539	$ 10,539
King City	KCD0900	$ 31,498	$ 31,498
Livermore	LIV0900	$ 147,994	$ 147,994
Los Altos	LAS0900	$ 205,409	$ 205,409
Marysville	MRL0900	$ 29,364	$ 29,364
Oroville	ORO0900	$ 34,328	$ 34,328
Palos Verdes	PVD0900	$ 388,698	$ 303,587
Salinas	SLN0900	$ 204,735	$ 204,735
Selma	SEL0900	$ 41,089	$ 32,400
Stockton	STK0900	$ 243,118	$ 243,118
Visalia	VIS0900	$ 306,701	$ 306,701
Westlake	WLK0900	$ 82,522	$ 73,833
Willows	WIL0900	$ 19,543	$ 19,543
Total		$ 4,473,356	$ 4,106,528

[5] CWS RO model file "Y_CH07_RO_RB_FDR_Proposed Capital Budget," tab "IN_2021 GRC ACB." Dominguez District Capital Project Justification, p. 30. CWS Response to Public Advocates Office Data Request JMI-015 (Direct Project Costs – DOM 0900 and Tank Painting) acknowledges that the direct project costs shown in the Dominguez District Capital Project Justification shows the correct direct project cost for DOM 0900.

Table 1-2: 2023 Meter Replacement Program—Cost Comparison[6]

District	PID	Total District Cost	
		CWS	Cal Advocates
Antelope Valley	AVD0900	$ 10,593	$ 10,593
Bayshore	SMD0900 SSF0900	$ 491,119	$ 491,119
Bakersfield	BKD0900	$ 427,243	$ 427,243
Bear Gulch	BGD0900	$ 231,871	$ 231,871
Chico	CHD0900	$ 193,270	$ 184,363
Dixon	DIX0900	$ 14,544	$ 14,544
Dominguez	DOM0900	$ 773,980	$ 582,055
East Los Angeles	ELA0900	$ 187,864	$ 187,864
Hermosa Redondo	HRD0900	$ 465,531	$ 291,054
Kern River Valley	KRV0900	$ 10,802	$ 10,802
King City	KCD0900	$ 32,285	$ 23,379
Livermore	LIV0900	$ 151,694	$ 151,694
Los Altos	LAS0900	$ 210,545	$ 210,545
Marysville	MRL0900	$ 30,097	$ 21,190
Oroville	ORO0900	$ 35,186	$ 26,279
Palos Verdes	PVD0900	$ 398,415	$ 311,176
Salinas	SLN0900	$ 209,854	$ 209,854
Selma	SEL0900	$ 42,116	$ 33,210
Stockton	STK0900	$ 249,196	$ 249,196
Visalia	VIS0900	$ 314,368	$ 314,368
Westlake	WLK0900	$ 84,586	$ 75,679
Willows	WIL0900	$ 20,032	$ 12,736
Total		$ 4,585,193	$ 4,070,815

[6] CWS RO model file "Y_CH07_RO_RB_FDR_Proposed Capital Budget," tab "IN_2021 GRC ACB." Dominguez District Capital Project Justification, p. 31. CWS Response to Public Advocates Office Data Request JMI-015 (Direct Project Costs – DOM 0900 and Tank Painting) acknowledges that the direct project costs shown in the Dominguez District Capital Project Justification shows the correct direct project cost for DOM 0900.

Table 1-3: 2024 Meter Replacement Program—Cost Comparison[7]

District	PID	Total District Cost	
		CWS	Cal Advocates
Antelope Valley	AVD0900	$ 10,858	$ 10,858
Bayshore	SMD0900 SSF0900	$ 503,396	$ 503,396
Bakersfield	BKD0900	$ 437,925	$ 410,534
Bear Gulch	BGD0900	$ 237,667	$ 237,667
Chico	CHD0900	$ 198,102	$ 198,102
Dixon	DIX0900	$ 14,908	$ 14,908
Dominguez	DOM0900	$ 793,330	$ 596,607
East Los Angeles	ELA0900	$ 192,560	$ 183,431
Hermosa Redondo	HRD0900	$ 477,169	$ 289,200
Kern River Valley	KRV0900	$ 11,072	$ 11,072
King City	KCD0900	$ 33,092	$ 23,963
Livermore	LIV0900	$ 155,487	$ 155,487
Los Altos	LAS0900	$ 215,809	$ 215,809
Marysville	MRL0900	$ 30,849	$ 21,720
Oroville	ORO0900	$ 36,066	$ 15,169
Palos Verdes	PVD0900	$ 408,376	$ 318,956
Salinas	SLN0900	$ 215,182	$ 205,971
Selma	SEL0900	$ 43,170	$ 25,328
Stockton	STK0900	$ 255,426	$ 255,426
Visalia	VIS0900	$ 322,228	$ 322,228
Westlake	WLK0900	$ 86,701	$ 86,701
Willows	WIL0900	$ 20,532	$ 14,876
Total		$ 4,699,904	$ 4,117,408

III. ANALYSIS

CWS provided an inventory for all existing meters in each district, including meter size and meter age.[8] The meter age through 2024 was evaluated to determine whether

[7] CWS RO model file "Y_CH07_RO_RB_FDR_Proposed Capital Budget," tab "IN_2021 GRC ACB." Dominguez District Capital Project Justification, p. 32. CWS Response to Public Advocates Office Data Request JMI-015 (Direct Project Costs – DOM 0900 and Tank Painting) acknowledges that the direct project costs shown in the Dominguez District Capital Project Justification shows the correct direct project cost for DOM 0900.

[8] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

replacement is warranted based on either GO 103-A,[9] replacement schedule for small meters, or the twenty-year replacement cycle for large meters. Adjustments regarding CWS' proposed Meter Replacement Program budget are discussed below.

A. Small Meter

1. 1.5" Meters

The Commission should deny replacement of four 1.5-inch meters in the Willows District because they do not warrant replacement.

According to CWS' inventory for this meter type, in the Willows District,[10] eleven of fifteen meters[11] will reach the required GO 103-A replacement 10-year rate.[12]

The Commission should only allow funding for the eleven meters that will reach ten years during this rate case cycle in the Willows District. The cost of the four remaining should be excluded from the Willows District budget (WIL 0900). The revised and recommended cost estimates for WIL 0900 are shown in Attachment 1-2 of this report.[13]

B. Large Meters

1. Three-Inch Meters

The Commission should deny replacement of four three-inch meters in the Antelope Valley, Oroville, and Selma districts because they do not warrant replacement.

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[9] GO 103-A, p. 23. GO 103-A establishes the following replacement schedule cycle for the following meter sizes: twenty years for meters small than one-inch, fifteen years for one-inch meters and ten years for meters larger than one-inch.

[10] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

[11] Attachment 1-1 (Meter Inventory Tables).

[12] GO 103-A, p. 23.

[13] Attachment 1-2 (Revised Meter Replacement Budget Direct Cost Estimates).

According to CWS' inventory of three-inch meters in the Antelope Valley, Oroville, and Selma districts,[14] eleven three-inch meters will reach CWS' twenty years replacement rate for the Antelope Valley, Oroville, and Selma districts.[15] Only those eleven three-inch meters in Antelope Valley, Oroville, Selma districts will reach twenty years during this rate case cycle, should be replaced in these districts.

The Commission should exclude costs for the remaining four three-inch meters in these districts as shown in Table 1-4 below.

Table 1-4: 3" Meters Inventory Summary – Antelope Valley, Oroville, and Selma districts[16]

District	PID	Number of 3" Meters Proposed to be Replaced in 2022-2024	Number of 3" Meters that Reach CWS' 20 Year Replacement Schedule for Large Meters by 2024	Number of 3" Meters in 2022-2024 that should be removed from Meter Replacement Program Cost Estimates
Antelope Valley	AVD0900	3	2	1
Oroville	ORO0900	6	4	2
Selma	SEL0900	6	5	1

The revised cost estimates for AVD 0900, ORO 0900, and SEL 0900 are shown in Attachment 1-2 of this report.[17] The revised Meter Replacement Program budget for the Antelope Valley, Oroville, and Selma districts is shown in Tables 1-8 to 1-10 below.

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[14] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

[15] Attachment 1-1 (Meter Inventory Tables).

[16] Antelope Valley District Project Justification, pp. 22-24. Oroville District Project Justification, pp. 19-21. Selma District Project Justification, pp. 21-23. Attachment 1-1 (Meter Inventory Tables).

[17] Attachment 1-2 (Revised Meter Replacement Budget Direct Cost Estimates).

2. Four-Inch Meters

The Commission should deny replacement of six four-inch meters in the Dixon, Oroville, Selma, and Willows districts because they do not warrant replacement at this time.

According to CWS' inventory of four-inch meters in the Dixon, Oroville, Selma, and Willows districts,[18] six four-inch meters will reach CWS' replacement rate of twenty years for the Dixon, Oroville, Selma, and Willows districts.[19] The six four-inch meters will reach twenty years in the Dixon, Oroville, Selma, and Willows districts, should be replaced.

The Commission should exclude the remaining four six four-inch meters from the Dixon, Oroville, Selma, and Willows districts as shown in Table 1-5 below.

Table 1-5: 4" Meters Inventory Summary – Dixon, Oroville, Selma, and Willows districts[20]

District	PID	Number of 4" Meters Proposed to be Replaced in 2022-2024	Number of 4" Meters that Reach CWS' 20 Year Replacement Schedule for Large Meters by 2024	Number of 4" Meters in 2022-2024 that should be removed from Meter Replacement Program Cost Estimates
Dixon	DIX0900	3	2	1
Oroville	ORO0900	3	1	2
Selma	SEL0900	3	2	1
Willows	WIL0900	3	1	2

[18] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

[19] Attachment 1-1 (Meter Inventory Tables).

[20] Dixon District Capital Project Justification, pp. 20-22. Oroville District Capital Project Justification, pp. 19-21. Selma District Capital Project Justification, pp. 21-23. Willows District Capital Project Justification, pp. 18-20. Attachment 1-1 (Meter Inventory Tables).

The revised cost estimates for DIX 0900, ORO 0900, SEL 0900, and WIL 0900 are shown in Attachment 1-2 of this report.[21] The revised Meter Replacement Program budget for the Dixon, Oroville, Selma, and Willows districts is shown in Tables 1-8 to 1-10 below.

3. Six-Inch Meters

The Commission should deny replacement of 22 six-inch meters in the Bakersfield, Chico, East Los Angeles, Hermosa Redondo, King City, Marysville, Bayshore, Oroville, Salinas, Selma, and Westlake districts because they do not warrant replacement.

According to CWS' inventory of six-inch meters in the Bakersfield, Chico, East Los Angeles, Hermosa Redondo, King City, Marysville, Bayshore, Oroville, Salinas, Selma, and Westlake districts,[22] only twenty six-inch meters will reach CWS' replacement rate of twenty years for the Bakersfield, Chico, East Los Angeles, Hermosa Redondo, King City, Marysville, Oroville, Salinas, Selma, and Westlake districts and Mid-Peninsula (Bayshore) service area.[23]

Since only twenty six-inch meters reach twenty years in this rate case cycle for the Bakersfield, Chico, East Los Angeles, Hermosa Redondo, King City, Marysville, Oroville, Salinas, Selma, and Westlake districts and Mid-Peninsula service area, twenty six-inch meters should be replaced among these districts and service area. The six-inch meters that warrant replacement in this rate case for the Bakersfield, Chico, East Los Angeles, Hermosa Redondo, King City, Marysville, Oroville, Salinas, Selma, and Westlake districts and Mid-Peninsula (Bayshore) service area are shown in Table 1-6 below.

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[21] Attachment 1-2 (Revised Meter Replacement Budget Direct Cost Estimates).

[22] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

[23] Attachment 1-1 (Meter Inventory Tables).

1 The Commission should exclude cost of 22 six-inch meters from the Bakersfield,
2 Chico, East Los Angeles, Hermosa Redondo, King City, Marysville, Oroville, Salinas,
3 Selma, and Westlake districts and Mid-Peninsula (Bayshore) service area. The six-inch
4 meters that were removed are shown in Table 1-6 below.

Table 1-6: 6" Meters Inventory Summary – Bakersfield, Chico, East Los Angeles, Hermosa Redondo, King City, Marysville, Bayshore, Oroville, Salinas, Selma, and Westlake districts[24]

District	PID	Number of 6" Meters Proposed to be Replaced in 2022-2024	Number of 6" Meters that Reach CWS' 20 Year Replacement Schedule for Large Meters by 2024	Number of 6" Meters in 2022-2024 that should be removed from Meter Replacement Program Cost Estimates
Bakersfield	BKD0900	9	3	6
Chico	CHD0900	3	2	1
East Los Angeles	ELA0900	6	5	1
Hermosa Redondo	HRD0900	3	2	1
King City	KCD0900	3	1	2
Marysville	MRL0900	3	1	2
Oroville	ORO0900	3	1	2
Bayshore -Mid-Peninsula	SMD0900	3	2	1
Salinas	SLN0900	3	2	1
Selma	SEL0900	3	0	3
Westlake	WLK0900	3	1	2

5 The revised cost estimates for BKD0900, CHD 0900, ELA 0900, HRD 0900,
6 KCD 0900, MRL 0900, SMD 0900, ORO0900, SLN 0900, SEL 0900, and WLK 0900

[24] Bakersfield District Capital Project Justification, pp. 58-60. Chico District Capital Project Justification, pp. 37-39. East Los Angeles District Capital Project Justification, pp. 32-34. Hermosa Redondo District Capital Project Justification, pp. 29-31. King City District Capital Project Justification, pp. 21-23. Marysville District Capital Project Justification, pp. 21-23. Bayshore District Capital Project Justification, pp. 42, 44, and 46. Salinas District Capital Project Justification, pp. 33-35. Selma District Capital Project Justification, pp. 21-23. Westlake District Capital Project Justification, pp. 16-18. Attachment 1-1 (Meter Inventory Tables).

are shown in Attachment 1-2 of this report. The revised Meter Replacement Program budget for the Bakersfield, Chico, East Los Angeles, Hermosa Redondo, King City, Marysville, Bayshore, Oroville, Salinas, Selma, and Westlake districts are shown in Tables 1-8 to 1-10 below.

4. Eight-Inch Meters

The Commission should deny replacement of 70 eight-inch meters in the Dominguez, Hermosa Redondo, and Palos Verdes districts because they do not warrant replacement.

According to CWS' inventory of eight-inch meters in the Dominguez, Hermosa Redondo, and Palos Verdes districts,[25] eight eight-inch meters will reach CWS' replacement rate of twenty years for the Dominguez, Hermosa Redondo, and Palos Verdes districts.[26] These eight eight-inch meters should be replaced in these districts. The meters that warrant replacement are shown in Figure 1-7 below.

The Commission should exclude the cost of 70 eight-inch meters from the Dominguez, Hermosa Redondo, and Palos Verdes districts. The eight-inch meters that were removed are shown in Table 1-7 below.

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[25] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

[26] Attachment 1-1 (Meter Inventory Tables).

Table 1-7: 8" Meters Inventory Summary – Dominguez, Hermosa Redondo, and Palos Verdes districts[27]

District	PID	Number of 8" Meters Proposed to be Replaced in 2022-2024	Number of 8" Meters that Reach CWS's Twenty Year Replacement Schedule for Large Meters by 2024	Number of 8" Meters in 2022-2024 that should be removed from Meter Replacement Program Cost Estimates
Dominguez	DOM0900	33	8	25
Hermosa Redondo	HRD0900	30	0	30
Palos Verdes	PVD0900	15	0	15

The revised cost estimates for DOM 0900, HRD 0900, and PVD 0900 are shown in Attachment 1-2 of this report.[28] The revised Meter Replacement Program budget for the Dominguez, Hermosa Redondo, and Palos Verdes districts is shown in Tables 1-8 to 1-10 below.

C. Recommended Budget

After incorporating the adjustments mentioned above,[29] the Commission should allow the following Meter Replacement Program budget shown in Tables 1-8 to 1-10 during this rate case cycle.

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[27] Dominguez District Capital Project Justification, pp. 30-32. Hermosa Redondo District Capital Project Justification, pp. 29-31. Palos Verdes District Capital Project Justification, pp. 28-30. Attachment 1-1 (Meter Inventory Tables).

[28] Attachment 1-2 (Revised Meter Replacement Budget Direct Cost Estimates).

[29] The revised project costs are shown in Attachment 1-2 (Revised Meter Replacement Budget Direct Cost Estimates).

Table 1-8: 2022 Recommended Meter Replacement Program Budget

District	PID	Total District Cost	
		CWS	Cal Advocates
Antelope Valley	AVD0900	$ 10,334	$ 7,427
Bayshore	SMD0900 SSF0900	$ 479,140	$ 470,450
Bakersfield	BKD0900	$ 416,823	$ 390,754
Bear Gulch	BGD0900	$ 226,215	$ 226,215
Chico	CHD0900	$ 188,556	$ 188,556
Dixon	DIX0900	$ 14,189	$ 8,805
Dominguez	DOM0900	$ 755,103	$ 704,036
East Los Angeles	ELA0900	$ 183,282	$ 183,282
Hermosa Redondo	HRD0900	$ 454,177	$ 283,955
Kern River Valley	KRV0900	$ 10,539	$ 10,539
King City	KCD0900	$ 31,498	$ 31,498
Livermore	LIV0900	$ 147,994	$ 147,994
Los Altos	LAS0900	$ 205,409	$ 205,409
Marysville	MRL0900	$ 29,364	$ 29,364
Oroville	ORO0900	$ 34,328	$ 34,328
Palos Verdes	PVD0900	$ 388,698	$ 303,587
Salinas	SLN0900	$ 204,735	$ 204,735
Selma	SEL0900	$ 41,089	$ 32,400
Stockton	STK0900	$ 243,118	$ 243,118
Visalia	VIS0900	$ 306,701	$ 306,701
Westlake	WLK0900	$ 82,522	$ 73,833
Willows	WIL0900	$ 19,543	$ 19,543
Total		$ 4,473,356	$ 4,106,528

Table 1-9: 2023 Recommended Meter Replacement Program Budget

District	PID	Total District Cost	
		CWS	Cal Advocates
Antelope Valley	AVD0900	$ 10,593	$ 10,593
Bayshore	SMD0900 SSF0900	$ 491,119	$ 491,119
Bakersfield	BKD0900	$ 427,243	$ 427,243
Bear Gulch	BGD0900	$ 231,871	$ 231,871
Chico	CHD0900	$ 193,270	$ 184,363
Dixon	DIX0900	$ 14,544	$ 14,544
Dominguez	DOM0900	$ 773,980	$ 582,055
East Los Angeles	ELA0900	$ 187,864	$ 187,864
Hermosa Redondo	HRD0900	$ 465,531	$ 291,054
Kern River Valley	KRV0900	$ 10,802	$ 10,802
King City	KCD0900	$ 32,285	$ 23,379
Livermore	LIV0900	$ 151,694	$ 151,694
Los Altos	LAS0900	$ 210,545	$ 210,545
Marysville	MRL0900	$ 30,097	$ 21,190
Oroville	ORO0900	$ 35,186	$ 26,279
Palos Verdes	PVD0900	$ 398,415	$ 311,176
Salinas	SLN0900	$ 209,854	$ 209,854
Selma	SEL0900	$ 42,116	$ 33,210
Stockton	STK0900	$ 249,196	$ 249,196
Visalia	VIS0900	$ 314,368	$ 314,368
Westlake	WLK0900	$ 84,586	$ 75,679
Willows	WIL0900	$ 20,032	$ 12,736
Total		$ 4,585,193	$ 4,070,815

Table 1-10: 2024 Recommended Meter Replacement Program Budget

District	PID	Total District Cost	
		CWS	Cal Advocates
Antelope Valley	AVD0900	$ 10,858	$ 10,858
Bayshore	SMD0900 SSF0900	$ 503,396	$ 503,396
Bakersfield	BKD0900	$ 437,925	$ 410,534
Bear Gulch	BGD0900	$ 237,667	$ 237,667
Chico	CHD0900	$ 198,102	$ 198,102
Dixon	DIX0900	$ 14,908	$ 14,908
Dominguez	DOM0900	$ 793,330	$ 596,607
East Los Angeles	ELA0900	$ 192,560	$ 183,431
Hermosa Redondo	HRD0900	$ 477,169	$ 289,200
Kern River Valley	KRV0900	$ 11,072	$ 11,072
King City	KCD0900	$ 33,092	$ 23,963
Livermore	LIV0900	$ 155,487	$ 155,487
Los Altos	LAS0900	$ 215,809	$ 215,809
Marysville	MRL0900	$ 30,849	$ 21,720
Oroville	ORO0900	$ 36,066	$ 15,169
Palos Verdes	PVD0900	$ 408,376	$ 318,956
Salinas	SLN0900	$ 215,182	$ 205,971
Selma	SEL0900	$ 43,170	$ 25,328
Stockton	STK0900	$ 255,426	$ 255,426
Visalia	VIS0900	$ 322,228	$ 322,228
Westlake	WLK0900	$ 86,701	$ 86,701
Willows	WIL0900	$ 20,532	$ 14,876
Total		$ 4,699,904	$ 4,117,408

IV. .CONCLUSION

The Commission should only allow $4,106,528 in 2022, $4,070,815 in 2023, and $4,117,408 in 2024 for the Meter Replacement Program to align with the recommendations above to exclude meter that do not qualify for replacement at this time.[30]

[30] Four 1.5-inch meters, four three-inch meters, six four-inch meters, 22 six-inch meters, and 70 eight-inch meters do not warrant replacement.

Attachment 1-1: Meter Inventory Tables

Att. Table 1-1: 3" Meters— Antelope Valley District[31]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
Antelope Valley	3	No Active Customer	2004	21
Antelope Valley	3	No Active Customer	2005	20
Antelope Valley	3	No Active Customer	2006	19

Att. Table 1-2: 6" Meters— Bakersfield District[32]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
BK	6	Public Authority Metered	2014	11
BK	6	Business Metered	2012	13
BK	6	Business Metered	2012	13
BK	6	Public Authority Metered	2021	4
BK	6	Public Authority Metered	2011	14
BK	6	Business Metered	2015	10
BK	6	Public Authority Metered	2017	8
BK	6	Public Authority Metered	2016	9
BK	6	Public Authority Metered	2020	5
BK	6	Business Metered	2012	13
BK	6	Business Metered	2013	12
BK	6	Business Metered	2009	16
BK	6	Multiple Residential Metered	2019	6
BK	6	Public Authority Metered	2004	21
BK	6	Business Metered	2016	9
BK	6	Public Authority Metered	2009	16
BK	6	Multiple Residential Metered	2010	15
BK	6	Business Metered	2013	12
BK	6	Business Metered	2008	17
BK	6	Public Authority Metered	2018	7
BK	6	Business Metered	2014	11
BK	6	Public Authority Metered	2016	9

[31] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

[32] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
BK	6	Business Metered	2021	4
BK	6	Business Metered	2017	8
BK	6	Business Metered	2012	13
BK	6	Multiple Residential Metered	2018	7
BK	6	Business Metered	2018	7
BK	6	Public Authority Metered	2019	6
BK	6	Multiple Residential Metered	2004	21
BK	6	Industrial Metered	2021	4
BK	6	Multiple Residential Metered	2011	14
BK	6	Public Authority Metered	2021	4
BK	6	Business Metered	2011	14
BK	6	Multiple Residential Metered	2021	4
BK	6	Public Authority Metered	2011	14
BK	6	Public Authority Metered	2007	18
BK	6	Business Metered	2017	8
BK	6	Business Metered	2010	15
BK	6	Business Metered	2012	13
BK	6	Business Metered	2008	17
BK	6	Public Authority Metered	2014	11
BK	6	Multiple Residential Metered	2020	5
BK	6	Business Metered	2006	19
BK	6	Business Metered	2013	12
BK	6	Business Metered	2010	15
BK	6	Business Metered	2011	14
BK	6	Business Metered	2004	21

Att. Table 1-3: 6" Meters— Chico District[33]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
Chico	6	Multiple Residential Metered	2019	6
Chico	6	Business Metered	2014	11
Chico	6	Multiple Residential Metered	2017	8
Chico	6	Business Metered	2006	19
Chico	6	Industrial Metered	2011	14
Chico	6	Industrial Metered	2014	11
Chico	6	Business Metered	2003	22
Chico	6	Business Metered	2005	20
Chico	6	Business Metered	2012	13
Chico	6	Business Metered	2021	4

Att. Table 1-4: 4" Meters— Dixon District[34]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
Dixon	4	Multiple Residential Metered	2005	20
Dixon	4	Public Authority Metered	2005	20

[33] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

[34] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

Att. Table 1-5: 8" Meters— Dominguez District[35]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
Dominguez	8	Industrial Metered	2012	13
Dominguez	8	Multiple Residential Metered	2018	7
Dominguez	8	Business Metered	2019	6
Dominguez	8	Industrial Metered	2008	17
Dominguez	8	Industrial Metered	2002	23
Dominguez	8	Business Metered	2001	24
Dominguez	8	Industrial Metered	2012	13
Dominguez	8	Business Metered	2011	14
Dominguez	8	Industrial Metered	2001	24
Dominguez	8	Public Authority Metered	2020	5
Dominguez	8	Industrial Metered	2003	22
Dominguez	8	No Active Customer	2011	14
Dominguez	8	Multiple Residential Metered	2019	6
Dominguez	8	Multiple Residential Metered	2009	16
Dominguez	8	Public Authority Metered	2018	7
Dominguez	8	Industrial Metered	2001	24
Dominguez	8	Multiple Residential Metered	2018	7
Dominguez	8	Industrial Metered	2001	24
Dominguez	8	Business Metered	2018	7
Dominguez	8	Multiple Residential Metered	2020	5
Dominguez	8	Multiple Residential Metered	2016	9
Dominguez	8	No Active Customer	1987	38
Dominguez	8	Business Metered	2006	19
Dominguez	8	Multiple Residential Metered	2016	9
Dominguez	8	No Active Customer	1987	38
Dominguez	8	Industrial Metered	2017	8
Dominguez	8	Multiple Residential Metered	2016	9

[35] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

Att. Table 1-6: 6" Meters— East Los Angeles District[36]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
East Los Angeles	6	Business Metered	2016	9
East Los Angeles	6	Business Metered	2017	8
East Los Angeles	6	Public Authority Metered	2017	8
East Los Angeles	6	No Active Customer	2003	22
East Los Angeles	6	Public Authority Metered	2003	22
East Los Angeles	6	Public Authority Metered	2008	17
East Los Angeles	6	Public Authority Metered	2003	22
East Los Angeles	6	Public Authority Metered	2016	9
East Los Angeles	6	Industrial Metered	2018	7
East Los Angeles	6	Industrial Metered	2017	8
East Los Angeles	6	Business Metered	2018	7
East Los Angeles	6	Business Metered	2014	11
East Los Angeles	6	Public Authority Metered	2017	8
East Los Angeles	6	Public Authority Metered	2017	8
East Los Angeles	6	Public Authority Metered	2012	13
East Los Angeles	6	Industrial Metered	2014	11
East Los Angeles	6	Industrial Metered	2014	11
East Los Angeles	6	No Active Customer	2003	22
East Los Angeles	6	Public Authority Metered	2017	8
East Los Angeles	6	Public Authority Metered	2009	16
East Los Angeles	6	Public Authority Metered	2020	5
East Los Angeles	6	Public Authority Metered	2010	15
East Los Angeles	6	Business Metered	2009	16
East Los Angeles	6	Business Metered	2003	22

[36] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

Att. Table 1-7: 6" and 8" Meters— Hermosa Redondo District[37]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
Hermosa Redondo	6	Public Authority Metered	2009	16
Hermosa Redondo	6	Industrial Metered	2001	24
Hermosa Redondo	6	Reclaimed Water	2017	8
Hermosa Redondo	6	Business Metered	2019	6
Hermosa Redondo	6	Multiple Residential Metered	2016	9
Hermosa Redondo	6	Multiple Residential Metered	2001	24
Hermosa Redondo	6	Public Authority Metered	2009	16
Hermosa Redondo	6	No Active Customer	2014	11
Hermosa Redondo	6	Business Metered	2012	13
Hermosa Redondo	6	Business Metered	2015	10
Hermosa Redondo	6	Multiple Residential Metered	2011	14
Hermosa Redondo	8	Business Metered	2014	11
Hermosa Redondo	8	Industrial Metered	2008	17
Hermosa Redondo	8	Industrial Metered	2019	6
Hermosa Redondo	8	Industrial Metered	2010	15
Hermosa Redondo	8	Industrial Metered	2020	5

Att. Table 1-8: 6" Meters— King City District[38]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
King City	6	Business Metered	2003	22
King City	6	Public Authority Metered	2016	9

Att. Table 1-9: 6" Meters— Marysville District[39]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
Marysville	6	No Active Customer	2003	22

[37] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

[38] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

[39] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

Att. Table 1-10: 3", 4", and 6" Meters— Oroville District[40]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
ORO	3	Business Metered	2013	12
ORO	3	Other Sales & Svc	2018	7
ORO	3	Public Authority Metered	2009	16
ORO	3	Public Authority Metered	2011	14
ORO	3	Public Authority Metered	2003	22
ORO	3	Public Authority Metered	2009	16
ORO	3	Other Sales & Svc	2016	9
ORO	3	Business Metered	2003	22
ORO	3	Public Authority Metered	2018	7
ORO	3	Multiple Residential Metered	2019	6
ORO	3	Multiple Residential Metered	2013	12
ORO	3	Business Metered	2014	11
ORO	3	Other Sales & Svc	2016	9
ORO	3	Other Sales & Svc	2015	10
ORO	3	Multiple Residential Metered	2010	15
ORO	3	Public Authority Metered	2015	10
ORO	3	Business Metered	2003	22
ORO	3	Business Metered	2018	7
ORO	3	Industrial Metered	2010	15
ORO	3	Other Sales & Svc	2014	11
ORO	3	Business Metered	2009	16
ORO	3	Business Metered	2009	16
ORO	3	Public Authority Metered	2007	18
ORO	3	Other Sales & Svc	2018	7
ORO	3	Business Metered	2003	22
ORO	4	Industrial Metered	2003	22
ORO	4	Public Authority Metered	2006	19
ORO	4	Multiple Residential Metered	2011	14
ORO	4	Industrial Metered	2003	22
ORO	4	Residential Metered	2014	11
ORO	4	Industrial Metered	2018	7
ORO	4	Public Authority Metered	2008	17
ORO	4	Business Metered	2016	9
ORO	6	Business Metered	2018	7

[40] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
ORO	6	Industrial Metered	2019	6
ORO	6	Business Metered	2019	6
ORO	6	Business Metered	2018	7
ORO	6	Multiple Residential Metered	2003	22

Att. Table 1-11: 8" Meters— Palos Verdes District[41]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
Palos Verdes	8	Business Metered	2015	10
Palos Verdes	8	Public Authority Metered	2007	18
Palos Verdes	8	Business Metered	2015	10
Palos Verdes	8	Public Authority Metered	2015	10

Att. Table 1-12: 6" Meters— Salinas District[42]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
Salinas	6	Multiple Residential Metered	2018	7
Salinas	6	Industrial Metered	2008	17
Salinas	6	Industrial Metered	2019	6
Salinas	6	Business Metered	2017	8
Salinas	6	Multiple Residential Metered	2011	14
Salinas	6	Public Authority Metered	2014	11
Salinas	6	Industrial Metered	2013	12
Salinas	6	Multiple Residential Metered	2012	13
Salinas	6	Multiple Residential Metered	2012	13
Salinas	6	Public Authority Metered	2015	10
Salinas	6	Business Metered	2003	22
Salinas	6	Business Metered	2012	13
Salinas	6	Industrial Metered	2014	11
Salinas	6	Business Metered	2003	22
Salinas	6	Business Metered	2016	9
Salinas	6	Multiple Residential Metered	2011	14

[41] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

[42] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

Salinas	6	Multiple Residential Metered	2015	10
Salinas	6	Multiple Residential Metered	2013	12
Salinas	6	Business Metered	2010	15
Salinas	6	Public Authority Metered	2012	13
Salinas	6	Public Authority Metered	2014	11

Att. Table 1-13: 3", 4", 6" Meters— Selma District[43]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
Selma	3	No Active Customer	2016	9
Selma	3	Public Authority Metered	2017	8
Selma	3	Public Authority Metered	2018	7
Selma	3	Other Sales & Svc	2016	9
Selma	3	Industrial Metered	2008	17
Selma	3	Other Sales & Svc	2018	7
Selma	3	Business Metered	2010	15
Selma	3	Public Authority Metered	2016	9
Selma	3	Industrial Metered	2010	15
Selma	3	Public Authority Metered	2017	8
Selma	3	No Active Customer	2017	8
Selma	3	Other Sales & Svc	2017	8
Selma	3	No Active Customer	2016	9
Selma	3	Public Authority Metered	2019	6
Selma	3	Public Authority Metered	2019	6
Selma	3	Multiple Residential Metered	2003	22
Selma	3	Other Sales & Svc	2016	9
Selma	3	Business Metered	2018	9
Selma	3	Business Metered	2003	22
Selma	3	Business Metered	2018	7
Selma	3	Multiple Residential Metered	2009	16
Selma	3	No Active Customer	2018	7
Selma	3	Business Metered	2019	6
Selma	3	Multiple Residential Metered	2018	7
Selma	3	Business Metered	2003	22
Selma	3	Public Authority Metered	2003	22
Selma	3	Other Sales & Svc	2004	21
Selma	3	Multiple Residential Metered	2016	9

[43] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

Selma	3	Multiple Residential Metered	2012	13
Selma	3	Business Metered	2011	14
Selma	3	No Active Customer	2005	20
Selma	4	Multiple Residential Metered	2003	22
Selma	4	Multiple Residential Metered	2003	22
Selma	4	Public Authority Metered	2006	19
Selma	4	Business Metered	2009	16
Selma	4	Business Metered	2014	11
Selma	4	Multiple Residential Metered	2008	17
Selma	4	Public Authority Metered	2018	7
Selma	4	Industrial Metered	2012	13
Selma	4	Public Authority Metered	2006	19
Selma	4	Public Authority Metered	2019	6
Selma	6	Multiple Residential Metered	2019	6
Selma	6	Multiple Residential Metered	2012	13
Selma	6	Multiple Residential Metered	2012	13
Selma	6	Multiple Residential Metered	2017	8

Att. Table 1-14: 4" Meters— Willows District[44]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
Willows	4	Public Authority Metered	2003	22
Willows	4	Public Authority Metered	2013	12

Att. Table 1-15: 6" Meters— Westlake District[45]

District	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2024)
Westlake	6	Reclaimed Water	2005	20
Westlake	6	Business Metered	2008	17
Westlake	6	Public Authority Metered	2017	8
Westlake	6	Business Metered	2021	4

[44] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

[45] CWS Response to Public Advocates Office Data Request JMI-003 (Meter Replacement Program), Attachment 1 Meter Inventory.

Attachment 1-2: Revised Meter Replacement Budget Direct Cost Estimates

Att. Table 1-16: AVD 0900 —2022 Cost Comparison[46]

Item	Unit	Quantity			Total Cost	
		CWS	Cal Advocates	Unit Cost	CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	68	68	$ 116.99	$ 7,955.46	$ 7,955.46
Small Meter Replacement - 3/4" to 1"	ea	3	3	$ 222.44	$ 667.33	$ 667.33
Small Meter Replacement - 2"	ea	1	1	$ 489.63	$ 489.63	$ 489.63
Large Meter Replacement - 3"	ea	1	0	$ 3,568.50	$ 3,568.50	$ -
Subtotal					$ 12,680.92	$ 9,112.42
Direct Cost				81.50%	$ 10,334.95	$ 7,426.62

Att. Table 1-17: BKD 0900 —2022 Cost Comparison[47]

Item	Unit	Quantity			Total Cost	
		CWS	Cal Advocates	Unit Cost	CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	379	379	$ 117.81	$ 44,648.80	$ 44,648.80
Small Meter Replacement - 3/4" to 1"	ea	756	756	$ 210.83	$ 159,386.66	$ 159,386.66
Small Meter Replacement - 1.5"	ea	74	74	$ 592.36	$ 43,834.36	$ 43,834.36
Small Meter Replacement - 2"	ea	184	184	$ 735.77	$ 135,382.34	$ 135,382.34
Large Meter Replacement - 3"	ea	14	14	$ 3,568.50	$ 49,958.98	$ 49,958.98
Large Meter Replacement - 4"	ea	7	7	$ 6,605.97	$ 46,241.81	$ 46,241.81
Large Meter Replacement - 6"	ea	3	0	$ 10,662.08	$ 31,986.25	$ -
Subtotal Cost					$ 511,439.20	$ 479,452.95
Direct Cost				81.50%	$ 416,822.95	$ 390,754.16

[46] Antelope Valley District Capital Project Justification, p. 22.

[47] Bakersfield District Capital Project Justification, p. 58.

Att. Table 1-18: BKD 0900 —2024 Cost Comparison[48]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	379	379	$ 123.77	$ 46,909.15	$ 46,908.83
Small Meter Replacement - 3/4" to 1"	ea	756	756	$ 221.50	$ 167,455.60	$ 167,454.00
Small Meter Replacement - 1.5"	ea	74	74	$ 622.34	$ 46,053.48	$ 46,053.16
Small Meter Replacement - 2"	ea	184	184	$ 773.02	$ 142,236.07	$ 142,235.68
Large Meter Replacement - 3"	ea	14	14	$ 3,749.15	$ 52,488.16	$ 52,488.10
Large Meter Replacement - 4"	ea	7	7	$ 6,940.40	$ 48,582.80	$ 48,582.80
Large Meter Replacement - 6"	ea	3	0	$ 11,201.85	$ 33,605.55	$ -
Subtotal					$ 537,330.81	$ 503,722.57
Direct Cost				81.50%	$ 437,924.61	$ 410,533.89

Att. Table 1-19: CHD 0900 —2023 Cost Comparison[49]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	460	460	$ 120.89	$ 55,610.64	$ 55,610.64
Small Meter Replacement - 3/4" to 1"	ea	288	288	$ 215.63	$ 62,101.26	$ 62,101.26
Small Meter Replacement - 1.5"	ea	33	33	$ 596.62	$ 19,688.52	$ 19,688.52
Small Meter Replacement - 2"	ea	71	71	$ 751.04	$ 53,323.63	$ 53,323.63
Large Meter Replacement - 3"	ea	6	6	$ 3,657.71	$ 21,946.27	$ 21,946.27
Large Meter Replacement - 4"	ea	2	2	$ 6,771.12	$ 13,542.24	$ 13,542.24
Large Meter Replacement - 6"	ea	1	0	$ 10,928.63	$ 10,928.63	$ -
Subtotal Cost					$ 237,141.19	$ 226,212.56
Direct Cost				81.50%	$ 193,270.08	$ 184,363.25

[48] Bakersfield District Capital Project Justification, p. 60.

[49] Chico District Capital Project Justification, p. 38.

Att. Table 1-20: DIX 0900 —2022 Cost Comparison[50]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	18	18	$ 120.04	$ 2,160.74	$ 2,160.74
Small Meter Replacement - 3/4" to 1"	ea	10	10	$ 210.74	$ 2,107.36	$ 2,107.36
Small Meter Replacement - 1.5"	ea	2	2	$ 443.27	$ 886.54	$ 886.54
Small Meter Replacement - 2"	ea	3	3	$ 693.64	$ 2,080.92	$ 2,080.92
Large Meter Replacement - 3"	ea	1	1	$ 3,568.50	$ 3,568.50	$ 3,568.50
Large Meter Replacement - 4"	ea	1	0	$ 6,605.97	$ 6,605.97	$ -
Subtotal					$ 17,410.03	$ 10,804.06
Direct Cost				81.50%	$ 14,189.18	$ 8,805.31

Att. Table 1-21: DOM 0900 —2022 Cost Comparison[51]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	3118	3118	$ 117.86	$ 367,503.05	$ 367,503.05
Small Meter Replacement - 3/4" to 1"	ea	85	85	$ 209.50	$ 17,807.19	$ 17,807.19
Small Meter Replacement - 1.5"	ea	117	117	$ 588.50	$ 68,854.42	$ 68,854.42
Small Meter Replacement - 2"	ea	198	198	$ 735.68	$ 145,664.55	$ 145,664.55
Large Meter Replacement - 3"	ea	8	8	$ 3,568.50	$ 28,547.99	$ 28,547.99
Large Meter Replacement - 4"	ea	3	3	$ 6,605.97	$ 19,817.92	$ 19,817.92
Large Meter Replacement - 6"	ea	2	2	$ 10,662.09	$ 21,324.17	$ 21,324.17
Large Meter Replacement - 8"	ea	11	8	$ 20,886.10	$ 229,747.07	$ 167,088.78
Large Meter Replacement > 10"	ea	1	1	$ 27,240.04	$ 27,240.04	$ 27,240.04
Subtotal Cost					$ 926,506.40	$ 863,848.11
Direct Cost				81.50%	$ 755,102.70	$ 704,036.19

[50] Dixon District Capital Project Justification, p. 20.

[51] Dominguez District Capital Project Justification, p. 30.

Att. Table 1-22: DOM 0900 —2023 Cost Comparison[52]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	3118	3118	$ 120.81	$376,690.62	$ 376,690.62
Small Meter Replacement - 3/4" to 1"	ea	85	85	$ 214.73	$ 18,252.37	$ 18,252.37
Small Meter Replacement - 1.5"	ea	117	117	$ 603.21	$ 70,575.78	$ 70,575.78
Small Meter Replacement - 2"	ea	198	198	$ 754.07	$149,306.16	$ 149,306.16
Large Meter Replacement - 3"	ea	8	8	$ 3,657.71	$ 29,261.69	$ 29,261.69
Large Meter Replacement - 4"	ea	3	3	$ 6,771.12	$ 20,313.37	$ 20,313.37
Large Meter Replacement - 6"	ea	2	2	$10,928.64	$ 21,857.27	$ 21,857.27
Large Meter Replacement - 8"	ea	11	0	$21,408.25	$235,490.75	$ -
Large Meter Replacement > 10"	ea	1	1	$27,921.04	$ 27,921.04	$ 27,921.04
Subtotal Cost					$949,669.05	$ 714,178.30
Direct Cost				81.50%	$773,980.27	$ 582,055.31

Att. Table 1-23: DOM 0900 —2024 Cost Comparison[53]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	3118	3118	$ 123.83	$386,107.89	$ 386,107.89
Small Meter Replacement - 3/4" to 1"	ea	85	85	$ 220.10	$ 18,708.68	$ 18,708.68
Small Meter Replacement - 1.5"	ea	117	117	$ 618.29	$ 72,340.18	$ 72,340.18
Small Meter Replacement - 2"	ea	198	198	$ 772.92	$153,038.84	$ 153,038.84
Large Meter Replacement - 3"	ea	8	8	$ 3,749.15	$ 29,993.23	$ 29,993.23
Large Meter Replacement - 4"	ea	3	3	$ 6,940.40	$ 20,821.20	$ 20,821.20
Large Meter Replacement - 6"	ea	2	2	$11,201.85	$ 22,403.70	$ 22,403.70
Large Meter Replacement - 8"	ea	11	0	$21,943.46	$241,378.01	$ -
Large Meter Replacement > 10"	ea	1	1	$28,619.06	$ 28,619.06	$ 28,619.06
Subtotal Cost					$973,410.79	$ 732,032.78
Direct Cost				81.50%	$793,329.78	$ 596,606.71

[52] Dominguez District Capital Project Justification, p. 31.

[53] Dominguez District Capital Project Justification, p. 32.

Att. Table 1-24: ELA 0900 —2024 Cost Comparison[54]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	580	580	$ 123.72	$ 71,756.75	$ 71,756.75
Small Meter Replacement - 3/4" to 1"	ea	122	122	$ 222.01	$ 27,085.15	$ 27,085.15
Small Meter Replacement - 1.5"	ea	31	31	$ 627.62	$ 19,456.30	$ 19,456.30
Small Meter Replacement - 2"	ea	58	58	$ 771.62	$ 44,754.21	$ 44,754.21
Large Meter Replacement - 3"	ea	8	8	$ 3,749.15	$ 29,993.23	$ 29,993.23
Large Meter Replacement - 4"	ea	3	3	$ 6,940.40	$ 20,821.20	$ 20,821.20
Large Meter Replacement - 6"	ea	2	1	$ 11,201.85	$ 22,403.70	$ 11,201.85
Subtotal Cost					$ 236,270.54	$ 225,068.69
Direct Cost				81.50%	$ 192,560.50	$ 183,430.99

Att. Table 1-25: HRD 0900 —2022 Cost Comparison[55]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	595	595	$ 117.76	$ 70,066.99	$ 70,066.99
Small Meter Replacement - 3/4" to 1"	ea	434	434	$ 210.82	$ 91,494.54	$ 91,494.54
Small Meter Replacement - 1.5"	ea	145	145	$ 589.67	$ 85,501.63	$ 85,501.63
Small Meter Replacement - 2"	ea	76	76	$ 737.66	$ 56,062.49	$ 56,062.49
Large Meter Replacement - 3"	ea	6	6	$ 3,568.50	$ 21,410.99	$ 21,410.99
Large Meter Replacement - 4"	ea	2	2	$ 6,605.98	$ 13,211.95	$ 13,211.95
Large Meter Replacement - 6"	ea	1	1	$ 10,662.08	$ 10,662.08	$ 10,662.08
Large Meter Replacement - 8"	ea	10	0	$ 20,886.10	$ 208,860.97	$ -
Subtotal Cost					$ 557,271.64	$ 348,410.67
Direct Cost				81.50%	$ 454,176.39	$ 283,954.70

[54] East Los Angeles District Capital Project Justification, p. 34.

[55] Hermosa Redondo District Capital Project Justification, p. 29.

Att. Table 1-26: HRD 0900 —2023 Cost Comparison[56]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	595	595	$ 120.70	$ 71,818.67	$ 71,818.67
Small Meter Replacement - 3/4" to 1"	ea	434	434	$ 216.09	$ 93,781.91	$ 93,781.91
Small Meter Replacement - 1.5"	ea	145	145	$ 604.41	$ 87,639.17	$ 87,639.17
Small Meter Replacement - 2"	ea	76	76	$ 756.11	$ 57,464.05	$ 57,464.05
Large Meter Replacement - 3"	ea	6	6	$ 3,657.71	$ 21,946.27	$ 21,946.27
Large Meter Replacement - 4"	ea	2	2	$ 6,771.12	$ 13,542.24	$ 13,542.24
Large Meter Replacement - 6"	ea	1	1	$ 10,928.63	$ 10,928.63	$ 10,928.63
Large Meter Replacement - 8"	ea	10	0	$ 21,408.25	$ 214,082.50	$ -
Subtotal Cost					$ 571,203.44	$ 357,120.94
Direct Cost				81.50%	$ 465,530.80	$ 291,053.56

Att. Table 1-27: HRD 0900 —2024 Cost Comparison[57]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	595	595	$ 123.72	$ 73,614.13	$ 73,614.13
Small Meter Replacement - 3/4" to 1"	ea	434	434	$ 221.49	$ 96,126.45	$ 96,126.45
Small Meter Replacement - 1.5"	ea	145	145	$ 619.52	$ 89,830.15	$ 89,830.15
Small Meter Replacement - 2"	ea	76	76	$ 775.01	$ 58,900.65	$ 58,900.65
Large Meter Replacement - 3"	ea	6	6	$ 3,749.15	$ 22,494.92	$ 22,494.92
Large Meter Replacement - 4"	ea	2	2	$ 6,940.40	$ 13,880.80	$ 13,880.80
Large Meter Replacement - 6"	ea	1	0	$ 11,201.85	$ 11,201.85	$ -
Large Meter Replacement - 8"	ea	10	0	$ 21,943.46	$ 219,434.56	$ -
Subtotal Cost					$ 585,483.51	$ 354,847.10
Direct Cost				81.50%	$ 477,169.07	$ 289,200.39

[56] Hermosa Redondo District Capital Project Justification, p. 30.

[57] Hermosa Redondo District Capital Project Justification, p. 31.

Att. Table 1-28: KCD 0900 —2023 Cost Comparison[58]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		Cal Water	Cal Advocates
Small Meter Replacement - 5/8"	ea	63	63	$ 120.96	$ 7,620.79	$ 7,620.79
Small Meter Replacement - 3/4" to 1"	ea	26	26	$ 216.70	$ 5,634.11	$ 5,634.11
Small Meter Replacement - 1.5"	ea	2	2	$ 681.53	$ 1,363.05	$ 1,363.05
Small Meter Replacement - 2"	ea	5	5	$ 727.71	$ 3,638.55	$ 3,638.55
Large Meter Replacement - 3"	ea	1	1	$ 3,657.71	$ 3,657.71	$ 3,657.71
Large Meter Replacement - 4"	ea	1	1	$ 6,771.12	$ 6,771.12	$ 6,771.12
Large Meter Replacement - 6"	ea	1	0	$ 10,928.63	$ 10,928.63	$ -
Subtotal Cost					$ 39,613.96	$ 28,685.33
Direct Cost				81.50%	$ 32,285.39	$ 23,378.55

Att. Table 1-29: KCD 0900 —2024 Cost Comparison[59]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	63	63	$ 123.99	$ 7,811.31	$ 7,811.31
Small Meter Replacement - 3/4" to 1"	ea	26	26	$ 222.11	$ 5,774.97	$ 5,774.97
Small Meter Replacement - 1.5"	ea	2	2	$ 698.57	$ 1,397.13	$ 1,397.13
Small Meter Replacement - 2"	ea	5	5	$ 745.90	$ 3,729.52	$ 3,729.52
Large Meter Replacement - 3"	ea	1	1	$ 3,749.15	$ 3,749.15	$ 3,749.15
Large Meter Replacement - 4"	ea	1	1	$ 6,940.40	$ 6,940.40	$ 6,940.40
Large Meter Replacement - 6"	ea	1	0	$ 11,201.85	$ 11,201.85	$ -
Subtotal Cost					$ 40,604.33	$ 29,402.48
Direct Cost				81.50%	$ 33,092.53	$ 23,963.02

[58] King City District Capital Project Justification, p. 22.

[59] King City District Capital Project Justification, p. 23.

Att. Table 1-30: MRL 0900 —2023 Cost Comparison[60]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	14	14	$ 117.93	$ 1,651.00	$ 1,651.00
Small Meter Replacement - 3/4" to 1"	ea	8	8	$ 207.00	$ 1,656.03	$ 1,656.03
Small Meter Replacement - 1.5"	ea	5	5	$ 646.19	$ 3,230.94	$ 3,230.94
Small Meter Replacement - 2"	ea	12	12	$ 752.80	$ 9,033.65	$ 9,033.65
Large Meter Replacement - 3"	ea	1	1	$ 3,657.71	$ 3,657.71	$ 3,657.71
Large Meter Replacement - 4"	ea	1	1	$ 6,771.12	$ 6,771.12	$ 6,771.12
Large Meter Replacement - 6"	ea	1	0	$ 10,928.63	$ 10,928.63	$ -
Subtotal Cost					$ 36,929.08	$ 26,000.45
Direct Cost				81.50%	$ 30,097.21	$ 21,190.37

Att. Table 1-31: MRL 0900 —2024 Cost Comparison[61]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	14	14	$ 120.88	$ 1,692.28	$ 1,692.28
Small Meter Replacement - 3/4" to 1"	ea	8	8	$ 212.18	$ 1,697.43	$ 1,697.43
Small Meter Replacement - 1.5"	ea	5	5	$ 662.34	$ 3,311.71	$ 3,311.71
Small Meter Replacement - 2"	ea	12	12	$ 771.62	$ 9,259.49	$ 9,259.49
Large Meter Replacement - 3"	ea	1	1	$ 3,749.15	$ 3,749.15	$ 3,749.15
Large Meter Replacement - 4"	ea	1	1	$ 6,940.40	$ 6,940.40	$ 6,940.40
Large Meter Replacement - 6"	ea	1	0	$ 11,201.85	$ 11,201.85	$ -
Subtotal Cost					$ 37,852.31	$ 26,650.46
Direct Cost				81.50%	$ 30,849.64	$ 21,720.13

[60] Marysville District Capital Project Justification, p. 22.

[61] Marysville District Capital Project Justification, p. 23.

Att. Table 1-32: ORO 0900 —2023 Cost Comparison[62]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	67	67	$ 120.50	$ 8,073.81	$ 8,073.81
Small Meter Replacement - 3/4" to 1"	ea	8	8	$ 202.50	$ 1,620.03	$ 1,620.03
Small Meter Replacement - 1.5"	ea	2	2	$ 656.29	$ 1,312.57	$ 1,312.57
Small Meter Replacement - 2"	ea	10	10	$ 715.16	$ 7,151.64	$ 7,151.64
Large Meter Replacement - 3"	ea	2	2	$ 3,657.71	$ 7,315.42	$ 7,315.42
Large Meter Replacement - 4"	ea	1	1	$ 6,771.12	$ 6,771.12	$ 6,771.12
Large Meter Replacement - 6"	ea	1	0	$ 10,928.63	$ 10,928.63	$ -
Subtotal Cost					$ 43,173.22	$ 32,244.59
Direct Cost				81.50%	$ 35,186.18	$ 26,279.35

Att. Table 1-33: ORO 0900 —2024 Cost Comparison[63]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		Cal Water	Cal Advocates
Small Meter Replacement - 5/8"	ea	67	67	$ 123.52	$ 8,275.66	$ 8,275.66
Small Meter Replacement - 3/4" to 1"	ea	8	8	$ 207.57	$ 1,660.53	$ 1,660.53
Small Meter Replacement - 1.5"	ea	2	2	$ 672.69	$ 1,345.38	$ 1,345.38
Small Meter Replacement - 2"	ea	10	10	$ 733.04	$ 7,330.43	$ 7,330.43
Large Meter Replacement - 3"	ea	2	0	$ 3,749.16	$ 7,498.31	$ -
Large Meter Replacement - 4"	ea	1	0	$ 6,940.40	$ 6,940.40	$ -
Large Meter Replacement - 6"	ea	1	0	$ 11,201.85	$ 11,201.85	$ -
Subtotal Cost					$ 44,252.56	$ 18,612.00
Direct Cost				81.50%	$ 36,065.84	$ 15,168.78

[62] Oroville District Capital Project Justification, p. 20.

[63] Oroville District Capital Project Justification, p. 21.

Att. Table 1-34: PVD 0900 —2022 Cost Comparison[64]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	968	968	$ 117.82	$ 114,047.93	$ 114,047.93
Small Meter Replacement - 3/4" to 1"	ea	253	253	$ 210.46	$ 53,245.96	$ 53,245.96
Small Meter Replacement - 1.5"	ea	175	175	$ 591.59	$ 103,527.89	$ 103,527.89
Small Meter Replacement - 2"	ea	87	87	$ 730.22	$ 63,529.33	$ 63,529.33
Large Meter Replacement - 3"	ea	4	4	$ 3,568.50	$ 14,273.99	$ 14,273.99
Large Meter Replacement - 4"	ea	2	2	$ 6,605.98	$ 13,211.95	$ 13,211.95
Large Meter Replacement - 6"	ea	1	1	$ 10,662.08	$ 10,662.08	$ 10,662.08
Large Meter Replacement - 8"	ea	5	0	$ 20,886.10	$ 104,430.49	$ -
Subtotal Cost					$ 476,929.62	$ 372,499.13
Direct Cost				81.50%	$ 388,697.64	$ 303,586.79

Att. Table 1-35: PVD 0900 —2023 Cost Comparison[65]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	968	968	$ 120.76	$ 116,899.13	$ 116,899.13
Small Meter Replacement - 3/4" to 1"	ea	253	253	$ 215.72	$ 54,577.11	$ 54,577.11
Small Meter Replacement - 1.5"	ea	175	175	$ 606.38	$ 106,116.09	$ 106,116.09
Small Meter Replacement - 2"	ea	87	87	$ 748.48	$ 65,117.56	$ 65,117.56
Large Meter Replacement - 3"	ea	4	4	$ 3,657.71	$ 14,630.84	$ 14,630.84
Large Meter Replacement - 4"	ea	2	2	$ 6,771.12	$ 13,542.24	$ 13,542.24
Large Meter Replacement - 6"	ea	1	1	$ 10,928.63	$ 10,928.63	$ 10,928.63
Large Meter Replacement - 8"	ea	5	0	$ 21,408.25	$ 107,041.25	$ -
Subtotal Cost					$ 488,852.85	$ 381,811.60
Direct Cost				81.50%	$ 398,415.08	$ 311,176.46

[64] Palos Verdes District Capital Project Justification, p. 28.

[65] Palos Verdes District Capital Project Justification, p. 29.

Att. Table 1-36: PVD 0900 —2024 Cost Comparison[66]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	968	968	$ 123.78	$ 119,821.60	$ 119,821.60
Small Meter Replacement - 3/4" to 1"	ea	253	253	$ 221.11	$ 55,941.54	$ 55,941.54
Small Meter Replacement - 1.5"	ea	175	175	$ 621.54	$ 108,768.99	$ 108,768.99
Small Meter Replacement - 2"	ea	87	87	$ 767.19	$ 66,745.50	$ 66,745.50
Large Meter Replacement - 3"	ea	4	4	$ 3,749.15	$ 14,996.62	$ 14,996.62
Large Meter Replacement - 4"	ea	2	2	$ 6,940.40	$ 13,880.80	$ 13,880.80
Large Meter Replacement - 6"	ea	1	1	$ 11,201.85	$ 11,201.85	$ 11,201.85
Large Meter Replacement - 8"	ea	5	0	$ 21,943.46	$ 109,717.28	$ -
Subtotal Cost					$ 501,074.18	$ 391,356.90
Direct Cost				81.50%	$ 408,375.46	$ 318,955.88

Att. Table 1-37: SLN 0900 —2024 Cost Comparison[67]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	319	319	$ 123.92	$ 39,531.22	$ 39,531.22
Small Meter Replacement - 3/4" to 1"	ea	490	490	$ 221.29	$ 108,432.85	$ 108,432.85
Small Meter Replacement - 1.5"	ea	29	29	$ 628.08	$ 18,214.41	$ 18,214.41
Small Meter Replacement - 2"	ea	51	51	$ 774.15	$ 39,481.44	$ 39,481.44
Large Meter Replacement - 3"	ea	7	7	$ 3,749.15	$ 26,244.08	$ 26,244.08
Large Meter Replacement - 4"	ea	3	3	$ 6,940.40	$ 20,821.20	$ 20,821.20
Large Meter Replacement - 6"	ea	1	0	$ 11,201.85	$ 11,201.85	$ -
Subtotal Cost					$ 263,927.05	$ 252,725.20
Direct Cost				81.50%	$ 215,100.55	$ 205,971.04

[66] Palos Verdes District Capital Project Justification, p. 30.

[67] Salinas District Capital Project Justification, p. 35.

Att. Table 1-38: SEL 0900 —2022 Cost Comparison[68]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	85	85	$ 117.17	$ 9,959.06	$ 9,959.06
Small Meter Replacement - 3/4" to 1"	ea	16	16	$ 215.13	$ 3,442.02	$ 3,442.02
Small Meter Replacement - 1.5"	ea	8	8	$ 566.40	$ 4,531.19	$ 4,531.19
Small Meter Replacement - 2"	ea	11	11	$ 734.44	$ 8,078.87	$ 8,078.87
Large Meter Replacement - 3"	ea	2	2	$ 3,568.50	$ 7,137.00	$ 7,137.00
Large Meter Replacement - 4"	ea	1	1	$ 6,605.97	$ 6,605.97	$ 6,605.97
Large Meter Replacement - 6"	ea	1	0	$ 10,662.08	$ 10,662.08	$ -
				Subtotal Cost	$ 50,416.19	$ 39,754.11
			Direct Cost	81.50%	$ 41,089.20	$ 32,399.60

Att. Table 1-39: SEL 0900 —2023 Cost Comparison[69]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	85	85	$ 120.09	$ 10,208.04	$ 10,208.04
Small Meter Replacement - 3/4" to 1"	ea	16	16	$ 220.50	$ 3,528.07	$ 3,528.07
Small Meter Replacement - 1.5"	ea	8	8	$ 580.56	$ 4,644.47	$ 4,644.47
Small Meter Replacement - 2"	ea	11	11	$ 752.80	$ 8,280.85	$ 8,280.85
Large Meter Replacement - 3"	ea	2	2	$ 3,657.71	$ 7,315.42	$ 7,315.42
Large Meter Replacement - 4"	ea	1	1	$ 6,771.12	$ 6,771.12	$ 6,771.12
Large Meter Replacement - 6"	ea	1	0	$ 10,928.63	$ 10,928.63	$ -
				Subtotal Cost	$ 51,676.60	$ 40,747.97
			Direct Cost	81.50%	$ 42,116.43	$ 33,209.60

[68] Selma District Capital Project Justification, p. 21.

[69] Selma District Capital Project Justification, p. 22.

Att. Table 1-40: SEL 0900 —2024 Cost Comparison[70]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	85	85	$ 123.10	$ 10,463.24	$ 10,463.24
Small Meter Replacement - 3/4" to 1"	ea	16	16	$ 226.02	$ 3,616.27	$ 3,616.27
Small Meter Replacement - 1.5"	ea	8	8	$ 595.07	$ 4,760.58	$ 4,760.58
Small Meter Replacement - 2"	ea	11	11	$ 771.62	$ 8,487.87	$ 8,487.87
Large Meter Replacement - 3"	ea	2	1	$ 3,749.15	$ 7,498.31	$ 3,749.15
Large Meter Replacement - 4"	ea	1	0	$ 6,940.40	$ 6,940.40	$ -
Large Meter Replacement - 6"	ea	1	0	$ 11,201.85	$ 11,201.85	$ -
				Subtotal Cost	$ 52,968.52	$ 31,077.11
			Direct Cost	81.50%	$ 43,169.34	$ 25,327.84

Att. Table 1-41: SMD 0900 —Cost Comparison 2022[71]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	1358	1358	$ 117.89	$ 160,091.39	$ 160,091.39
Small Meter Replacement - 3/4" to 1"	ea	436	436	$ 210.90	$ 91,951.14	$ 91,951.14
Small Meter Replacement - 1.5"	ea	48	48	$ 586.92	$ 28,172.20	$ 28,172.20
Small Meter Replacement - 2"	ea	74	74	$ 736.10	$ 54,471.20	$ 54,471.20
Large Meter Replacement - 3"	ea	8	8	$ 3,568.50	$ 28,547.99	$ 28,547.99
Large Meter Replacement - 4"	ea	3	3	$ 6,605.97	$ 19,817.92	$ 19,817.92
Large Meter Replacement - 6"	ea	1	0	$ 10,662.08	$ 10,662.08	$ -
				Subtotal Cost	$ 393,713.92	$ 383,051.84
			Direct Cost	81.50%	$ 320,876.84	$ 312,187.24

[70] Selma District Capital Project Justification, p. 23.

[71] Bayshore District Capital Project Justification, p. 42.

Att. Table 1-42: WIL 0900 —2023 Cost Comparison[72]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	43	43	$ 121.27	$ 5,214.76	$ 5,214.76
Small Meter Replacement - 3/4" to 1"	ea	8	8	$ 211.50	$ 1,692.03	$ 1,692.03
Small Meter Replacement - 1.5"	ea	5	1	$ 545.22	$ 2,726.10	$ 545.22
Small Meter Replacement - 2"	ea	6	6	$ 752.80	$ 4,516.82	$ 4,516.82
Large Meter Replacement - 3"	ea	1	1	$ 3,657.71	$ 3,657.71	$ 3,657.71
Large Meter Replacement - 4"	ea	1	0	$ 6,771.12	$ 6,771.12	$ -
				Subtotal Cost	$ 24,578.54	$ 15,626.54
				Direct Cost 81.50%	$ 20,031.52	$ 12,735.64

Att. Table 1-43: WIL 0900 —2024 Cost Comparison[73]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	43	43	$ 124.31	$ 5,345.12	$ 5,345.12
Small Meter Replacement - 3/4" to 1"	ea	8	8	$ 216.79	$ 1,734.34	$ 1,734.34
Small Meter Replacement - 1.5"	ea	5	5	$ 558.85	$ 2,794.26	$ 2,794.26
Small Meter Replacement - 2"	ea	6	6	$ 771.63	$ 4,629.75	$ 4,629.75
Large Meter Replacement - 3"	ea	1	1	$ 3,749.15	$ 3,749.15	$ 3,749.15
Large Meter Replacement - 4"	ea	1	0	$ 6,940.40	$ 6,940.40	$ -
				Subtotal Cost	$ 25,193.02	$ 18,252.62
				Direct Cost 81.50%	$ 20,532.31	$ 14,875.88

[72] Willows District Capital Project Justification, p. 19.

[73] Willows District Capital Project Justification, p. 20.

Att. Table 1-44: WLK 0900 —2022 Cost Comparison[74]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	94	94	$ 117.65	$ 11,059.07	$ 11,059.07
Small Meter Replacement - 3/4" to 1"	ea	20	20	$ 210.74	$ 4,214.72	$ 4,214.72
Small Meter Replacement - 1.5"	ea	37	37	$ 585.70	$ 21,670.92	$ 21,670.92
Small Meter Replacement - 2"	ea	54	54	$ 738.98	$ 39,904.74	$ 39,904.74
Large Meter Replacement - 3"	ea	2	2	$ 3,568.50	$ 7,137.00	$ 7,137.00
Large Meter Replacement - 4"	ea	1	1	$ 6,605.97	$ 6,605.97	$ 6,605.97
Large Meter Replacement - 6"	ea	1	0	$ 10,662.08	$ 10,662.08	$ -
				Subtotal Cost	$ 101,254.50	$ 90,592.42
			Direct Cost	81.50%	$ 82,522.42	$ 73,832.82

Att. Table 1-45: WLK 0900 —2022 Cost Comparison[75]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
Small Meter Replacement - 5/8"	ea	94	94	$ 120.59	$ 11,335.55	$ 11,335.55
Small Meter Replacement - 3/4" to 1"	ea	20	20	$ 216.00	$ 4,320.09	$ 4,320.09
Small Meter Replacement - 1.5"	ea	37	37	$ 600.34	$ 22,212.69	$ 22,212.69
Small Meter Replacement - 2"	ea	54	54	$ 757.45	$ 40,902.36	$ 40,902.36
Large Meter Replacement - 3"	ea	2	2	$ 3,657.71	$ 7,315.42	$ 7,315.42
Large Meter Replacement - 4"	ea	1	1	$ 6,771.12	$ 6,771.12	$ 6,771.12
Large Meter Replacement - 6"	ea	1	0	$ 10,928.63	$ 10,928.63	$ -
				Subtotal Cost	$ 103,785.86	$ 92,857.23
			Direct Cost	81.50%	$ 84,585.48	$ 75,678.65

[74] Westlake District Capital Project Justification, p. 16.

[75] Westlake District Capital Project Justification, p. 17.

CHAPTER 2 Flowmeter Replacements

I. INTRODUCTION

This chapter presents analyses and recommendations on CWS' flowmeter replacement request. CWS requests to replace flowmeters throughout its districts based on existing age and condition of its flowmeters.[76] However, some of the proposed flowmeters are still functional and are still able to provide a benefit to ratepayers. CWS should not replace flowmeters that are still able to provide a benefit to ratepayers.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize $1,934,996 in 2022, $1,706,869 in 2023 and $1,922,565 in 2024 for CWS to replace flowmeters since seventeen flowmeters do not warrant replacement at this time. The recommended budgets also reflect reducing the labor costs for the 2023 and 2024 Livermore flowmeter replacement project budget (PID 124146 and PID 124154) and removing the project contingency. Tables 2-1 to 2-3 below show a cost comparison between the proposed and recommended budgets.

[76] Common Plant Issues Capital Project Justification, p. 30.

Table 2-1: 2022 Flowmeter Replacement Program—Cost Comparison[77]

District	PID	Direct Cost	
		CWS	Cal Advocates
Antelope Valley	123727	$ 35,129	$ 31,936
Bayshore	123794	$ 142,943	$ -
Bear Gulch	123914	$ 93,545	$ 38,977
Bakersfield	123925	$ 118,116	$ 98,430
Chico	123963	$ 310,877	$ 259,064
Dominguez	123968	$ 51,492	$ 46,810
East Los Angeles	124062	$ 155,941	$ 106,323
Hermosa Redondo	124179	$ 128,775	$ 117,069
King City	124175	$ 54,686	$ 45,572
Kern River Valley	124135	$ 59,700	$ 54,272
Livermore	124142	$ 310,933	$ 246,914
Los Altos	124066	$ 88,291	$ 73,576
Marysville	123995 124004	$ 72,217	$ 60,180
Oroville	124157	$ 84,982	$ 70,818
Redwood Valley	124083	$ 44,146	$ 36,788
Selma	-	$ -	$ -
Salinas	124163	$ 174,443	$ 145,369
Stockton	124121	$ 143,739	$ 130,672
Visalia	124110	$ 307,374	$ 256,145
Travis	126096	$ 28,815	$ 26,195
Westlake	124126	$ 17,132	$ 15,574
Willows	124132	$ 89,172	$ 74,310
Total		$ 2,512,447	$ 1,934,996

[77] CWS RO model file "Y_CH07_RO_RB_FDR_Proposed Capital Budget," tab "IN_2021 GRC ACB."

Table 2-2: 2023 Flowmeter Replacement Program—Cost Comparison[78]

District	PID	Direct Cost	
		CWS	Cal Advocates
Antelope Valley	123764	$ 36,704	$ 33,367
Bayshore	123903	$ 147,358	$ 40,933
Bear Gulch	-	$ -	$ -
Bakersfield	123961	$ 137,382	$ 124,892
Chico	123964	$ 328,530	$ 273,775
Dominguez	123973	$ 98,928	$ -
East Los Angeles	124063	$ 137,623	$ 83,408
Hermosa Redondo	124184	$ 93,544	$ 85,040
King City	-	$ -	$ -
Kern River Valley	124138	$ 61,294	$ 55,722
Livermore	124146	$ 288,377	$ 236,933
Los Altos	124069	$ 91,060	$ 37,942
Marysville	124007 124011	$ 74,022	$ 61,685
Oroville	124161	$ 49,367	$ 41,139
Redwood Valley	124087	$ 45,530	$ 37,941
Selma	124089	$ 44,805	$ 37,337
Salinas	124166	$ 146,195	$ 121,829
Stockton	124123	$ 147,875	$ 134,432
Visalia	124113	$ 316,325	$ 263,604
Travis	-	$ -	$ -
Westlake	-	$ -	$ -
Willows	124133	$ 44,266	$ 36,889
Total		$ 2,289,185	$ 1,706,869

[78] CWS RO model file "Y_CH07_RO_RB_FDR_Proposed Capital Budget," tab "IN_2021 GRC ACB."

Table 2-3: 2024 Flowmeter Replacement Program—Cost Comparison[79]

District	PID	Direct Cost	
		CWS	Cal Advocates
Antelope Valley	123788	$ 37,695	$ -
Bayshore	123906	$ 99,448	$ 82,873
Bear Gulch	-	$ -	$ -
Bakersfield	123962	$ 135,464	$ 123,149
Chico	123966	$ 353,166	$ 294,305
Dominguez	123976	$ 142,283	$ 129,348
East Los Angeles	124064	$ 141,322	$ -
Hermosa Redondo	124186	$ 96,055	$ 87,322
King City	-	$ -	$ -
Kern River Valley	124141	$ 64,038	$ 58,216
Livermore	124154	$ 296,733	$ 257,375
Los Altos	124070	$ 95,032	$ 39,597
Marysville	-	$ -	$ -
Oroville	-	$ -	$ -
Redwood Valley	124088	$ 93,929	$ 78,274
Selma	124091	$ 92,232	$ 76,860
Salinas	124167	$ 150,423	$ 125,353
Stockton	124127	$ 152,145	$ 126,788
Visalia	124118	$ 360,531	$ 300,443
Travis	-	$ -	$ -
Westlake	124413	$ 156,928	$ 142,662
Willows	-	$ -	$ -
Total		$ 2,467,423	$ 1,922,565

III. ANALYSIS

CWS provided an evaluation of the flowmeters CWS requests to replace in this rate case based on grading criteria CWS uses to determine if a flowmeter warrants replacement.[80]

[79] CWS RO model file "Y_CH07_RO_RB_FDR_Proposed Capital Budget," tab "IN_2021 GRC ACB."

[80] CWS Response to Public Advocates Office Data Request JMI-002 (Flowmeter Replacement Program), Attachment JMI-002 Attachment 1 – (Flowmeter Replacement Program Data).

CWS predicts a life expectancy of fifteen years for its flowmeters.[81] CWS states that all flowmeters with a remaining useful life of 20% (three years) are identified for replacement.[82] CWS classified its replacement criteria for flowmeters into five categories: 1) condition of the flow meter; 2) whether it meets design capacity; 3) functionality; 4) reliability; and 5) financial efficiency.[83] Table 2-4 below shows the criteria CWS used to determine whether a flowmeter needs to be replaced.

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[81] Common Plant Issues Capital Project Justification, p. 31.

[82] Common Plant Issues Capital Project Justification, p. 31.

[83] Common Plant Issues Capital Project Justification, p. 34.

Table 2-4: Flowmeter Replacement Criteria[84]

	Condition		Environmental Degradation Risk	Capacity	Functionality			Reliability	Financial Effciency		
Rating	Condition	Age/ Remaining Useful Life (RUL)	Environment-corrosion, heat, chemical, etc.	Growth Potential	Code Compliance	Performance	Runtime, cycling, loading per year	breadown frequency	Payback period	parts, equipment, obsolescence	Technology maturity
Multiplier	1	1.5	1	1	1	1.5	1.5	2	2	1.5	1.5
1	Excellent	80-100% RUL	protected/minimal exposure	significant exceeds design capacity	exceeds all codes	exceeds all	<1752 hrs, <17520 starts, 70-80%	none	> 10 yrs.	lead time < 1 month	current version, best available
2	Minor defects	60-80% RUL	minor exposure	exceeds design capacity	--	exceeds some	1752-3504 hrs, 17520-26280 starts, 80-90%	LE/2	<10 yrs	lead time>1 month	--
3	Moderate defects	40-60% RUL	moderate exposure	meets design capacity	meets all codes	meets all	3504-5256 hrs, 26280-35040 starts, 90-100%	LE/5	<5 yrs	lead time>1 month	functionality meets requirements
4	Significant deterioration	20-40% RUL	significant	fails design capacity	--	fails some	5256-7000 hrs, 35040-43800 starts, 100-115%	LE/10	< 3 yrs.	special order/ long lead time	--
5	Virtually unserviceable	0-20% RUL	severe exposure	significant fails design capacity	fails critical codes	fails all	>7000-8760 hrs, > 43800 starts, > 115%	LE/20	<1 yr	not available	not supported or obsolete

A. Project Need

The Commission should deny replacement of seventeen flowmeters in the Antelope Valley, Bear Gulch, Bayshore, Dominguez, East Los Angeles, Los Altos, and Livermore districts because they do not warrant replacement. In response to discovery, CWS provided the grading scores for the flowmeters CWS requests to replace in 2022-2024.[85]

Nine flowmeters do not need to be replaced due to existing condition of the flowmeters. Six flowmeters (LAN-114-INST, ELA-023-INST, ELA-022-INST, ELA-

[84] Common Plant Issues Capital Project Justification, p. 34.

[85] CWS Response to Public Advocates Office Data Request JMI-002 (Flowmeter Replacement Program), Attachment JMI-002 Attachment 1 – (Flowmeter Replacement Program Data).

054-INST, ELA-025-INST, and ELA-013-INST) are code compliant, meets current design capacity, and meets CWS' performance standards for measurement accuracy.[86] Three flowmeters (BG-005-INST and two DOM-203-INST) meet CWS' performance standards for measurement accuracy.[87] Even though the flowmeters have reached their useful age, the flowmeter meet all applicable code and performance standards. Since the current flowmeters meet all applicable performance standards, the flowmeters do not need to be replaced at this time. The 2024 Antelope Valley flowmeter replacement project budget (PID 123788), 2022 Bear Gulch flowmeter replacement project budget (PID 123914), 2023 Dominguez flowmeter replacement budget (PID 123973), and 2022-2024 East Los Angeles flowmeter replacement budget (PID 124062, PID124063, and PID 124064) were adjusted to remove the project costs associated with the aforementioned flowmeters.

CWS fails to adequately justify the need to replace seven flowmeters in the Mid-Peninsula (Bayshore) and Los Altos districts. The grading scores for certain criteria (e.g., flowmeter condition, code compliance, performance) were blank for five flowmeters (two SSF-001-INST, SC-122-INST, SC-120-INST, and SM-000-POR8) in Mid-Peninsula.[88] In addition, the grading scores for certain criteria (e.g., flowmeter condition, code compliance, performance) were blank for two flowmeters (LAS-023-INST and LAS-34-INST) in the Los Altos District.[89] Because there is no grading on current condition, performance, or whether the flowmeters can function at the current flow or pressure requirements, it is difficult to determine that the flowmeters need to be replaced.

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[86] CWS Response to Public Advocates Office Data Request JMI-002 (Flowmeter Replacement Program), Attachment JMI-002 Attachment 1 – (Flowmeter Replacement Program Data).

[87] CWS Response to Public Advocates Office Data Request JMI-002 (Flowmeter Replacement Program), Attachment JMI-002 Attachment 1 – (Flowmeter Replacement Program Data).

[88] CWS Response to Public Advocates Office Data Request JMI-002 (Flowmeter Replacement Program), Attachment JMI-002 Attachment 1 – (Flowmeter Replacement Program Data).

[89] CWS Response to Public Advocates Office Data Request JMI-002 (Flowmeter Replacement Program), Attachment JMI-002 Attachment 1 – (Flowmeter Replacement Program Data).

Therefore, no funding should be authorized for these flowmeters until CWS evaluates the flowmeters to demonstrate that the five flowmeters needs to be replaced. The 2022 and 2023 Mid-Peninsula flowmeter replacement budget (PID 123794 and PID 123903) and the 2023 and 2024 Los Altos flowmeter replacement project budget (PID 124069 and PID 124070) were adjusted to remove the project costs associated with the aforementioned flowmeters.

One flowmeter should be excluded from the 2022 flowmeter replacement project budget in the Livermore District (PID 124142) because CWS only justifies the replacement of six flowmeters. CWS states during discovery that it only plans to replace six flowmeters in 2022 (LIV-028-INST, LIV-026-INST, LIV-031-INST, two LIV-029-INST, and LIV-025-INST).[90] Because CWS only plans on replacing six flowmeters in 2022, funding for only six flowmeters should be authorized.

B. Labor Hours – Livermore District

The number of labor hours should be reduced in 2023 (PID 124146) and 2024 (PID 124154) in the Livermore District due to the number of flowmeters being replaced. CWS includes the following labor in the cost estimate: design, electrical engineering, field labor, and field manager. The number of labor hours in the cost estimates is shown in Table 2-5 below.

Table 2-5: Number of Labor Hours in Flowmeter Replacement Projects Cost Estimates[91]

			# Flowmeters		Number Labor Hrs			
District	Year	PID	8" Magmeter	10" Magmeter	Design	Electrical Eng.	Field Labor	Field Manager

[90] CWS Response to Public Advocates Office Data Request JMI-002 (Flowmeter Replacement Program), Attachment JMI-002 Attachment 1 – (Flowmeter Replacement Program Data).

[91] Chico District Capital Project Justification, pp. 41-43. Livermore District Capital Project Justification, pp. 33-35. Visalia District Capital Project Justification, pp. 35-37. Westlake District Capital Project Justification, p. 20, the total Design and total electrical engineering costs are both $29,138.40. At a unit cost of $121.41 per hour, this results in 120 hours for both the design and electrical engineering ($29138.40 ÷ $121.41 per hour).

Chico	2022	123963	7	0	280	280	280	28
Chico	2023	123964	7	0	280	280	280	28
Chico	2024	123966	7	0	280	280	280	28
Livermore	2022	124142	6	1	280	280	280	28
Livermore	2023	124146	6	0	280	280	280	28
Livermore	2024	124154	6	0	280	280	280	28
Visalia	2022	124110	7	0	280	280	280	28
Visalia	2023	124113	7	0	280	280	280	28
Visalia	2024	124118	9	0	360	360	360	36

Table 2-5 shows an average of approximately 40 hours of design labor per flowmeter, 40 hours of electrical engineering per flowmeter, 40 hours of field labor per flowmeter, and four hours of field manager labor per flowmeter for both the Chico and Visalia districts.[92]

For the flowmeter replacement projects in 2023 and 2024 in the Livermore District (PID 124146 and PID 124154), CWS estimates the same amount of labor (in each labor category) it takes to replace six flowmeters that it does to replace seven flowmeters. CWS shows that it is comfortable using the average number of labor hours per flowmeter of approximately 40 hours of design labor per flowmeter, 40 hours of electrical engineering per flowmeter, 40 hour of field labor per flowmeter, and four hours of field manager per flowmeter in its Livermore District, as shown in its 2022 Livermore budget (PID 124142) cost estimate.[93] The number of labor hours should be adjusted in those years to reflect six flowmeters. Similarly in 2022, CWS in discovery shows that it plans

[92] Table 2-5 above, CWS shows that 280 hours of design labor, 280 hours of electrical engineering, 280 hours of field labor, and 28 hours of field manager labor is needed to replace seven flowmeters in the Chico District. CWS also shows 280 hours of design labor, 280 hours of electrical engineering, 280 hours of field labor, and 28 hours of field manager labor is needed to replace seven flowmeters in Visalia in 2022 and 2023. CWS shows that 360 hours of design labor, 360 hours of electrical engineering, 360 hours of field labor, and 36 hours of field manager labor is needed to replace nine flowmeters in Visalia in 2024.

[93] Livermore District Capital Project Justification, p. 33. In CWS' original cost estimate to replace seven flowmeters in Livermore in 2022 (PID 124142) shows 280 hours of design labor, 280 hours of electrical engineering, 280 hours of field labor, and 28 hours of field manager labor is needed.

to replace six flowmeters. Therefore, the number of labor hours was adjusted to reflect the number of labor labors for six flowmeters. The revised cost estimates for the flowmeter replacement projects in the Livermore District is shown in Attachment 2-1.[94]

C. Project Contingency

The Commission should remove the project contingency from the proposed project costs,[95] consistent with Cal Advocates' recommendation regarding contingency.[96]

D. Recommended Budget

After incorporating the adjustments mentioned above, the Commission should allow the following flowmeter replacement project budget shown in Table 2-6 to 2-8 during this rate case cycle.

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[94] Attachment 2-1 (2022-2024 Livermore Flowmeter Replacement – Cost Comparison).

[95] CWS uses a contingency of ten percent for its flowmeter replacement project cost estimates.

[96] Public Advocates Office Report on Common Plant Issues.

Table 2-6: 2022 Recommended Flowmeter Replacement Project Budget

District	PID	Direct Cost	
		CWS	Cal Advocates
Antelope Valley	123727	$ 35,129	$ 31,936
Bayshore	123794	$ 142,943	$ -
Bear Gulch	123914	$ 93,545	$ 38,977
Bakersfield	123925	$ 118,116	$ 98,430
Chico	123963	$ 310,877	$ 259,064
Dominguez	123968	$ 51,492	$ 46,810
East Los Angeles	124062	$ 155,941	$ 106,323
Hermosa Redondo	124179	$ 128,775	$ 117,069
King City	124175	$ 54,686	$ 45,572
Kern River Valley	124135	$ 59,700	$ 54,272
Livermore	124142	$ 310,933	$ 246,914
Los Altos	124066	$ 88,291	$ 73,576
Marysville	123995 124004	$ 72,217	$ 60,180
Oroville	124157	$ 84,982	$ 70,818
Redwood Valley	124083	$ 44,146	$ 36,788
Selma	-	$ -	$ -
Salinas	124163	$ 174,443	$ 145,369
Stockton	124121	$ 143,739	$ 130,672
Visalia	124110	$ 307,374	$ 256,145
Travis	126096	$ 28,815	$ 26,195
Westlake	124126	$ 17,132	$ 15,574
Willows	124132	$ 89,172	$ 74,310
Total		$ 2,512,447	$ 1,934,996

Table 2-7: 2023 Recommended Flowmeter Replacement Project Budget

District	PID	Direct Cost	
		CWS	Cal Advocates
Antelope Valley	123764	$ 36,704	$ 33,367
Bayshore	123903	$ 147,358	$ 40,933
Bear Gulch	-	$ -	$ -
Bakersfield	123961	$ 137,382	$ 124,892
Chico	123964	$ 328,530	$ 273,775
Dominguez	123973	$ 98,928	$ -
East Los Angeles	124063	$ 137,623	$ 83,408
Hermosa Redondo	124184	$ 93,544	$ 85,040
King City	-	$ -	$ -
Kern River Valley	124138	$ 61,294	$ 55,722
Livermore	124146	$ 288,377	$ 236,933
Los Altos	124069	$ 91,060	$ 37,942
Marysville	124007 124011	$ 74,022	$ 61,685
Oroville	124161	$ 49,367	$ 41,139
Redwood Valley	124087	$ 45,530	$ 37,941
Selma	124089	$ 44,805	$ 37,337
Salinas	124166	$ 146,195	$ 121,829
Stockton	124123	$ 147,875	$ 134,432
Visalia	124113	$ 316,325	$ 263,604
Travis	-	$ -	$ -
Westlake	-	$ -	$ -
Willows	124133	$ 44,266	$ 36,889
Total		$ 2,289,185	$ 1,706,869

Table 2-8: 2024 Recommended Flowmeter Replacement Project Budget

District	PID	Direct Cost	
		CWS	Cal Advocates
Antelope Valley	123788	$ 37,695	$ -
Bayshore	123906	$ 99,448	$ 82,873
Bear Gulch	-	$ -	$ -
Bakersfield	123962	$ 135,464	$ 123,149
Chico	123966	$ 353,166	$ 294,305
Dominguez	123976	$ 142,283	$ 129,348
East Los Angeles	124064	$ 141,322	$ -
Hermosa Redondo	124186	$ 96,055	$ 87,322
King City	-	$ -	$ -
Kern River Valley	124141	$ 64,038	$ 58,216
Livermore	124154	$ 296,733	$ 257,375
Los Altos	124070	$ 95,032	$ 39,597
Marysville	-	$ -	$ -
Oroville	-	$ -	$ -
Redwood Valley	124088	$ 93,929	$ 78,274
Selma	124091	$ 92,232	$ 76,860
Salinas	124167	$ 150,423	$ 125,353
Stockton	124127	$ 152,145	$ 126,788
Visalia	124118	$ 360,531	$ 300,443
Travis	-	$ -	$ -
Westlake	124413	$ 156,928	$ 142,662
Willows	-	$ -	$ -
Total		$ 2,467,423	$ 1,922,565

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IV. CONCLUSION

The Commission should adopt $1,934,996 in 2022, $1,706,869 in 2023, and $ 1,922,565 in 2024 for CWS' flowmeter replacement projects since seventeen flowmeters do not need to be replaced during the 2022-2024 period. The recommended budgets also reflect reducing the labor costs for the 2023 and 2024 Livermore flowmeter replacement project budget (PID 124146 and PID 124154) and excluding the project contingency

Attachment 2-1: 2022-2024 Livermore Flowmeter Replacement – Cost Comparison

Att. Table 2-1: 2022 Livermore Flowmeter Replacement – Cost Comparison[97]

Item	Units	Quantity		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
Contractor Cost	ea.	1	1	$ 125,000	$ 125,000	$ 125,000
Design	hr.	280	240	$ 121.41	$ 33,994.80	$ 29,138.40
Electrical Engineering	hr.	280	240	$ 121.41	$ 33,994.80	$ 29,138.40
Field Labor	hr.	280	240	$ 75.29	$ 21,081.20	$ 18,069.60
Field Manager	hr.	28	24	$ 107.03	$ 2,996.84	$ 2,568.72
Flowmeter - 8"	ea.	6	6	$ 5,183.54	$ 31,101.24	$ 31,101.24
Flowmeter - 10"	ea.	1	0	$ 8,570.70	$ 8,570.70	$ -
Subtotal					$ 256,739.58	$ 235,016.36
Contingency				10%	$ 39,210.86	$ -
Subtotal					$ 295,950.44	$ 235,016.36
Escalation				5.06%	$ 14,982.59	$ 11,897.78
Direct Cost					$ 310,933.03	$ 246,914.14

Att. Table 2-2: 2023 Livermore Flowmeter Replacement – Cost Comparison[98]

Item	Units	Quantity		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
Contractor Cost	ea.	1	1	$ 110,000	$ 110,000	$ 110,000
Design	hr.	280	240	$ 121.41	$ 33,994.80	$ 29,138.40
Electrical Engineering	hr.	280	240	$ 121.41	$ 33,994.80	$ 29,138.40
Field Labor	hr.	280	240	$ 75.29	$ 21,081.20	$ 18,069.60
Field Manager	hr.	28	24	$ 107.03	$ 2,996.84	$ 2,568.72
Flowmeter - 8"	ea.	6	6	$ 5,183.54	$ 31,101.24	$ 31,101.24
Subtotal					$ 233,168.88	$ 220,016.36
Contingency				10%	$ 34,617.59	$ -
Subtotal					$ 267,786.47	$ 220,016.36
Escalation				7.69%	$ 20,590.08	$ 16,917.04
Direct Cost					$ 288,376.55	$ 236,933.40

[97] Livermore District Capital Project Justification, p. 33.

[98] Livermore District Capital Project Justification, p. 34.

Att. Table 2-3: 2024 Livermore Flowmeter Replacement – Cost Comparison[99]

Item	Units	Quantity		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
Contractor Cost	ea.	1	1	$ 110,000	$ 110,000	$ 110,000
Design	hr.	280	280	$ 121.41	$ 33,994.80	$ 33,994.80
Electrical Engineering	hr.	280	280	$ 121.41	$ 33,994.80	$ 33,994.80
Field Labor	hr.	280	280	$ 75.29	$ 21,081.20	$ 21,081.20
Field Manager	hr.	28	28	$ 107.03	$ 2,996.84	$ 2,996.84
Flowmeter - 8"	ea.	6	6	$ 5,183.54	$ 31,101.24	$ 31,101.24
Subtotal					$ 233,168.88	$ 233,168.88
Contingency				10%	$ 35,656.12	$ -
Subtotal					$ 268,825.00	$ 233,168.88
Escalation				10.38%	$ 27,907.54	$ 24,205.97
Direct Cost					$ 296,732.54	$ 257,374.85

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[99] Livermore District Capital Project Justification, p. 35.

CHAPTER 3 Vehicle Replacement Program

I. INTRODUCTION

This chapter presents Cal Advocates' analyses and recommendations on vehicle purchases and impacts to plant addition for general office and district offices.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a budget of $7,552,765 for vehicles between the 2022 and 2024 period.[100] This $7,552,765 budget consists of $5,099,215 for Vehicle Replacement Program, $1,862,503 for California Air Resources Board vehicles, $0 for new employee vehicles, and $591,046 other vehicle requests. This budget excludes CWS's proposed replacement of vehicles that do not meet established criteria, vehicles that CWS inadvertently requested in this GRC, and CWS's proposed 10% contingency factor for estimated purchase costs.

The Commission should also authorize $15,051,361 in 2021 and 2022 for Previously Funded Vehicle Budget.[101] This budget excludes amounts for cancelled vehicles and incomplete vehicle projects. A comparison of CWS's proposed, and Cal Advocates recommended vehicle purchases is presented in Attachment 3-1.

III. ANALYSIS

In response to discovery, CWS provided lists of proposed vehicle purchases for the 2022-2024 period, which include the Vehicle Replacement Program, the California Air Resources Board (CARB) replacement vehicles, vehicles for new employees,

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[100] See Attachment 3-1 A. Vehicle Budget from 2022 to 2024 (Direct Cost): CWS proposes $4,515,468 in 2022, $3,952,205 in 2023 and $2,950,946 in 2024 a total of $11,418,619 in 2022 to 2024.

[101] See Attachment 3-1 B. Previously Funded Vehicle Budget 2021-2022 (Direct Cost): CWS proposes $12,282,510 in 2021, and $2,768,852 in 2022 a total of $15,051,361 in 2021 to 2022.

additional vehicle requests, and a contingency factor cost for all vehicle budgets. CWS also provided 2020 and 2021 lists of actual vehicles purchased from previously funded vehicle budgets.

A. Vehicle Replacement Program (VRP)

The Commission should authorize a budget of $5,099,215 vehicle replacement between the period 2022 and 2024.[102] According to the Department of General Services (DGS) replacement criteria specified below in Table 3-1, twenty-four of CWS's proposed vehicles do not qualify for replacement during the years covered by this general rate case. Furthermore, CWS verified during the discovery process that eleven vehicles were inadvertently included on the replacement list and should be removed.[103]

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[102] See Attachment 3-1 A. CWS's vehicle replacement program proposed budget is $7,710,104 between the period 2022 and 2024

[103] CWS Response to Cal Advocates Data Request SN2-007 Q.2.a (Figure 4).

Table 3-1: DGS Vehicle Replacement Schedule Criteria (2008).[104]

Replacement Schedule Criteria
To assist agencies with determining replacement schedules and budgeting needs for state-owned vehicles, the following schedule for alternative fuel and gasoline fueled vehicles shall be used:

Authorized emergency vehicles as defined in Section 165 of the Vehicle Code, that are equipped with emergency lamps or lights described in Section 25252 of the Vehicle Code	100,000 miles
Sedans, station wagons, vans and light duty trucks or vehicles having a gross vehicle weight rating (GVWR) or 8500 pounds or less	120,000 miles
Heavy duty trucks or vehicles (Class 3 and under) having a gross vehicle weight rating (GVWR) of 8501 pounds or more	150,000 miles
4-wheel drive vehicles	150,000 miles

A state-owned vehicle may be disposed of or replaced when it is determined that it would be cost-effective to do so, regardless of age or mileage. All vehicles being disposed of require a Property Survey Report (STD. 152). An evaluation will be made by an Inspector of Automotive Equipment to determine whether a vehicle should be disposed of or can be safely and economically continued in service. The decision whether to retain, reutilize, or dispose of any vehicle not meeting the minimum replacement criteria shall be based on an inspection taking into account the following factors:

- Current mechanical condition.
- Previous maintenance and repair record.
- Extent of needed repairs and availability of parts and life expectancy of vehicle after repair.
- Current sale value.
- Cost and availability of replacement unit and accessories.
- Owning agency's ability to replace unit.

Vehicles meeting or exceeding the replacement schedule do not require an inspection.

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As shown in Figure 3-1 above, the mileage criteria for vehicle replacement are based on the (2008) DGS standard: (1) 120,000 miles for vehicles with a GVWR of up to 8,500 lbs., and (2) 150,000 miles for heavy-duty trucks, vehicles with a GVWR exceeding 8,500 lbs., or four-wheel drive vehicles.

Previously, the Commission has allowed customer funding only for CWS and Golden State Water Company (GSWC) vehicle replacements that comply with DGS criteria to ensure all utilities replace vehicles using consistent standards.[105, 106]

In its proposed list of vehicle replacements, CWS does not follow the 2008 DGS replacement criteria. For example, CWS proposes replacement of heavy-duty trucks

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[104] The April 22, 2008, State of California Fleet Handbook -A guide to Fleet Policy from DGS, p. 4. And CWS - Capital Project Justification Common Plant Issues, p. PJ-35.

[105] Decision D.07-12-055 December 20, 2007, Section 5.2 Vehicle Replacement Policy, p. 29.

[106] Decision D.06-01-25 January 17, 2006, Section 5.8 Golden State Water Company vehicle replacement policy.

when the mileage reaches 120,000 miles rather than the 150,000 DGS mileage criteria.[107] While DGS guidelines permit replacement of emergency vehicles at 100,000 miles, CWS's heavy-duty trucks do not qualify as "emergency vehicles" under the California Vehicle Code.[108,109]

In addition to its proposed replacement of fifteen heavy-duty trucks that fail to meet the 150,000 DGS mileage standard, CWS proposes replacement of nine passenger vehicles that fail to meet the 120,000 DGS mileage standard. Table 3-2 below shows the list of the total twenty-four vehicles that CWS proposes to replace that fail to meet DGS standards. [110]

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[107] CWS - Capital Project Justification Common Plant Issues, p. PJ-35.

[108] CWS Response to Public Advocates Office Data Request SN2-003, #1.a.

[109] Section 165 of the California Vehicle Code (Attachment 1-3), https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=165.

[110] See Attachment 3-4 Calculation for 24 vehicles that do not meet the replacement criteria.

Table 3-2: List of vehicles do not meet DGS standards by 2024

Proposed Year	District	Project ID	Vehicle ID	Year/ Make/ Model of Existing Vehicle to be Replaced	Primary Use of Existing Vehicle	Applicable DGS Standard	Mileage as of 12/31/2024
2024	101-BK	123799	V207107	2007 FORD F150	NWTP FLEET	120,000	112,216
2024	102-BG	123720	V215016	2015 FORD F-350	FLUSHING FOREMAN	150,000	128,282
2024	104-CHC	123724	V215116	2016 FORD F-250	FOREMAN-MRP	150,000	128,672
2024	111-LAS	123755	V213025	2013 FORD F-250	SERVICE PERSON	150,000	124,939
2023	112-MRL	123759	V205029	2005 FORD F-250	UTILITY WORKER	150,000	121,727
2024	114-SLN	123776	V211010	2011 FORD F-250	PUMP OP	150,000	136,255
2024	114-SLN	123776	V213027	2013 CHEVROLET 2500	PUMP OP	150,000	144,605
2024	114-SLN	123776	V215021	2016 FORD F-250	SAFETY	150,000	139,809
2023	117-SEL	123778	V213029	2013 FORD F-250	UW/RCPO	150,000	147,644
2023	119-STK	123781	V213033	2013 CHEVROLET 1500	COLLECTOR	120,000	102,993
2023	119-STK	123781	V215100	2015 FORD F-150	SUPERINTENDENT	120,000	89,648
2023	119-STK	123781	V215102	2015 FORD F-350	FOREMAN	150,000	117,881
2024	119-STK	123783	V213030	2013 CHEVROLET 1500	METER READER	120,000	102,709
2024	119-STK	123783	V216065	2016 CHEVROLET 1500	SERVICE PERSON	120,000	119,002
2022	120-VIS	123784	V208167	2008 FORD F-350	FLUSHING	150,000	144,215
2023	146-RDV	123770	V204083	2004 FORD F-350	UTILITY WORKER	150,000	142,683
2022	151-RDOM	123765	V206078	2006 CHEVROLET 3500	FOREMAN/HYD MAIN	150,000	144,866
2023	151-RDOM	123766	V208164	2008 FORD F-350	FLUSHING FOREMAN	150,000	134,798
2024	151-RDOM	123768	V215037	2015 FORD EDGE	PROJECT MANAGER	120,000	109,676
2023	330-CSS	123737	V217091	2017 FORD F-250	RISK MANAGER	150,000	145,113
2024	330-CSS	123739	V214031	2014 FREIGHTLINER	EMT	150,000	128,816
2024	330-CSS	123739	V218054	2018 LEXUS NX300H	CHIEF PROCUREMENT	120,000	106,985
2024	330-CSS	123739	V218074	2018 TOYOTA PRIUS	COMMUNITY AFFAIRS	120,000	82,977
2024	330-CSS	123739	V218075	2018 FORD FOCUS	REG COMMUNITY AFF	120,000	90,421

The DGS policy allows early vehicle replacement if a performance inspection concludes it is cost-effective.[111] Cal Advocates asked for the early replacement reasons but CWS was unable to provide requested supporting documents to support the early replacement requirements such as cost benefit analysis, maintenance records and inspection reports. Instead, CWS provided a new approach that contradicts its original information. CWS's new analysis inaccurately excludes 2020-2021 factual mileage data and only used an average mileage data of 2015 to 2019.[112] Using only 2015 to 2019 data unreasonably inflates the average mileage. This approach is not correct because CWS

[111] The policy states that vehicles maybe disposed or replaced when cost effective to do so. The decision to determine the effectiveness is based on an inspection the considers factors including current mechanical condition, previous maintenance, and repair record. See detailed explanation in Figure-1-1.

[112] CWS Response to Cal Advocates Data Request SN2-007, #1.a. and Figure 1.

cannot simply ignore data that does not support its preferred conclusions.[113] While CWS's 2020 and 2021 data indicated lower mileage usage, CWS still performed meter reading, maintenance and field repairs for valves, pipelines, etc. which required driving vehicles. CWS has not reduced any of its essential activities to maintain their systems during the pandemic as evidenced by its capital budget request in this rate case. CWS presented no reasons to exclude factual 2020 and 2021 data as outliers. Therefore, it is reasonable to include 2020 and 2021 mileage data for forecasting purposes.

CWS also stated that the 24 vehicles discussed above are due for replacement under DGS's revised criteria.[114] DGS's revised replacement criteria is based on a study related to DGS's specific needs and objectives as presented in the 2016 Vehicle Replacement Methodology report.[115] The report explained DGS has not been allocating sufficient funding for replacement of its fleet for the past decade. The fleet has high operating, maintenance, and repair costs. The study of replacement criteria was developed based on a life-cycle analysis specific to DGS conditions, which aims to speed up fleet replacements for achieving the reduction of overall costs, including operating and maintenance costs. CWS does not have a similar fleet condition. CWS has a vehicle replacement program that has consistently replaced its vehicles in a timely manner. In addition, CWS has not performed its own analysis to determine whether CWS has similar fleet goals and conditions or whether implementing the same criteria will be cost effective for CWS ratepayers.

Because CWS has not justified using the revised DGS replacement criteria, vehicles which are not expected to reach the replacement mileage threshold between 2022 to 2024 under the existing DGS guidelines should be removed. The capital budget

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[113] We are currently still in the pandemic, and it may continue for many years to come.

[114] CWS Response to Cal Advocates Data Request SN2-007, #1.a. and Figure 1.

[115] California Department of General Services, (https://www.dgs.ca.gov/Resources/SAM/TOC/4100/4126, Date accessed: 10/8/2021), also see Attachment 1-2 for the report's executive summary.

associated with the twenty-four vehicles should also be removed from CWS budget request. When a vehicle is expected to reach its replacement mileage in a year that is not in the year requested by CWS, it should be required to move the amount to the year that it is expected to reach the designated DGS replacement mileage. The Commission should authorize vehicle replacement budgets that are based on DGS scheduled criteria shown on Table 3-1 above.

In response to Cal Advocates' discovery request,[116] CWS agreed to remove eleven additional vehicles with an initially proposed budget of $702,972. CWS verified the vehicles were inadvertently included on 2022-2024 Vehicle Replacement Program budget list as shown in Table 1-B below.

Table 3-3: Vehicles Removed from 2022-2024 Vehicle Replacement Program

Proposed Year	District Code	Project ID	Vehicle ID	Status	Direct Cost
2022	101	123159	V213070	Remove	$ 44,466
2022	101	123159	V213072	Remove	$ 38,135
2024	106	123733	V209019	Remove	$ 93,682
2022	330	123734	V211032	Remove	$ 99,308
2023	151	123766	V206009	Remove	$ 45,886
2022	146	123769	V216077	Remove	$ 49,277
2023	146	123770	V204083	Remove	$ 107,980
2022	120	123784	V205010	Remove	$ 46,930
2023	330	123737	V214050	Remove	$ 42,916
2022	151	123765	V206078	Remove	$ 94,591
2022	330	123734	V212038	Remove	$ 39,800
Total					$ 702,972

[116] CWS Response to Cal Advocates Data Request SN2-007 Q2. Figure 4. Direct Costs are based on Cal Advocates estimates.

B. Vehicles for California Air Resources Board (CARB) Regulation

The Commission should authorize a budget of $1,862,503 to replace eleven vehicles in 2022 to comply with CARB's regulatory requirements. [117],[118]

CARB regulation of trucks and buses is based on the weight category of the vehicles. CWS's eleven proposed vehicles are diesel trucks with Gross Vehicle Weight Ratings (GVWRs) between 14,001 to 26,000 lbs., which are classified under the lighter vehicle category.[119] The regulation states that lighter vehicles with engines that are built prior to 2010 must be replaced by January 1, 2023.[120] The CARB replacement schedule is provided below in Table 3-4.

Table 3-4: CARB Engine Model Year Schedule for Lighter Vehicles.

Engine Model	2010 Engine Required
1995 and older	January 1, 2015
1996	January 1, 2016
1997	January 1, 2017
1998	January 1, 2018
1999	January 1, 2019
2003 and older	January 1, 2020
2004-2006	January 1, 2021
2007-2009	January 1, 2023

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[117] See Attachment 1-1, Total Direct Cost budget for CARB Vehicles reduced from $2,048,754 to $1,862,503 due to adjustment of contingency factor.

[118] Truck and Bus Regulation | California Air Resources Board, (https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation/about, Date accessed: October 9, 2021)((" requires heavy-duty diesel vehicles that operate in California to reduce toxic air contaminants (TACs) emissions from their exhaust. Diesel exhaust is responsible for 70% of the cancer risk from airborne toxics. Therefore, by January 1, 2023, nearly all trucks and buses will be required to have 2010 or newer model year engines to reduce particulate matter (PM) and oxides of nitrogen (NOx) emissions. To help ensure that the benefits of this regulation are achieved, starting in 2020, only vehicles compliant with this regulation will be registered by the California Department of Motor Vehicles (DMV)").

[119] California Air Resources Board (CARB), Truck and Bus Regulation Compliance Requirement Overview, (https://ww3.arb.ca.gov/msprog/onrdiesel/documents/fsregsum.pdf, last updated: June 18, 2019).

[120] CARB Truck Rule Compliance Required for DMV Registration FAQ, (https://ww2.arb.ca.gov/sites/default/files/truckstop/pdfs/sb1_faqeng.pdf, Date accessed: 10/9/2021).

In this GRC, CWS requests to replace its trucks with engines built between 2007 and 2009. Following the CARB schedule criteria above, these vehicles should be replaced before they are out of compliance. After January 1, 2023, non-compliant vehicles cannot operate in California and will be denied for vehicle registration.

C. Other Vehicles Requests

The Commission should authorize a budget of $591,046 to purchase six additional vehicles, and diesel truck replacements in 2022 to 2024.[121],[122] CWS verified during the discovery process that two vehicles were cancelled.[123] These requests are reasonable and justified.

D. Vehicle For New Employees

The Commission should not authorize the purchase of new vehicles for new employees that are hired in this GRC.[124] Because new employees are not necessary (see Andrew Sweeney testimony),[125] there should be $0 budget for new vehicles.

E. Contingency

The Commission should not apply a contingency factor in setting the budget for vehicles in the period between the 2022 and 2024. Please refer to Suliman Ibrahim's

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[121] The budget of $591,046 (Direct Cost) includes reduction due to contingency factor adjustment to 0%.

[122] Notes: CWS Response to Cal Advocates Data Request SN2-007, Q. 3 e, h and k. CWS agreed to remove $100,000 from 2021 recorded amount in the plant file.

[123] See Attachment 1-1 for Additional Vehicles list in 2022 to 2024 and CWS Response to Cal Advocates Data Request SN2-001 Attachment #1 – Excel Project List. CWS originally proposed 8 vehicles for $856,013 between 2022 to 2024, 2 vehicles in Chico district were cancelled (PIDs 124198 and 124202). Total 6 vehicles (4 additional vehicles and 2 diesel truck replacements).

[124] CWS requests a budget to purchase 10 vehicles for the new employee that will be hired in 2023. CWS RO Model, file: CH07_RO_RB_PLT, tab: Budget (ACB) Adjustments WS-2.1, subcategory: vehicle, for new employee. The total budget is $803,749 in 2023 (Direct Cost). See Patrick Alexander's (CWS) email (10/13/2021) Subject: Question: Vehicles for new employees (new complements).

[125] Cal Advocates Report on Administrative and General Expenses (Andrew Sweeney), page 2-3.

testimony in Chapter 16 of this report for a detailed discussion on the contingency factor.[126]

F. Previously Funded Vehicle Budget

The Commission should authorize $15,051,361 in 2021-2022 for Previously Funded Vehicle Budget.[127] Cal Advocates presents its analysis and recommendation of Previously Funded Budget section in Suliman Ibrahim's testimony in chapter 16 of this report.[128]

IV. CONCLUSION

The Commission should authorize $7,552,765 for CWS's Vehicle Capital Budgets for replacement and new vehicles between 2022 and 2024 period and $15,051,361in 2021 and 2022 for CWS's Previously Funded Vehicle Budget as discussed above. The vehicle requests on plant addition are presented in Attachment 3-1.

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[126] CWS applies 10% contingency factor for its proposed vehicle budget. Please refer to Cal Advocates Report on Allocations and Plant for CSS & RDOM District, Pipeline Replacement, and Physical Security, p. 3-49.

[127] See Attachment 1-1 B. CWS vs. Cal Advocates Previously Funded Vehicle Budget (2021 to 2022).

[128] Cal Advocates Report on Allocations and Plant for CSS & RDOM District, Pipeline Replacement, and Physical Security, pp. 3-52 to 3-54.

Attachment 3-1:
A. CWS vs. Cal Advocates Vehicle Budget Comparison (2022 to 2024)
and
B. Previously Funded Vehicle Budget (2021 to 2022)[129]

[129] Cal Advocates' recommended amount in the tables include contingency reduction from 10% to 0% (in Direct Costs).

Attachment 3-1 A.: CWS vs. Cal Advocates Vehicle Budget (Direct Cost)

Director Code	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates as % of CWS
2022	Vehicle Replacement Program					
100	00129001	AV 2022 Vehicle Replacement Program	$ 91,728	$ -	$ 91,728	0%
101	00129100	BK 2022 Vehicle Replacement Program	$ 170,294	$ 90,848	$ 79,446	47%
102	00129264	BAY 2022 Vehicle Replacement Program	$ 157,107	$ 154,591	$ 2,516	98%
103	00129716	BC 2022 Vehicle Replacement Program	$ 147,651	$ 44,557	$ 103,094	30%
104	00129722	CH 2022 Vehicle Replacement Program	$ 40,210	$ 39,554	$ 656	98%
105	00129730	DA 2022 Vehicle Replacement Program	$ 135,751	$ 121,591	$ 14,160	90%
106	00129734	CSS 2022 Vehicle Replacement Program	$ 541,718	$ 212,531	$ 329,186	39%
107	00129740	KRV 2022 Vehicle Replacement Program	$ 96,313	$ 95,648	$ 666	99%
108	00129744	KC 2022 Vehicle Replacement Program	$ 57,126	$ -	$ 57,126	0%
110	00129751	OHD 2022 Vehicle Replacement Program	$ 46,730	$ 42,564	$ 4,166	91%
111	00129752	RD 2022 Vehicle Replacement Program	$ 184,441	$ 91,890	$ 94,551	49%
113	00129760	RDV 2022 Vehicle Replacement Program	$ 100,298	$ 54,528	$ 45,770	54%
114	00129773	SJV 2022 Vehicle Replacement Program	$ 46,730	$ 42,564	$ 4,166	91%
117	00129777	SSL 2022 Vehicle Replacement Program	$ 46,730	$ 42,564	$ 4,166	91%
120	00129784	VIS 2022 Vehicle Replacement Program	$ 152,878	$ 77,254	$ 75,625	51%
121	00129791	WIL 2022 Vehicle Replacement Program	$ 46,730	$ 42,564	$ 4,166	91%
	CARB Vehicle Replacement Program					
101	00129863	BK 2022 CARB VEHICLE REPLACEMENT	$ 536,455	$ 471,552	$ 47,153	88%
102	00129874	BC 2022 CARB Vehicle Replacement	$ 208,154	$ 190,153	$ 18,015	91%
105	00129879	DA 2022 CARB Vehicle Replacement	$ 104,910	$ 95,660	$ 9,250	91%
111	00129878	LAS 2022 CARB Vehicle Replacement	$ 240,578	$ 219,108	$ 21,470	91%
117	00129870	SSL 2022 CARB Vehicle Replacement	$ 234,201	$ 213,310	$ 20,891	91%
121	00129862	WIL 2022 CARB Vehicle Replacement	$ 950,748	$ 866,316	$ 84,431	91%
	Other Vehicle Requests					
104	00129302	CH 2022 ADDITIONAL DUMP TRUCK	$ 98,545	$ -	$ 98,545	0%
145	00129306	RDV ATV AND TRAILER	$ 18,018	$ 16,330	$ 1,688	91%
105	00129304	DA Small Trailer Vacuum Unit	$ 25,201	$ 22,950	$ 2,251	91%
106	00129347	DA Replace V108366	$ 155,548	$ 112,431	$ 43,117	72%
		Total 2022	$ 4,535,488	$ 3,104,969	$ 1,430,519	68%

Director Code	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates as % of CWS
2023	Vehicle Replacement Program					
129	00132091	AV 2023 Vehicle Replacement Program	$ -	$ 91,760	$ (91,760)	0%
101	00132121	BK 2023 Vehicle Replacement Program	$ 38,727	$ -	$ 38,727	0%
102	00132247	BAY 2023 Vehicle Replacement Program	$ 200,117	$ 132,326	$ 67,791	66%
104	00132253	CH 2023 Vehicle Replacement Program	$ 90,307	$ 82,401	$ 8,906	91%
105	00132311	DA 2023 Vehicle Replacement Program	$ 45,088	$ 41,334	$ 4,154	91%
106	00132317	CSS 2023 Vehicle Replacement Program	$ 1,079,307	$ 579,476	$ 499,831	54%
110	00129740	OHV 2023 Vehicle Replacement Program	$ 46,034	$ 41,761	$ 4,273	91%
111	00129754	LAS 2023 Vehicle Replacement Program	$ 50,907	$ -	$ 50,907	0%
112	00129763	WIL 2023 Vehicle Replacement Program	$ 58,555	$ -	$ 58,555	0%
121	00129766	RD 2023 Vehicle Replacement Program	$ 573,887	$ 308,573	$ 265,314	54%
145	00129770	RDV 2023 Vehicle Replacement Program	$ 107,980	$ -	$ 107,980	0%
114	00129774	SJV 2023 Vehicle Replacement Program	$ 96,207	$ -	$ 96,207	0%
117	00129778	SSL 2023 Vehicle Replacement Program	$ 58,555	$ -	$ 58,555	0%
119	00129781	SIS 2023 Vehicle Replacement Program	$ 380,860	$ 154,676	$ 226,184	40%
120	00129785	VIS 2023 Vehicle Replacement Program	$ 188,997	$ 188,471	$ 526	100%
123	00129797	WIL 2023 Vehicle Replacement Program	$ 46,878	$ 41,544	$ 5,334	89%
152	00129348	BAY 2023 Vehicle Replacement Program	$ -	$ 45,107	$ (45,107)	0%
332	00129348	CSS 2023 Vehicle Replacement Program	$ -	$ 140,876	$ (140,876)	0%
	Vehicle for New Employees					
332	CSSOrtisVeh	CSS Vehicle for Proposed Compliance	$ 607,616	$ -	$ 607,616	0%
101	BKOrtisVeh	BK Vehicle for Proposed Compliance	$ 55,624	$ -	$ 55,624	0%
111	LASOrtisVeh	LAS Vehicle for Proposed Compliance	$ 50,907	$ -	$ 50,907	0%
	Other Vehicle Requests					
114	00129392	SJV 2023 Additional Water Truck	$ 148,080	$ 134,618	$ 13,462	91%
121	00129398	WIL VAC TRAILER	$ 46,406	$ 40,260	$ 6,146	87%
		Total 2023	$ 4,162,268	$ 1,741,128	$ 2,421,140	42%

Function Code 2024	Work Order #	Project Description	CWS	Cal Advances	CWS > Cal Advances	Cal Advances as % of CWS
	Vehicle Replacement Program					
132	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ 100,343	$ 91,130	$ 9,213	91%
101	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ -	$ 35,087	$ (35,087)	0%
102	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ 162,431	$ 47,569	$ 114,862	29%
104	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ 291,395	$ 211,091	$ 80,304	72%
102	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ 140,524	$ 87,166	$ 53,358	62%
330	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ 427,147	$ 172,850	$ 254,297	40%
134	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ 46,841	$ 42,583	$ 4,258	91%
109	001 [illegible]	[illegible] 2022 Vehicle Replacement Program	$ -	$ 54,561	$ (54,561)	0%
111	001 [illegible]	[illegible] 2023 Vehicle Replacement Program	$ -	$ 47,067	$ (47,067)	0%
111	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ 60,017	$ -	$ 60,017	0%
131	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ 277,011	$ 176,724	$ 100,286	63%
114	001 [illegible]	[illegible] 2023 Vehicle Replacement Program	$ -	$ 89,648	$ (89,648)	0%
114	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ 109,340	$ -	$ 109,340	0%
114	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ 290,389	$ 179,847	$ 110,542	61%
130	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ 97,017	$ 89,648	$ 7,370	92%
101	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ 521,701	$ 426,851	$ 94,850	82%
132	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ -	$ 47,355	$ (47,355)	0%
330	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ -	$ 94,851	$ (94,851)	0%
330	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ -	$ 314,915	$ (314,915)	0%
114	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ -	$ 71,120	$ (71,120)	0%
130	001 [illegible]	[illegible] 2024 Vehicle Replacement Program	$ -	$ 47,054	$ (47,054)	0%
	Other Vehicle Requests					
104	001 [illegible]	[illegible] ADDITIONAL TRUCK	$ 105,409	$ -	$ 105,409	0%
102	001 [illegible]	[illegible] Vacuum Truck Replacement	$ 251,049	$ 229,268	$ 21,780	91%
		Total 2024	$ 2,950,941	$ 2,500,389	$ 450,552	85%
		Total 2022 to 2024	$ 11,418,519	$ 7,552,705	$ 3,865,814	66.14%

Attachment 3-1 B. CWS vs. Cal Advocates: Previously Funded Vehicle Budget from 2021 to 2022 (Direct Cost)

District Code	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates as % of CWS
2021	**Vehicle Replacement Program and Other Vehicle Requests**					
101	00115683	2019 Vehicle Replacement Program	$ 637,255	$ 637,255	$ -	100%
101	00115728	2020-Vehicle Replacement Program	$ 312,615	$ 312,615	$ -	100%
101	00115731	2021-Vehicle Replacement Program	$ 558,475	$ 558,475	$ -	100%
152	00115746	2019 Vehicle Replacement Program	$ 196,078	$ 196,078	$ -	100%
152	00115747	2020 Vehicle Replacement Program	$ 231,585	$ 231,585	$ -	100%
152	00115748	2021 Vehicle Replacement Program	$ 95,838	$ 95,838	$ -	100%
102	00115759	2020 Vehicle Replacement Program	$ 196,290	$ 196,290	$ -	100%
104	00115767	2020 Vehicle Replacement Program	$ 331,090	$ 331,090	$ -	100%
104	00115768	2021 Vehicle Replacement Program	$ 268,944	$ 268,944	$ -	100%
105	00115772	2020 Vehicle Replacement Program	$ 66,336	$ 66,336	$ -	100%
106	00115779	2020 Vehicle Replacement Program	$ 119,293	$ 119,293	$ -	100%
106	00115781	2021 Vehicle Replacement Program	$ 93,879	$ 93,879	$ -	100%
330	00115784	2019 Vehicle Replacement Program	$ 960,784	$ 960,784	$ -	100%
330	00115786	2020 Vehicle Replacement Program	$ 741,871	$ 741,871	$ -	100%
330	00115787	2021 Vehicle Replacement Program	$ 557,624	$ 557,624	$ -	100%
134	00115810	2019 Vehicle Replacement Program	$ 58,192	$ 58,192	$ -	100%
134	00115811	2020 Vehicle Replacement Program	$ 146,996	$ 146,996	$ -	100%
109	00115814	2020 Vehicle Replacement Program	$ 47,975	$ 47,975	$ -	100%
110	00115817	2020 Vehicle Replacement Program	$ 47,975	$ 47,975	$ -	100%
110	00115818	2021 Vehicle Replacement Program	$ 98,350	$ 98,350	$ -	100%
111	00115819	2019 Vehicle Replacement Program	$ 294,118	$ 294,118	$ -	100%
111	00115820	2020 Vehicle Replacement Program	$ 152,946	$ 152,946	$ -	100%
111	00115821	2021 Vehicle Replacement Program	$ 102,821	$ 102,821	$ -	100%
151	00115825	2019 Vehicle Replacement Program	$ 519,608	$ 519,608	$ -	100%
151	00115826	2020 Vehicle Replacement Program	$ 500,654	$ 500,654	$ -	100%
151	00115827	2021 Vehicle Replacement Program	$ 263,094	$ 263,094	$ -	100%
146	00115829	2020 Vehicle Replacement Program	$ 80,498	$ 80,498	$ -	100%
146	00115831	2021 Vehicle Replacement Program	$ 48,236	$ 48,236	$ -	100%
114	00115832	2019 Vehicle Replacement Program	$ 392,157	$ 392,157	$ -	100%
114	00115834	2020 Vehicle Replacement Program	$ 146,296	$ 146,296	$ -	100%
117	00115837	2020 Vehicle Replacement Program	$ 48,056	$ 48,056	$ -	100%
119	00115841	2020 Vehicle Replacement Program	$ 47,975	$ 47,975	$ -	100%
119	00115842	2021 Vehicle Replacement Program	$ 135,382	$ 135,382	$ -	100%
120	00115847	2019 Vehicle Replacement Program	$ 293,980	$ 293,980	$ -	100%
120	00115848	2020 Vehicle Replacement Program	$ 268,550	$ 268,550	$ -	100%
120	00115855	2021 Vehicle Replacement Program	$ 46,939	$ 46,939	$ -	100%
123	00115857	2019 Vehicle Replacement Program	$ 45,128	$ 45,128	$ -	100%
123	00115858	2020 Vehicle Replacement Program	$ 91,590	$ 91,590	$ -	100%
121	00116358	2021 VEHICLE REPLACEMENT PROJECT	$ 53,399	$ 53,399	$ -	100%
152	00117798	Dump Trucks -	$ 132,353	$ 132,353	$ -	100%
152	00117881	Replace Air Compressor	$ 75,514	$ 75,514	$ -	100%
152	00118094	2020- VEH. FOR PROPOSED COMPLEMENT	$ 1,003,900	$ 1,003,900	$ -	100%
146	00118096	2020 - VEH. FOR PROPOSED COMPLEMENT	$ 52,988	$ 52,988	$ -	100%
152	00118120	2019 - VEH. FOR NEW COMPLEMENT	$ 826,975	$ 826,975	$ -	100%
102	00118528	2019 - ADDITIONAL VEHICLES	$ 248,289	$ 248,289	$ -	100%
111	00118529	2020 - ADDITIONAL LEAK TRUCK	$ 226,631	$ 226,631	$ -	100%
151	00118530	2020 - ADDITIONAL VAC TRUCKS	$ 416,987	$ 416,987	$ -	100%
2022	**Vehicle Replacement Program and Other Vehicle Requests**					
102	00115762	2021 Vehicle Replacement Program	$ 198,659	$ 198,659	$ -	100%
134	00115812	2021 Vehicle Replacement Program	$ 122,275	$ 122,275	$ -	100%
114	00115835	2021 Vehicle Replacement Program	$ 247,696	$ 247,696	$ -	100%
101	00118093	2019- VEH. FOR PROPOSED COMPLEMENT	$ 1,618,706	$ 1,618,706	$ -	100%
105	00118095	2020 - VEH. FOR PROPOSED COMPLEMENT	$ 50,620	$ 50,620	$ -	100%
120	00118121	2019 - VEHICLE FOR NEW COMPLEMENT	$ 48,629	$ 48,629	$ -	100%
330	00118124	Mobile Comm trailer	$ 384,228	$ 384,228	$ -	100%
330	00118531	2019 - ADDITIONAL SO CAL POOL	$ 98,039	$ 98,039	$ -	100%
		Carry Over TOTAL 2021-2022	$ 15,051,361	$ 15,051,361	$ -	100%

Attachment 3-2:
2016 Vehicle Replacement Methodology
(Executive Summary)

EXECUTIVE SUMMARY

This report presents the results of Mercury Associates, Inc.'s analysis of the costs and cost savings opportunities associated with modernizing the vehicle fleet of the State of California[1]. The State has been unable to allocate enough money to replace its vehicles over the past decade or so. This has resulted in a fleet whose average age of 11.2 years is much higher than optimal and a backlog of replacement spending needs that we estimate to be $605 million in FY 2017, when optimal replacement cycles we developed as part of this project are used.

In comparison to a younger fleet whose assets are replaced in a consistently timely manner, an old fleet typically has higher operating costs, notably maintenance and repair, costs; lower residual values (when assets are sold at the end of their lives); and poorer asset availability and reliability and, hence, employee productivity. For these reasons, an *increase* in fleet replacement spending aimed at modernizing a fleet often is essential for achieving an overall *reduction* in fleet costs, which, in turn, increases the availability of funds to support an organization's primary mission. The goal of this report is to show the State of California that this is precisely the situation confronting its fleet; that is, that embarking upon a fleet modernization program is an investment that will more than pay for itself over time.

The report discusses three key elements of the development and implementation of an effective fleet modernization and ongoing replacement program and their application to the State's fleet:

- The determination of optimal replacement cycles for key types of assets in a fleet, where "optimal" is defined as the best cycle or service life for minimizing the total cost of ownership of a given type or class of assets;
- The development of several long-term replacement plans that quantify future fleet replacement costs; and
- The development of a business case justification for modernizing a fleet that quantifies the cost savings that can be realized from such an initiative in comparison to the costs of not modernizing it.

Replacement Cycles

We calculated optimal replacement cycles for nine key types of vehicles in the State's fleet using quantitative life cycle cost analysis techniques. These nine classes covered two-thirds of the vehicles in the study fleet. Results were then applied to similar types of vehicles in the fleet to develop a set of fleet-wide replacement criteria.

In general, we found that the State's existing replacement cycles to be longer than peer organizations and much longer than optimal (and it should be noted that the State has

[1] Note that this study covered mostly the automotive fleet and included some highway rated trucks as well. Vocational trucks and off-road equipment were not included in the study.

Attachment 3-3:
California Vehicle Code Section 165

AUTHENTICATED

State of California

VEHICLE CODE

Section 165

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165. An authorized emergency vehicle is:

(a) Any publicly owned and operated ambulance, lifeguard, or lifesaving equipment or any privately owned or operated ambulance licensed by the Commissioner of the California Highway Patrol to operate in response to emergency calls.

(b) Any publicly owned vehicle operated by the following persons, agencies, or organizations:

(1) Any federal, state, or local agency, department, or district employing peace officers as that term is defined in Chapter 4.5 (commencing with Section 830) of Part 2 of Title 3 of the Penal Code, for use by those officers in the performance of their duties.

(2) Any forestry or fire department of any public agency or fire department organized as provided in the Health and Safety Code.

(c) Any vehicle owned by the state, or any bridge and highway district, and equipped and used either for fighting fires, or towing or servicing other vehicles, caring for injured persons, or repairing damaged lighting or electrical equipment.

(d) Any state-owned vehicle used in responding to emergency fire, rescue, or communications calls and operated either by the Office of Emergency Services or by any public agency or industrial fire department to which the Office of Emergency Services has assigned the vehicle.

(e) (1) Any vehicle owned or operated by a federally recognized Indian tribe used in responding to emergency, fire, ambulance, or lifesaving calls. For the purposes of this section and the provisions of Sections 2501 and 2510, a vehicle used in responding to emergency, fire, ambulance, or lifesaving calls owned or operated by a federally recognized Indian tribe is considered an authorized emergency vehicle.

(2) Any vehicle owned or operated by any department or agency of the United States government when the vehicle is used in responding to emergency fire, ambulance, or lifesaving calls or is actively engaged in law enforcement work.

(f) Any vehicle for which an authorized emergency vehicle permit has been issued by the Commissioner of the California Highway Patrol.

(Amended by Stats. 2021, Ch. 282, Sec. 1. (AB 798) Effective January 1, 2022.)

Attachment 3-4:
Calculations of 24 Vehicles Do Not Meet Replacement Criteria

Proposed Year	Department	Project ID	Vehicle ID	Year Make Model of Existing Vehicle to be Replaced	Primary Use of Existing Vehicle	GVWR of Existing Vehicle to be Replaced	Applicable DCS Standard	Existing Vehicle Purchased Date	Actual Mileage of Existing Vehicle	Date Actual Mileage Recorded	Length of Vehicle Usage (in days)	Avg Daily Mileage	Mileage as of 12/31/2017	Mileage as of 12/31/2018	Mileage as of 12/31/2019	Mileage as of 12/31/2020	Qualify Replacement?
2024	101-BK	123749	V213047	2007 FORD F150	NWTP FLEET	6,800	120,000	4/10/2017	90,033	6/30/2021	5105	17	93,222	99,548	105,873	112,210	not GRC
2024	103-HG	123720	V215016	2014 FORD F-150	FLUSHING FOREMAN	11,500	150,000	9/24/2015	94,166	6/30/2021	2106	38	96,734	104,187	114,116	124,363	not GRC
2024	104-CHC	123731	V214116	2016 FORD F-250	FOREMAN-MRP	10,000	150,000	12/2016	78,474	6/30/2021	2001	39	85,690	100,004	114,319	128,672	not GRC
2024	111-AS	123722	V213025	2014 FORD F-250	SERVICE PERSON	10,000	150,000	4/3/2013	87,661	6/30/2021	3104	29	91,024	101,641	114,280	124,919	not GRC
2023	112-MPL	123739	V214074	2005 FORD F-250	UTILITY WORKER	10,000	150,000	4/19/2016	100,075	6/30/2021	5016	17	103,188	109,362	115,530	121,727	not GRC
2024	114-SLN	123770	V211010	2011 FORD F-250	PUMP OP	10,000	150,000	6/8/2011	101,193	6/30/2021	3675	21	106,117	116,114	126,191	136,211	not GRC
2024	114-SLN	123739	V213077	2013 CHEVROLET 250	PUMP OP	10,000	150,000	4/10/2013	101,789	6/30/2021	3043	33	107,044	120,153	132,262	144,005	not GRC
2024	114-SLN	123770	V215021	2014 FORD F-250	SAFETY	10,000	150,000	8/12/2015	87,630	6/30/2021	2184	41	91,122	110,004	124,886	139,814	not GRC
2023	117-SEL	123718	V213074	2013 FORD F-250	UWRCPO	10,000	150,000	4/10/2013	108,592	6/30/2021	3010	34	109,025	122,486	135,948	147,044	not GRC
2023	119-STK	123781	V213088	2013 CHEVROLET 150	FIELD METER	6,800	120,000	4/2/2013	77,210	6/30/2021	3011	31	80,889	83,437	94,316	107,591	not GRC
2023	119-STK	123783	V214101	2015 FORD F-150	SUPERINTENDENT	6,800	120,000	10/16/2015	55,537	6/30/2021	2084	27	60,440	70,167	79,894	89,648	not GRC
2023	119-STK	123781	V215102	2014 FORD F-150	FOREMAN	11,500	150,000	11/3/2015	77,166	6/30/2021	2086	37	79,394	93,127	104,861	117,583	not GRC
2024	119-STK	123783	V213131	2013 CHEVROLET 150	METER READER	6,800	120,000	12/2013	72,270	6/30/2021	3080	24	76,646	85,326	94,000	102,709	not GRC
2023	119-STK	123783	V216065	2016 CHEVROLET 150	SERVICE PERSON	6,800	120,000	6/23/2016	91,063	6/30/2021	1673	38	93,063	97,038	103,103	119,146	not GRC
2022	120-VIS	123784	V204067	2008 FORD F-350	FLUSHING	10,000	150,000	4/28/2008	113,909	6/30/2021	4811	24	118,266	126,008	135,550	144,215	not GRC
2023	120-RDOM	123770	V204088	2004 FORD F-150	UTILITY WORKER	11,500	150,000	6/30/2004	114,396	6/30/2021	6304	19	123,807	128,276	135,210	147,683	not GRC
2022	121-RDOM	123760	V206174	2006 CHEVROLET 250	FOREMAN/HYD MAINT	11,500	150,000	4/7/2006	117,541	6/30/2021	5506	21	121,489	129,261	137,032	144,800	not GRC
2023	121-RDOM	123760	V208164	2008 FORD F-150	FLUSHING FOREMAN	11,500	150,000	4/28/2008	109,113	6/30/2021	4811	23	110,913	118,821	126,866	134,146	not GRC
2024	121-RDOM	123768	V215117	2015 FORD EDGE	PROJECT MANAGER	6,800	120,000	11/7/2015	67,720	6/30/2021	2066	33	72,751	85,715	97,679	109,670	not GRC
2023	130-CSS	123737	V217001	2017 FORD F-250	RISK MANAGER	10,000	150,000	11/21/2017	73,940	6/30/2021	1317	56	83,831	104,266	124,663	145,111	not GRC
2024	130-CSS	123739	V214031	2014 FREIGHTLINER	FLAT	11,500	150,000	1/28/2014	87,481	6/30/2021	2700	32	93,429	106,210	118,997	128,810	not GRC
2023	130-CSS	123739	V218054	2018 LEXUS NX300H	FIELD PROFESSIONAL/CO	6,800	120,000	12/31/2018	44,513	6/30/2021	913	49	53,493	71,917	84,333	106,963	not GRC
2024	130-CSS	123739	V218034	2018 TOYOTA PRIUS	COMMUNITY AFFAIRS 3.0	6,800	120,000	4/19/2018	38,500	6/30/2021	1108	35	44,804	57,576	70,259	82,977	not GRC
2023	130-CSS	123739	V218075	2018 FORD FOCUS	BUS COMMUNITY AFFAI	6,800	120,000	6/21/2018	41,841	6/30/2021	1103	38	48,864	65,917	78,915	91,933	not GRC
		31															

CHAPTER 4 Pump and Motor Replacements

I. INTRODUCTION

Pumps and motors are an important part of a water system's infrastructure. They allow a utility to pump ground water, move water through the system, and boost water pressure when necessary.

There are many factors that can affect the lifespan of a pump, including the type of pump, how much it is used, environmental conditions, and maintenance, or lack thereof. Addressing environmental concerns, such as preventing sand from entering the pump, and completing routine maintenance can help extend the useful life of pumps and motors.

One metric of pump condition is the Overall Plant Efficiency (OPE) score, which rates the efficiency of the pump "from wire to water."[130] Cal Water uses a slightly modified version of the OPE scoring metric, which divides the pumps into five categories, rather than four.[131] Cal Water asserts that it also uses other factors, such as when the last work was performed on the pump, to determine if the pump needs replacement.[132]

II. SUMMARY OF RECOMMENDATIONS

The Commission should approve a pump and motor budget of $1,346,913 in 2022, $1,542,665 in 2023 and $828,815 in 2024. Table 4-1 below shows each district's recommended budget for each year.

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[130] Attachment 4-2: CPUC Memo on efficiency of water pump stations and equipment assets. January 26, 1978. File No. J-1428.

[131] A.21-07-002, file "Common Plant_2021_GRC_Justification Book.pdf" section e. Pump and Motor Replacements, p. Common Plant PJ-44. Cal Water's Justification Book uses the categories "Very Low", "Low", "Fair", "Good", and "Very Good". The CPUC Memo J-1428 (referred to above) uses the categories "Low", "Fair", "Good", and "Excellent".

[132] A.21-07-002, file "Common Plant_2021_GRC_Justification Book.pdf" section e. Pump and Motor Replacements, p. Common Plant PJ-43.

Table 4-1: Cal Advocates Recommended Pump and Motor Replacement Budget for Each District

District Code	District	2022	2023	2024	Total
129	Antelope Valley	$ -	$ 89,459	$ -	$ 89,459
101	Bakersfield	$ 464,268	$ 153,783	$ 125,467	$ 743,519
152	Bayshore	$ 98,754	$ 179,858	$ 181,023	$ 459,635
102	Bear Gulch	$ 99,586	$ -	$ 27,494	$ 127,080
104	Chico	$ 109,055	$ 77,384	$ -	$ 186,439
149	Coast Springs	$ -	$ -	$ -	$ -
105	Dixon	$ -	$ -	$ -	$ -
128	Dominguez	$ -	$ 207,038	$ -	$ 207,038
106	East Los Angeles	$ -	$ 32,686	$ -	$ 32,686
108	Hermosa Redondo	$ -	$ -	$ -	$ -
134	Kern River Valley	$ 71,722	$ 32,686	$ -	$ 104,408
109	King City	$ -	$ -	$ -	$ -
110	Livermore	$ 86,500	$ 68,934	$ 151,015	$ 306,449
111	Los Altos	$ 245,472	$ 197,204	$ 96,804	$ 539,480
147	Lucerne	$ -	$ -	$ -	$ -
112	Marysville	$ -	$ -	$ -	$ -
113	Oroville	$ -	$ 25,693	$ -	$ 25,693
122	Palos Verdes	$ -	$ 58,388	$ -	$ 58,388
146	Redwood Valley	$ -	$ -	$ -	$ -
114	Salinas	$ -	$ 25,252	$ 61,869	$ 87,120
117	Selma	$ -	$ 60,360	$ -	$ 60,360
119	Stockton	$ 106,456	$ 143,359	$ 61,406	$ 311,221
157	Travis	$ -	$ -	$ -	$ -
650	Unified Area	$ -	$ -	$ -	$ -
120	Visalia	$ 65,098	$ 190,581	$ 123,737	$ 379,417
123	Westlake	$ -	$ -	$ -	$ -
121	Willows	$ -	$ -	$ -	$ -
330	Customer Support Services	$ -	$ -	$ -	$ -
151	Rancho Dominguez	$ -	$ -	$ -	$ -
		$ 1,346,913	$ 1,542,665	$ 828,815	

III. ANALYSIS

The Commission should approve a pump and motor budget of $1,346,913 in 2022, $1,542,665 in 2023 and $828,815 in 2024.

This budget includes a contingency factor of 0%. See testimony of Mr. Suliman Ibrahim on Contingency in Chapter 16 of this report for further discussion on contingency adjustments.

Cal Water's proposed pump and motor budget replaces pumps and motors prematurely, which exposes its customers to burdensome and unreasonable rate increases. Cal Water provided five main reasons for its requested pump and motor replacement; low OPE, environmental concerns, reliability concerns, operational concerns, and functionality concerns. The Commission should deny Cal Water's full requested budget, because not all these reasons indicate that pumps and motors must be replaced, not all the requested pumps and motors replacements are identified correctly in each category, and historically only 24% of the pump and motor replacement expenses that Cal Water incurred was due to low OPE.

A. Environmental Concerns

Cal Water proposes to replace 12 pump and motors due to environmental concerns from mercury-seal pumps and potential bacteriological fouling from oil-lubricated pumps. Fouling refers to the degradation of infrastructure due to a buildup of unwanted material, either organic or inorganic.[133]

Two of the oil-lubricated pumps that Cal Water requests to replace are for wells that are no longer active.[134] Another two pumps that Cal Water claims are oil-lubricated are dry-lubricated or water-lubricated.[135] The remaining four oil-lubricated pumps have

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[133] Fouling Wikipedia article, available at: https://en.wikipedia.org/wiki/Fouling .

[134] The two requested pumps are Visalia Sta. 072 Pump 01 and Chico Sta. 041 Pump 01. Attachment 4-3: "2019 Sanitary Survey and Water Supply Permit Amendment for the CWS Visalia Water System", dated Dec 12, 2019 and Attachment 4-4: "California Water Service Co. – Chico Public Water System No. 0410002, FY 2021 Sanitary Survey Inspection Report", dated June 1, 2021, list these two wells as inactive.

[135] Attachment 4-5: "Public Water System No. 1110003 Willows District 2020 Sanitary Survey Report", dated August 26, 2020, states that Willows Sta. 009 Pump 01 is dry lubricated. Attachment 4-4: "California Water Service Co. – Chico Public Water System No. 0410002, FY 2021 Sanitary Survey Inspection Report", dated June 1, 2021, states that Chico Sta. 027 Pump 01 is water lubricated.

OPE ratings of Good and Fair, and Cal Water did not provide any evidence of poor performance or equipment failure. Additionally, Cal Water failed to provide evidence of failed bacteriological water quality samples caused by oil-lubricated pumps.

The Commission should reduce the budget for environmental pump and motor replacements to only include the four mercury-seal pump replacements requested. This reduces the proposed pump and motor replacement budget by $264,752 in 2022, $342,446 in 2023, and $82,444 in 2024.

B. Low OPE

Cal Water requests to replace pumps and motors due to low OPE ratings.

Of the replacements Cal Water completed from 2017 to 2019, only 24% were for low OPE.[136] In contrast, 70% of Cal Water's current requested budget is for low-OPE replacements.[137] Given Cal Water's low historical replacement rate of pumps with low OPE ratings, it is unreasonable to assume that Cal Water's proposed replacement budget for low-OPE pumps is accurate. Ratepayers should be protected from paying for pump and motor replacements that Cal Water is unlikely to complete, and Cal Water's requested budgets should more accurately depict its historical replacement rates for routine low-OPE pump replacements.

A more accurate budget can be calculated by applying the average historical replacement rate for low-OPE pumps and motors to Cal Water's proposed low-OPE replacement budget.[138] This reduces the proposed pump and motor replacement budget by $307,523 in 2022, $506,058 in 2023, and $323,494 in 2024.

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[136] Calculated from data provided in Cal Water Response to DR NMH-004, Attachment #2 – Historical Replacements. Attachment 4-6: Example excerpt of Cal Water Response to DR NMH-004, Attachment #2 – Historical Replacements.

[137] Calculated from data provided in Cal Water Response to DR NMH-010 Attachment #1 and cost estimates provided in Cal Water Response to DR NMH-014 Attachment #2.

[138] Total actual expenses to replace all pump and motors from 2017 to 2019 is $11,377,933 (from Attachment 4-7: Cal Water response to DR NMH-016, Attachment #1). $11,377,933 * 24% is $2,739,132 for three years, or $913,044 annually. Cal Water's proposed total low-OPE pump and motor replacement budget (without contingency) from 2022 to 2024 is $3,533,121 or $1,177,707 annually. $913,044 /

IV. CONCLUSION

To prevent ratepayers from paying to replace pumps and motors that are unlikely to be replaced considering Cal Water's previous budgets and completion rates, the pump and motor replacement budget should be reduced to be in line with the historical replacement rate of pump and motors. Additionally, incorrectly identified pumps and motors should be removed from the replacement budget.

The Commission should approve a pump and motor budget of $1,346,913 in 2022, $1,542,665 in 2023 and $828,815 in 2024.

$1,177,707 = 78%. The annual historical replacement budget is 78% of the annual proposed replacement budget. Cal Advocates reduced Cal Water's proposed low-OPE replacement budgets by 22% after removing contingency across all districts, to more accurately reflect that on average only 78% of the low-OPE replacement budget was historically used for low-OPE replacements.

Attachment 4-1: Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY
OF
NIAMH MURPHY

Q.1 Please state your name and address.

A.1 My name is Niamh Murphy and my business address is 505 Van Ness Ave, San Francisco, CA 94102.

Q.2 By whom are you employed and what is your job title?

A.2 I am employed by the Commission as a Utilities Engineer in the Water Branch of the Public Advocates Office.

Q.3 Please describe your educational and professional experience.

A.3 I graduated from University of Washington with a Master's degree in Civil Engineering in 2019. In 2016, I graduated from UC Berkeley with a B.S. in Environmental Science and a minor in Energy Resources. I joined the Public Advocates Office Water Branch in 2020. I prepared and submitted testimony in A.21-01-003, SJWC's 2021 GRC Application and A.21-07-001, Great Oaks Water Company's 2021 GRC Application.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am reviewing plant additions for the Chico, Marysville, Oroville, Willows and Dixon Districts and the following common plant issues; pump and motor replacement, cathodic protection systems, control valve overhaul and replacement, water quality analyzers, SB 1398 service line replacements, water quality sample sites and Special Request #14.

Q.5 Does that complete your prepared testimony?

A.5 Yes.

Attachment 4-2: CPUC Memo J-1428

State of California

Memorandum

Pump efficiency ratings

GJH

Date : January 26, 1978

To : President Batinovich
Commissioner Sturgeon
Commissioner Symons, Jr.
Commissioner Gravelle
Commissioner Dedrick

From : **Public Utilities Commission — San Francisco** -B. A. Davis, Director
Operations Division

File No.: J-1428

Subject: Efficiency of Water Pumps and Motors

At the Commission Conference of January 24, 1978 there was a discussion regarding the acceptable level of efficiency for water utility pumps (coupled to electric motors). In response to a question from Commissioner Symons, Mr. Andy Garde stated that the acceptable level of efficiency for pumps varies with the size of the pump and the range is approximately between 40% to 60%. He further stated that the efficiency of pump motors is rated as low, fair, good and excellent.

In making the judgment regarding the acceptability of efficiency of pumps, the Operations Division's staff is guided by the staff revised report in Case No. 10114 concerning water conservation. Attached is a table from the staff revised report showing the overall efficiency ranges for various sizes of pumps.

ATG:PA

cc: P. E. Blecher
W. J. Cavagnaro
P. L. Boneysteele
J. D. Reader

Attachment

HYDRAULIC BRANCH

Staff Revised Report IN CASE No 10114
July 11, 1977 WATER CONSERVATION

TABLE 10
Sheet 2A

STAFF RECOMMENDED WATER CONSERVATION PROGRAM

Engineering

OVERALL PLANT EFFICIENCY RANGES
WIRE TO WATER

MOTOR HP	LOW	FAIR	GOOD	EXCELLENT
3-5	41.9 or less	42-49.9	50-54.9	55 or above
7½-10	44.9 " "	45-52.9	53-57.9	58 " "
15-30	47.9 " "	48-55.9	56-60.9	61 " "
40-60	52.9 " "	53-59.9	60-64.9	65 " "
75-up	55.9 " "	56-62.9	63-68.9	69 " "

Attachment 4-3: Excerpt of Visalia 2019 Sanitary Survey Inspection Report

CALIFORNIA
Water Boards

RECEIVED
DEC 17 2019
BY: hd

GAVIN NEWSOM
GOVERNOR

JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board
Division of Drinking Water

December 12, 2019

Ms. Sophie James, Director of Water Quality
California Water Service Visalia – System Number 5410016
1720 North First Street
San Jose, CA 95112

2019 SANITARY SURVEY AND WATER SUPPLY PERMIT AMENDMENT FOR THE CWS VISALIA WATER SYSTEM

Dear Ms. James:

On October 7, 9, and 31, 2019 and November 1, 2019, Visalia District staff with the Division of Drinking Water (Division) conducted an inspection of the California Water Service Visalia (CWS-Visalia) water system. The findings of this inspection are detailed in the enclosed report. Also enclosed is an amendment to the Domestic Water Supply Permit for the water system.

Upon completion of the inspection and subsequent report, Division staff finds the items listed below are required to be addressed by CWS-Visalia.

1. By January 17, 2020, CWS-Visalia needs to sample for the constituents listed on the Delinquent Monitoring Report.

2. CWS-Visalia can begin monitoring ST2S5 – 26487 Mulanax Drive (PS Code: 5410016-904) on a quarterly basis beginning with the 1st quarter of 2020.

If you have any questions please contact Shawn Demmers by telephone at (559) 447-3136 or email at shawn.demmers@waterboards.ca.gov.

Sincerely,

Chad J. Fischer, P.E.
Senior Sanitary Engineer, Visalia District
SOUTHERN CALIFORNIA BRANCH
DRINKING WATER FIELD OPERATION

CJF/SD
Enclosures

cc Ms. Tammy Kelly, District Manager (216 Valley Oaks Drive, Visalia, CA 93292)
Ms. Talle Lopez, Water Quality Manager (1720 North First Street, San Jose, CA 95112)
Mr. Joel Bird, Water Quality Program Manager (216 Valley Oaks Drive, Visalia, CA 93292)
Mr. Eric Furtado, Production Superintendent (216 Valley Oaks Drive, Visalia, CA 93292)

WATER PERMIT AMENDMENT NO. 03-12-19PA-014

California Water Service Company - Visalia
For the Operation of the
California Water Service Company - Visalia
Water System

Tulare County
System No. 5410016

CALIFORNIA
Water Boards

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF DRINKING WATER

STATE OF CALIFORNIA

AMENDMENT TO THE DOMESTIC WATER SUPPLY PERMIT ISSUED TO

CALIFORNIA WATER SERVICE COMPANY - VISALIA

SYSTEM NO. 5410016

ORIGINAL PERMIT NO.: 03-93-033 **DATE OF ISSUE:** March 1993

PERMIT AMENDMENT NO.: 03-12-19PA-014 **EFFECTIVE DATE:** December 12, 2019

WHEREAS:

1. The California Water Service Company - Visalia (CWS - Visalia) submitted an application to the California State Water Resources Control Board – Division of Drinking (Division) Water on November 9, 2017 for an amendment to the Domestic Water Supply Permit issued to the California Water Service Company - Visalia in March of 1993.

2. The purpose of the amendment, as stated in the application, is to allow California Water Service Company - Visalia to make the following modifications to the public water system:

   a) Install and activate granular activated carbon (GAC) treatment for removal of 1,2,3 Trichloropropane (1,2,3-TCP) at Well No. 16-02.

   b) Operate GAC treatment for removal of DBCP at Well No. 13-01.

3. California Water Service Company - Visalia has submitted all of the supporting information required to evaluate the application.

4. The Division has evaluated the application and the supporting material and has determined that the proposed modifications comply with all applicable State drinking water requirements.

THEREFORE:

The Division hereby approves the application submitted by the California Water Service Company - Visalia for a permit amendment. The Domestic Water Supply

Permit issued to the California Water Service Company - Visalia in March of 1993 is hereby amended as follows:

a) Well No. 16-02 is granted granted treatment for removal of 1,2,3-TCP with GAC.

b) Well No. 13-01 is granted treatment for removal of DBCP with GAC.

This permit amendment is subject to the following all-inclusive list of permit conditions:

1. CWS-Visalia shall comply with all the requirements set forth in the California Safe Drinking Water Act, California Health and Safety Code and any regulations, standards or orders adopted thereunder.

2. The approved sources of domestic water supply for CWS-Visalia are listed in the table below.

Approved Sources

Source Name	Status	Primary Station (PS) Number
WELL 07-01-RAW	A	5410016-010
WELL 11-02-BEFORE_GAC-TCP	A	5410016-014
WELL 12-01-RAW	A	5410016-015
WELL 13-01-BEFORE_GAC-TCP DBCP & PCE	A	5410016-016
WELL 14-01-RAW	A	5410016-017
WELL 15-01-RAW	A	5410016-018
WELL 16-02-BEFORE_GAC-TCP	A	5410016-154
WELL 19-01-BEFORE_GAC-TCP	A	5410016-023
WELL 20-01-RAW	A	5410016-024
WELL 22-01-RAW	A	5410016-026
WELL 23-01-BEFORE_GAC-TCP	A	5410016-027
WELL 24-01-RAW	A	5410016-028
WELL 25-01-BEFORE_GAC-TCP & PCE	A	5410016-029
WELL 26-01-RAW	A	5410016-030
WELL 27-01-BEFORE_GAC-TCP	A	5410016-031
WELL 30-01-RAW	A	5410016-035
WELL 31-01	A	5410016-036
WELL 32-01-BEFORE_GAC-TCP & PCE	A	5410016-037
WELL 33-02 (OAKRCH)	A	5410016-178
WELL 34-01-BEFORE_GAC-TCP	A	5410016-040
WELL 36-01-RAW	A	5410016-043
WELL 37-01-RAW	A	5410016-044
WELL 38-01-RAW	A	5410016-045

WELL 39-01-RAW	A	5410016-046
WELL 40-01-BEFORE_GAC-TCP	A	5410016-047
WELL 41-01-RAW	A	5410016-048
WELL 42-01-RAW (OAKRCH)	A	5410016-179
WELL 45-01-RAW	A	5410016-053
WELL 46-01-RAW	A	5410016-054
WELL 47-01-RAW	A	5410016-055
WELL 48-01-RAW	A	5410016-056
WELL 49-01-RAW	A	5410016-057
WELL 50-01-RAW	A	5410016-058
WELL 51-01-RAW	A	5410016-059
WELL 52-01-RAW	A	5410016-060
WELL 53-01-RAW	A	5410016-061
WELL 55-02-RAW	A	5410016-166
WELL 56-01-RAW	A	5410016-064
WELL 57-01	A	5410016-065
WELL 57-02	A	5410016-066
WELL 58-01	A	5410016-067
WELL 60-01 – RAW	A	5410016-159
WELL 61-01-RAW	A	5410016-069
WELL 62-01-RAW	A	5410016-070
WELL 64-01-RAW	A	5410016-081
WELL 70-01-RAW	A	5410016-080
WELL 78-01-RAW	A	5410016-090
WELL 79-01-BEFORE_GAC-TCP	A	5410016-091
WELL 80-01-RAW	A	5410016-092
WELL 81-01-RAW	A	5410016-093
WELL 82-01-BEFORE_GAC-TCP	A	5410016-094
WELL 83-01-BEFORE_GAC-TCP	A	5410016-156
WELL 91-01-RAW	A	5410016-098
WELL 93-01-RAW	A	5410016-158
WELL 94-01-RAW	A	5410016-167
WELL 95-01-RAW	A	5410016-182
WELL 97-01-RAW	A	5410016-185

3. All of CWS-Visalia's wells provide disinfection of the water supply using NSF approved 12.5% sodium hypochlorite solution.

4. All approved GAC treatment for use by CWS-Visalia Water System is listed in the table below.

Approved Treatment

Facility	PS Code
WELL 11-02-AFTER_GAC-TCP	5410016-142
WELL 13-01- AFTER_GAC-TCP DBCP & PCE	5410016-088
WELL 16-02-AFTER_GAC-TCP	5410016-155
WELL 19-01-AFTER_GAC-TCP	5410016-136
WELL 23-01-AFTER_GAC-TCP	5410016-132
WELL 25-01- AFTER_GAC-TCP & PCE	5410016-130
WELL 27-01-GAC_EFF-TCP	5410016-128
WELL 32-01- AFTER_GAC-TCP & PCE	5410016-125
WELL 34-01-AFTER_GAC-TCP	5410016-124
WELL 40-01-AFTER_GAC-TCP	5410016-119
WELL 79-01-AFTER_GAC-TCP	5410016-049
WELL 82-01-GAC_EFF-TCP	5410016-147
WELL 83-01-AFTER_GAC-TCP	5410016-161

5. The wells in the water system that are considered to be inactive are: Well No.'s 02-03, 3-03, 6-02, 9-01, 17-01, 18-01, 33-01, 36-01, 43-01, 44-01, 44-02, 54-01, 63-01, 63-02, 65-01, 67-01, 68-01, 69-01, 71-01, 71-02, 72-01, 73-01, 74-01, 75-01, 76-01, 84-01, 86-01, 87-01, 88-01, 89-01, 90-01, 92-01, and 96-01. Inactive sources are not approved as sources of supply and must be locked out or physically disconnected or otherwise isolated from the system so that only an intentional act by an operator, and no automatic response, can place the source in service. Inactive wells can be upgraded to standby status if all monitoring is updated to meet standby requirements and the change in status is approved in writing by the Division. Inactive sources can only be used as a last resort in extreme emergencies after all other active sources of supply have been utilized. Any use of an inactive source is subject to the following restrictions.

   a. Emergency notification to the consumers that the water is unsafe for domestic use must be given immediately preceding, and on a continuing basis, during the emergency use of the source.
   b. Initiation of the use of an inactive source must be the result of an intentional manual action by the system operator.
   c. The use of an inactive source shall not be initiated without the knowledge and approval of the Division.
   d. All monitoring as deemed appropriate by the Division shall be required during or immediately following any emergency use of an inactive source.

6. Sources that are designated as standby are: Well No 77-01. Standby sources may only be used for a maximum of five consecutive days and 15 calendar days per year. CWS-Visalia must notify the Division in writing any time a standby source is used in the water system and submit an incident report that details the events leading up to and during the use of the standby source.

7. No additions, changes or modifications to the sources of water supply or treatment processes outlined in Provisions 2, 3, 4, 5, and 6 can be made unless an amended domestic water supply permit has been approved by the Division.

8. Under the operator certification regulation, the CWS-Visalia water system is classified as a D4 distribution system. CWS-Visalia must have a chief distribution operator who is certified, at a minimum, as a D3 distribution system operator.

9. All treatment facilities shall be operated by personnel who have been certified in accordance with the Regulations relating to Certification of Water Treatment Facility Operation, CCR, Title 22. The GAC treatment at the indicated wells are classified as a T2 water treatment plant and as such, the minimum certification levels of the chief and shift operator are T2 and T1, respectively.

10. All chemicals used in the water system, including chlorine, shall be certified under NSF/ANSI Standard 60. All water system equipment and materials that come into contact with the drinking water shall be certified under NSF/ANSI Standard 61 to demonstrate the material does not leach any contaminants into the drinking water.

11. The GAC treatment facilities shall be operated in accordance with the approved operations plans. Each plan shall describe the operational and emergency procedures, monitoring program and reporting requirements. CWS-Visalia may modify the plans at any time to accommodate changing conditions; however, any modified plans must be submitted to and be approved by the Division prior to implementation. At any time, the Division can require CWS-Visalia to modify the plans due to changing conditions, change of laws or regulations, or concerns of the public.

12. The approved GAC facilities, arranged in series operating configuration, shall treat all water produced. The series operation cannot be changed without prior Division approval. In addition, no bypassing of the GAC facilities shall be allowed at any time.

13. CWS-Visalia shall, at a minimum, follow the monitoring requirements presented below when GAC treatment is in use. The analytical results shall be submitted to the Division using electronic data transfer (EDT) and the PS Codes indicated in provision 2 or 4. A summary report containing these results for any month when the plant is in operation shall be submitted by the 10th day of the following month to the Division. Daily operational records including, at a minimum, flow rates, total volume treated, daily chlorine residuals, operational changes, and unusual occurrences, shall be maintained by CWS-Visalia.

GAC Treatment Monitoring

	Raw Water	Treated Effluent Pre Cl_2	Treated Effluent Post Cl_2
1,2,3-TCP	Quarterly	---	Monthly
Total Coliform	Monthly	Monthly	Monthly
HPC's	Monthly	Monthly	Monthly
Nitrate*	Quarterly	*	Monthly

*For sources over ½ of the nitrate (as N) MCL

14. CWS-Visalia shall sample the raw untreated water from all active wells on a monthly basis for coliform bacteria. In the event that the presence of total coliform bacteria is detected, *E. coli* and fecal coliform bacteria shall also be analyzed utilizing an approved method that will provide the analytical results as a density in MPN/100ml (most probable number per 100 milliliters) units.

15. When the 1,2,3 TCP level in the treated effluent reaches the MCL or above, CWS-Visalia shall take the affected vessel(s) offline. The vessel(s) shall not be returned to service until the GAC media is replaced.

16. For any well with a raw water nitrate concentration that is equal to or greater than one-half the MCL for nitrate of 10 mg/L, CWS-Visalia must install an online nitrate analyzer to monitor the treated effluent. In addition, a monthly grab sample of the treated effluent for laboratory analysis must be collected and sent to the Division via EDT.

This permit amendment supersedes all previous domestic water supply permits issued for this public water system and shall remain in effect unless and until it is amended, revised, reissued, or declared to be null and void by the State Water Resources Control Board – Division of Drinking Water. This permit is non-transferable. Should CWS - Visalia's water system undergo a change of ownership, the new owner must apply for and receive a new domestic water supply permit.

Any change in the source of water for the water system, any modification of the method of treatment as described in the permit amendment report, or any addition of distribution system storage reservoirs shall not be made unless an application for such change is submitted to the State Water Resources Control Board – Division of Drinking Water.

This amendment shall be appended to and shall be considered to be an integral part of the Domestic Water Supply Permit issued to the California Water Service Company Visalia in March of 1993.

FOR THE STATE WATER RESOURCES CONTROL BOARD

12/12/19

Date

Chad Fischer, P.E.
District Engineer

Sanitary Survey Report
California Water Service - Visalia
System No. 5410016
December 2019

State Water Resources Control Board
Division of Drinking Water
Shawn Demmers, Water Resource Control Engineer

I. INTRODUCTION

Mr. Shawn Demmers inspected the California Water Service Company, Visalia District (CWS–Visalia) water system and its operation on October 7, 8, and 31, 2019 and November 1, 2019. Mr. Eric Furtado, Production Superintendent, and Mr. Joel Bird, Water Quality Program Manager were both representatives from CWS-Visalia. CWS-Visalia operates and maintains the community water system that provides water to the City of Visalia. At the time of this inspection, the water system appeared to be in good overall condition.

The objective of the inspection was to conduct a sanitary survey of the system and update the records held by the State Water Resources Control Board, Division of Drinking Water (Division). This Engineering Report will also be accompanied by an updated permit amendment reflecting current operational practices. The water system was last inspected by Ms. Cristina Knudsen with the Visalia District in 2016.

Permit Status

The CWS-Visalia water system is currently under the regulatory oversight of the Division's Visalia District Office. The water system is owned and operated by the California Water Service Company and has been operating under Domestic Water Supply Permit No. 03-12-02P-001. The original permit was issued by the Division (formerly the Department of Public Health) on April 11, 2002. This permit has been amended five (5) times since 2002. A brief summary of the April 2002 permit and the subsequent permit amendments are listed in the table below:

Table 1: Permit History

Permit Number	Date Issued	Purpose
03-12-02P-001	April 11, 2002	Approves 68 wells and 2 GAC treatment plants.
03-12-02PA-01	December 13, 2002	Approve Well 16-02 and consolidation of Post Mitts Water System.
03-12-03PA-01	April 24, 2003	Approve Well 55-01.
03-12-06PA-006	December 15, 2006	Approve Wells 83-01 and 92-01, add GAC treatment at Wells 32-01 and 69-01, and add ion exchange treatment at Wells 63-01 and 63-02.
03-12-08PA-002	April 7, 2008	Approve Well 55-02, 93-01, and 94-01. Add blending treatment at Well 73-01 and 74-01 and activate Wells 25-01 and 43-01.
03-12-11PA-002	January 19, 2011	Approve Well 96-01 and two 1-MG storage tanks
03-12-18PA-004	August 21, 2018	Approve GAC treatment at ten well sites.
03-12-19PA-014	November 27, 2019	Approve GAC treatment at various well sites.

The following provisions were included in the latest permit amendment and provide an inclusive list of all applicable permit provisions:

1. CWS-Visalia shall comply with all the requirements set forth in the California Safe Drinking Water Act, California Health and Safety Code and any regulations, standards or orders adopted thereunder.

2. The approved sources of domestic water supply for CWS-Visalia are listed in the table below.

Approved Sources

Source Name	Status	Primary Station (PS) Number
WELL 07-01-RAW	A	5410016-010
WELL 11-02-BEFORE_GAC-TCP	A	5410016-014
WELL 12-01-RAW	A	5410016-015
WELL 13-01-BEFORE_GAC-TCP DBCP & PCE	A	5410016-016
WELL 14-01-RAW	A	5410016-017
WELL 15-01-RAW	A	5410016-018
WELL 16-02-BEFORE_GAC-TCP	A	5410016-154
WELL 19-01-BEFORE_GAC-TCP	A	5410016-023
WELL 20-01-RAW	A	5410016-024
WELL 22-01-RAW	A	5410016-026
WELL 23-01-BEFORE_GAC-TCP	A	5410016-027
WELL 24-01-RAW	A	5410016-028
WELL 25-01-BEFORE_GAC-TCP & PCE	A	5410016-029
WELL 26-01-RAW	A	5410016-030
WELL 27-01-BEFORE_GAC-TCP	A	5410016-031
WELL 30-01-RAW	A	5410016-035
WELL 31-01	A	5410016-036
WELL 32-01-BEFORE_GAC-TCP & PCE	A	5410016-037
WELL 33-02 (OAKRCH)	A	5410016-178
WELL 34-01-BEFORE_GAC-TCP	A	5410016-040
WELL 36-01-RAW	A	5410016-043
WELL 37-01-RAW	A	5410016-044
WELL 38-01-RAW	A	5410016-045
WELL 39-01-RAW	A	5410016-046
WELL 40-01-BEFORE_GAC-TCP	A	5410016-047
WELL 41-01-RAW	A	5410016-048
WELL 42-01-RAW (OAKRCH)	A	5410016-179
WELL 45-01-RAW	A	5410016-053
WELL 46-01-RAW	A	5410016-054
WELL 47-01-RAW	A	5410016-055
WELL 48-01-RAW	A	5410016-056
WELL 49-01-RAW	A	5410016-057
WELL 50-01-RAW	A	5410016-058
WELL 51-01-RAW	A	5410016-059

WELL 52-01-RAW	A	5410016-060
WELL 53-01-RAW	A	5410016-061
WELL 55-02-RAW	A	5410016-166
WELL 56-01-RAW	A	5410016-064
WELL 57-01	A	5410016-065
WELL 57-02	A	5410016-066
WELL 58-01	A	5410016-067
WELL 60-01 – RAW	A	5410016-159
WELL 61-01-RAW	A	5410016-069
WELL 62-01-RAW	A	5410016-070
WELL 64-01-RAW	A	5410016-081
WELL 70-01-RAW	A	5410016-080
WELL 78-01-RAW	A	5410016-090
WELL 79-01-BEFORE_GAC-TCP	A	5410016-091
WELL 80-01-RAW	A	5410016-092
WELL 81-01-RAW	A	5410016-093
WELL 82-01-BEFORE_GAC-TCP	A	5410016-094
WELL 83-01-BEFORE_GAC-TCP	A	5410016-156
WELL 91-01-RAW	A	5410016-098
WELL 93-01-RAW	A	5410016-158
WELL 94-01-RAW	A	5410016-167
WELL 95-01-RAW	A	5410016-182
WELL 97-01-RAW	A	5410016-185

3. All of CWS-Visalia's wells provide disinfection of the water supply using NSF approved 12.5% sodium hypochlorite solution.

4. All approved GAC treatment for use by CWS-Visalia Water System is listed in the table below.

Approved Treatment

Facility	PS Code
WELL 11-02-AFTER_GAC-TCP	5410016-142
WELL 13-01- AFTER_GAC-TCP DBCP & PCE	5410016-088
WELL 16-02-AFTER_GAC-TCP	5410016-155
WELL 19-01-AFTER_GAC-TCP	5410016-136
WELL 23-01-AFTER_GAC-TCP	5410016-132
WELL 25-01- AFTER_GAC-TCP & PCE	5410016-130
WELL 27-01-GAC_EFF-TCP	5410016-128
WELL 32-01- AFTER_GAC-TCP & PCE	5410016-125
WELL 34-01-AFTER_GAC-TCP	5410016-124
WELL 40-01-AFTER_GAC-TCP	5410016-119
WELL 79-01-AFTER_GAC-TCP	5410016-049
WELL 82-01-GAC_EFF-TCP	5410016-147
WELL 83-01-AFTER_GAC-TCP	5410016-161

5. The wells in the water system that are considered to be inactive are: Well No.'s 02-03, 3-03, 6-02, 9-01, 17-01, 18-01, 33-01, 36-01, 43-01, 44-01, 44-02, 54-01, 63-01, 63-02, 65-01, 67-01, 68-01, 69-01, 71-01, 71-02, 72-01, 73-01, 74-01, 75-01, 76-01, 84-01, 86-01, 87-01, 88-01, 89-01, 90-01, 92-01, and 96-01. Inactive sources are not approved as sources of supply and must be locked out or physically disconnected or otherwise isolated from the system so that only an intentional act by an operator, and no automatic response, can place the source in service. Inactive wells can be upgraded to standby status if all monitoring is updated to meet standby requirements and the change in status is approved in writing by the Division. Inactive sources can only be used as a last resort in extreme emergencies after all other active sources of supply have been utilized. Any use of an inactive source is subject to the following restrictions.

   a. Emergency notification to the consumers that the water is unsafe for domestic use must be given immediately preceding, and on a continuing basis, during the emergency use of the source.
   b. Initiation of the use of an inactive source must be the result of an intentional manual action by the system operator.
   c. The use of an inactive source shall not be initiated without the knowledge and approval of the Division.
   d. All monitoring as deemed appropriate by the Division shall be required during or immediately following any emergency use of an inactive source.

6. Sources that are designated as standby are: Well No 77-01. Standby sources may only be used for a maximum of five consecutive days and 15 calendar days per year. CWS-Visalia must notify the Division in writing any time a standby source is used in the water system and submit an incident report that details the events leading up to and during the use of the standby source.

7. No additions, changes or modifications to the sources of water supply or treatment processes outlined in Provisions 2, 3, 4, 5, and 6 can be made unless an amended domestic water supply permit has been approved by the Division.

8. Under the operator certification regulation, the CWS-Visalia water system is classified as a D4 distribution system. CWS-Visalia must have a chief distribution operator who is certified, at a minimum, as a D3 distribution system operator.

9. All treatment facilities shall be operated by personnel who have been certified in accordance with the Regulations relating to Certification of Water Treatment Facility Operation, CCR, Title 22. The GAC treatment at the indicated wells are classified as a T2 water treatment plant and as such, the minimum certification levels of the chief and shift operator are T2 and T1, respectively.

10. All chemicals used in the water system, including chlorine, shall be certified under NSF/ANSI Standard 60. All water system equipment and materials that come into contact with the drinking water shall be certified under NSF/ANSI Standard 61 to demonstrate the material does not leach any contaminants into the drinking water.

11. The GAC treatment facilities shall be operated in accordance with the approved operations plans. Each plan shall describe the operational and emergency procedures, monitoring program and reporting requirements. CWS-Visalia may modify the plans at any time to accommodate changing conditions; however, any modified plans must be submitted to and be approved by the Division prior to implementation. At any time, the Division can require CWS-Visalia to modify the plans due to changing conditions, change of laws or regulations, or concerns of the public.

12. The approved GAC facilities, arranged in series operating configuration, shall treat all water produced. The series operation cannot be changed without prior Division approval. In addition, no bypassing of the GAC facilities shall be allowed at any time.

13. CWS-Visalia shall, at a minimum, follow the monitoring requirements presented below when GAC treatment is in use. The analytical results shall be submitted to the Division using electronic data transfer (EDT) and the PS Codes indicated in provision 2 or 4. A summary report containing these results for any month when the plant is in operation shall be submitted by the 10th day of the following month to the Division. Daily operational records including, at a minimum, flow rates, total volume treated, daily chlorine residuals, operational changes, and unusual occurrences, shall be maintained by CWS-Visalia.

GAC Treatment Monitoring

	Raw Water	Treated Effluent Pre Cl_2	Treated Effluent Post Cl_2
1,2,3-TCP	Quarterly	---	Monthly
Total Coliform	Monthly	Monthly	Monthly
HPC's	Monthly	Monthly	Monthly
Nitrate*	Quarterly	*	Monthly

*For sources over ½ of the nitrate (as N) MCL

14. CWS-Visalia shall sample the raw untreated water from all active wells on a monthly basis for coliform bacteria. In the event that the presence of total coliform bacteria is detected, *E. coli* and fecal coliform bacteria shall also be analyzed utilizing an approved method that will provide the analytical results as a density in MPN/100ml (most probable number per 100 milliliters) units.

15. When the 1,2,3 TCP level in the treated effluent reaches the MCL or above, CWS-Visalia shall take the affected vessel(s) offline. The vessel(s) shall not be returned to service until the GAC media is replaced.

16. For any well with a raw water nitrate concentration that is equal to or greater than one-half the MCL for nitrate of 10 mg/L, CWS-Visalia must install an online nitrate analyzer to monitor the treated effluent. In addition, a monthly grab sample of the treated effluent for laboratory analysis must be collected and sent to the Division via EDT.

Status: CWS-Visalia is in compliance with all permit provisions.

Enforcement History

No enforcement actions have been issued to CWS-Visalia.

II. DESCRIPTION OF SYSTEM

The City of Visalia is situated in the San Joaquin Valley of California in Tulare County. The City's water system is owned and operated by the California Water Service Company (CWS), and is commonly referred to as the California Water Service Visalia District water system (CWS-Visalia). The CWS headquarters is located at 1720 N. First Street, San Jose, Ca 95112. The mailing address for the CWS-Visalia District office is 2160 N. Valley Oaks Drive, Visalia, CA 93292. The service area is typical of a Central Valley area serving single and multiple family residences as well as commercial, retail and agricultural related establishments.

Attachment 4-4: Chico 2021 Sanitary Survey Inspection Report

Water Boards

State Water Resources Control Board
Division of Drinking Water

June 1, 2021

California Water Service Company
1720 North First Street
San Jose, CA 95112

Attention: Sophie James – Director of Water Quality

SUBJECT: CALIFORNIA WATER SERVICE CO. – CHICO PUBLIC WATER SYSTEM NO. 0410002, FY 2021 SANITARY SURVEY INSPECTION REPORT

On April 27, 2021, James Reade from the Division of Drinking Water (Division), met with Loni Lind to complete a sanitary survey inspection of California Water Service Company's (CWS) Chico domestic water system.

The CWS Chico water system appears to be well operated and maintained in accordance with Drinking Water Regulations.

No significant deficiencies were noted during the inspection.

If you have any questions, please call James Reade at (530) 339-1991, or me at (530) 224-4861.

R. Crenshaw

Reese B. Crenshaw, P.E.
Valley District Engineer
DRINKING WATER FIELD
OPERATIONS BRANCH

Enclosures

cc: Loni Lind, Water Quality Program Manager, Cal. Water Service Co., Chico

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF DRINKING WATER
ANNUAL INSPECTION REPORT

Purveyor California Water Service Company (CWS) - Chico System Number 0410002
Person(s) Contacted/Position Loni Lind, Water Quality Project Manager & Mathew Meninga, Superintendent
Date of Inspection April 27, 2021 Reviewing Engineer James M. Reade, P.E.
Previous Annual Inspection July 16 & 17, 2018 – by YH & SS District Engineer Reese B. Crenshaw, P.E.

A. INTRODUCTION

1. Permit Status (Date Issued/Amendment Purpose)

Full: A permit was issued to CWS on February 18, 1966, for the following:
Wells 1-01* to 35-01
Tanks 1 – 4
*Chlorination at Wells 1-01 and 1-02
Distribution system

Amendment(s): Permit amendments were issued as follows:
**2/5/79 – Well Stations 53-01, 54-01, 55-01, 56-01
**7/31/81 – Well Stations 57-01, 58-01
**5/27/83 – Well Stations 59-01, 60-01 (since destroyed)
A1 – 7/15/86 – Well Station 16-01 air stripper
A2 – 12/6/88 – Well Stations 63-01 and 64-01
A3 – 6/15/90 – Well Station 61-01
A4 – 9/12/90 – Well Stations 37-52 (45 since destroyed), 62-01, 65-01, abandon Well Stations 02-01, 10-01, 43-01
A5 – 4/3/92 – carbon filtration at Well Station 46-01
A6 – 7/29/96 – Well Station 67-01
A7 – 5/4/98 – State-owned cemetery wells and treatment system
A8 – 12/16/98 – Well Stations 68-01 and 69-01
A9 – 1/3/02 - Well Stations 70-01 and 71-01
A10 – 2/4/2004 – Well Station 72-01
A11 – 9/6/06 – Well Station 75-01
A12 – 1/22/07 – Well Station 76-01
A13 – 9/28/07 – carbon filtration at Well Station 40-01
A14 – 9/19/08 – Well Station 79-01
A15 – 2/20/13 – Tank Station 81-01 Pressure Zone 350
A16 – 3/7/13 – Well Station 80-01
A17 – 2/2/13 – Well Stations S3 & S4
A18 – 9/24/15 – Well Station 52-01
A19 – 3/17/16 – Reservoir, Pumps, and Hydro Tank at Station 79
A20 – 11/9/16 – Activate Well 16-01 & bypass GAC system at Well 40-01
A21 – 12/20/16 – Lead sampling in school
A22 – 4/28/17 – Station 82 – 0.75 MG tank

* Wells 01-01 and 01-02 (since destroyed) were dug wells used only during emergencies.
** Amendment not numbered.

Are the permit provisions complied with? The base permit has no provisions, but some of the permit amendments do (Amendment A7 & A17). Provisions are being complied with and verified via monthly monitoring reports.

Is the permit up to date? No. There is no permit amendment for the GAC treatment at Station 21-01 or the new Well 9-03 station. A permit amendment and supporting information has been submitted for both of these items.

2. Changes in System

Since last annual inspection: Well 9-03 station has been completed.

Planned future changes: The System is going through a major project to separate the water main across highway 99 into east and west sections. Currently, the System has a combined zone and it is difficult to maintain pressure in the upper portion of the zone, due to the higher elevation.

3. **Consumer & Production Data** (from 2019 Annual Report)

Number of service connections 29,283

Number with meters 29,283

Approximate population served: 104,908

Water produced during recent 12-month period (January – December 2019) 6,560 MG

Maximum month: 872.1 MG (August) Maximum day: not reported in 2019

4. **Past Water Production Data**

Table 1 – Water Use Data

Year	Max. Month MG	Max. Day x1.5 gpm	Report Max. Day MG	Max. Day gpm	GPM PC**	Total Conn.	Meter Conn.	Flat Conn.	Source Capacity gpm	Max. Pop.
2009	1,290	43,347	46.7	32,431	0.91	35,828	23,464	12,364	45,705	100,323
2010	773*	25,974	44.0	30,556	1.10	27,855	19,703	8,152	45,705	101,391
2011	1,159	38,945	44.6	30,972	1.14	27,275	20,974	6,301	46,905	95,519
2012	1,172	39,382	40.9	28,403	1.05	26,925	23,017	3,908	47,880	97,274
2013	1,150	38,626	40.65	28,229	1.01	28,051	26,689	1,362	46,490	98,689
2014	1,005	33,770	37.44	25,972	1.18	28,687	28,687	0	46,490	100,435
2015	637.2*	21,412	23.54	16,349	0.76	28,249	28,249	0	46,490	102,155
2016	783.5	27,204	42.23	29,330	1.02	28,878	28,878	0	46,490	104,295
2017	877.2	29,474	43.09	29,928	1.06	28,202	28,202	0	46,490	105,660
2018	863.8	29,026	42.51	29,518	1.02	28,910	28,910	0	43,885	103,842
2019	872.1	30,282	Not rep.	30,282	1.03	29,283	29,283	0	42,885	104,908
				5 year Avg. =	0.98					

* This value is as reported on the eAR, but looks low.

** Gallons per minute per service connection (GPMPC) is based on reported maximum month.

Discussion & appraisal: Wells are equipped with vacuum breakers of various sizes, depending on the size of the water main. They are also equipped with Rossum sand testers that are emptied as needed. Throughout the lifetime of the well, sand production can increase or vary. The sand testers provide a visual way to observe how much sand a well is producing, and whether a sand separator should be installed. Long-term production of sand accelerates wear on the impellor and can clog meters and valves. Monitoring sand production is beneficial for determining the health status of the well.

Wells are equipped with a water level gauge that measures static and pumping water levels. All wells are hooked up to SCADA. The majority of wells are capable of being remotely controlled through SCADA, including setting pressure ranges, observing flow rates, pressure readings, and water level. SCADA is used to obtain daily water production readings every twenty-four hours and those values are recorded by operators and hand entered into a database. Chlorination equipment is located inside a locked housing structure. The housing structures are equipped with eye wash stations that are tested monthly. The housing structures are ventilated and spare chlorine drums are kept on site. Diagrams of individual well house components and piping are located in each pump room. Pressure set points are changed regularly to allow different wells to turn on and off. Well houses were all clean and kept free of debris. Each well is equipped with a water level gauge, though it is unknown whether they were properly calibrated at the time of inspection and providing an accurate water level reading.

CWS has been completely metered since 2014. The highest reported max since that time is 30,282 gpm (2019), and that is the value referenced as the highest daily production. This is less than the total source capacity of 42,885 gpm and therefore meets the T22 §64554 source capacity requirement (based on a system-wide analysis). Peak hourly demand (1.5 x MDD) is 45,423 gpm. The water system must be able to meet at least 4 hours of PHD through a combination of source capacity and storage. Four hours of PHD requires 0.61 MG of

storage ((44,892 gpm – 43,885 gpm) x 240 minutes). The water system has 5.55 MG of storage and therefore meets the PHD requirement as well.

B. **Source Data** (shaded rows denote wells not in use).

Table 2 – Source Data

Well No.	Flow (gpm)	Location	Auxiliary Power	Status	Comments
01-04	*220*	*Across from 229 Orient*	*None*	*Destroyed*	*Oil lube; outside (no well house). 35 hp motor. Collocated with Tanks 1&2. Has had low (≤ 1.1 ppb) levels of PCE.*
03-03	*300*	*212 Cherry St.*	*None*	*Destroyed*	*Oil lube. 40 hp motor. At tank 4 (old yard)*
04-02	*300*	*Sycamore St between 7th & 8th St*	*None*	*Inactive*	*Submersible pump. (slated for destruction)*
05-02	620	Next to 1613 Locust St	Direct drive (natural gas).	Active	Oil lubed, 75 hp motor. **SCADA.**
07-04	*745*	*Next to 1161 E 10th St.*	*None*	*Inactive*	*Water lube. 75 hp motor. Inactive until it is determined whether treatment is feasible for high PFOS. SCADA*
08-01	790	Across from 116 E 6th Ave.	None	Active	Water lube. Next to Tank 3, **SCADA**
09-03	800	515 Olive St.	None	Active	Water lube. 75 hp turbine motor, **SCADA**
11-01	550	Next to 325 W 16th St.	None	Active	Water lube. 50 hp motor. **SCADA**
12-01	580	Next to 667 E 1st Ave	None	Active	Water lube. 50 hp motor. **SCADA.**
13-01	*460*	*Corner of W 12th St & Chestnut St*	*None*	*Inactive*	*Oil lube. SCADA equipment present but not connected. (slated for destruction)*
14-01	500	Next to 1812 Spruce St	None	Standby	Oil lube. 50 hp motor. Off during winter. Low levels of PCE (≤ 3.4 ppb); nitrate consistently over ½ MCL (≤ 31 ppm). **SCADA**
15-01	*610*	*Next to 1041 Deveny St*	*None*	*Inactive*	*GAC removed to 21-01. SCADA equipment present but not connected. (slated for destruction)*
16-01	735	Next to 1448 Sherman Ave.	None	Active	Air stripper removed. **SCADA.** 30 hp well motor and 60 hp booster (after filtration).
17-01	675	Next to 2125 Iroquois	None	Active	Water lube, sand separator, and 60 hp motor. Low, but consistent, detections of various organic chemicals (cis-1,2-DCE; PCE; 1,3-dichloropropane; 2,2-dichloropropane). **SCADA**
18-01	575	Fir St between 8th & 9th St park & ride	None	Active	Water lube. 60 hp motor. Off during winter. **SCADA**
19-01	820	Across from 560 Cohasset	None	Active	Water lube. 60 hp motor. **SCADA**
20-01	675	Across from 636 Bryant Ave	None	Active	Water lube. 60 hp motor. **SCADA**
21-01	580	Between 1559 & 1575 Citrus Ave	None	Active	Water lube. 60 hp motor. **SCADA.** Single vessel GAC treatment for PCE (GAC originally at Station 15-01).
22-01	*600*	*Next to 6 Montclair Dr.*	*None*	*Inactive*	*Oil lube. 60 hp motor (new in spring of 2008). Operates mainly during summer months. Produces sand for a while after startup. SCADA*
23-01	800	Next to 387 Humboldt	Diesel generator	Active	Water lube. 75 hp motor. Runs during periods of high demand. **SCADA**
24-01	640	Next to 1395 East Lindo Ave	None	Standby	Water lube. **SCADA.** 60 hp motor. Used to have total coliform hits on raw samples, but this has not been a problem recently. Still has online chlorine analyzer set to shut well off if chlorine drops below approx. 0.5 ppm.
25-01	*800*	*Cohasset Rd, just N of E Ave*	*Diesel generator*	*Inactive*	*Oil lube. 75 hp motor.* ***SCADA***
26-01	670	Next to 455 Larch St.	None	Active	Water lube. 75 hp motor. Always on. **SCADA**
27-01	800	E Lassen between Esplanade & Santos	None	Active	Water lube. 75 hp motor. Operates on demand. **SCADA**
28-01	645	Across from 805 Madrone	None	Active	Water lube. 75 hp motor. **SCADA**

Well No.	Flow (gpm)	Location	Auxiliary Power	Status	Comments
29-01	700	Across from 1741 Neal Dow Ave	None	Active	Oil lube. 75 hp motor. Operates seasonally. **SCADA**
30-01	900	Next to 2604 White Ave	None	Inactive	Submersible pump with 75 HP motor. PFOS **SCADA**
31-01	780	Next to 1164 E. Ave.	None	Active	Water lube. **SCADA**. 75 hp motor. Runs continuously during summer. Water looks greenish at start up, so pumps to waste until color clears.
32-01	760	Next to 1379 E Ave	Diesel generator	Active	Water lube. **SCADA**. 75 hp motor. Operates year round.
33-01	720	Next to 1975 Hooker Oak	Direct drive (gasoline)	Active	Water lube. **SCADA**. 75 hp motor. Sand separator, but well no longer producing sand.
34-01	715	Across from 1041 Sheridan	Direct drive (gasoline)	Active	Water lube. **SCADA**. 75 hp motor. Conservation garden.
35-01	630	Next to 825 E 20th St	None	Active	Water lube. **SCADA**. 75 hp motor. Operates continually.
37-01	725	Next to 1067 Lupine Ave.	None	Active	Water lube. 75 hp motor. Operates on demand. Set to run often. **SCADA**.
38-01	800	Next to 1038 Palmetto	None	Active	Water lube. 75 hp motor. **SCADA**.
39-01	760	Next to 893 Kern St.	Generator. Switched from direct drive.	Active	Water lube. 75 hp motor. **SCADA**
40-01	690	Behind 120 Menlo Way	None	Active	Water lube. 60 hp motor. Outside (no well building). Two-vessel GAC installed in 2007. GAC treats cis-1,2-DCE, 1,1-DCE, and 1,1-DCA. Nitrate is consistently around ½ MCL. Operates continuously. **SCADA**.
41-01	*870*	*Next to 3650 Morrow Ln.*	*None*	*Inactive*	*Water lube. 100 hp motor. PFOS To remain inactive until treatment is installed. **SCADA***
42-01	850	Behind 55 Rose Ave	Direct drive (gasoline)	Active	Water lube. **SCADA**. 75 hp motor. Operates during high demand. Gasoline motor on auxiliary drive does not work and will not be fixed.
44-01	615	Corner of Boeing & Marauder	Diesel generator	Active	Water lube, 75 hp motor (VFD). Pressure tank is no longer used. **SCADA**
46-01	550	Next to 620 Hickory St.	None	Active	Water lube. 75 hp motor. Single GAC vessel removes PCE. Operates continuously. **SCADA**
47-01	*860*	*Next to 2471 Guynn*	*Direct drive (natural gas)*	*Inactive*	*Oil lube. 75 hp motor. **SCADA***
48-01	*900*	*Behind 1055E Lassen Apts.*	*None*	*Inactive*	*Water lube. 75 hp motor. Operates during high demand. Nitrates consistently high (≤ 43 ppm) but below MCL. **SCADA***
49-01	600	Next to 1656 Manzanita	None	Active	Water lube. 75 hp motor. Operates continuously. **SCADA**
50-01	790	Next to 800 Bruce St.	None	Active	Water lube. 100 hp motor. Pressure tank for surge. Booster pump/sump not used. **SCADA**
51-01	*830*	*Next to 123 West 22nd St*	*None*	*Inactive*	*Oil lube. 75 hp motor. (slated for destruction)*
52-01	940	Across from 2382 Alba Ave	Direct drive (diesel)	Active	Water lube. 75 hp motor. GAC filtration removal of TCE, PCE, and cis-1,2-DCE consistently detected at low levels. **SCADA**
53-01	890	Across from 2090 Notre Dame Blvd	Direct drive (diesel)	Active	Water lube. 100 hp motor. Operates daily. **SCADA**
54-01	900	Next to 4 Vermillion Cr.	None	Active	Water lube. 100 hp motor. **SCADA**
55-01	*(1030)*	*Next to #3 Willowbrook*	*Direct drive (diesel)*	*Inactive*	*Oil lube. **SCADA***
56-01	865	Next to 3211 Silverbell Dr	Direct drive (diesel)	Active	Water lube. 75 hp motor. **SCADA**
57-01	750	Springfield & Heritage Oak Dr	None	Active	Water lube. 100 hp motor. **SCADA**
58-01	*610*	*Across from 3030 Sandi Dr*	*None*	*Inactive*	*Oil lube.*
59-01	750	Next to 876 St. Amant	Diesel	Active	Water lube. **SCADA**. 75 hp motor.

Well No.	Flow (gpm)	Location	Auxiliary Power	Status	Comments
			generator		
61-01	770	Next to Hwy 99, behind Chico mall	None	Active	Water lube. **SCADA**. 100 hp motor. Onsite chlorine generation replaced by conventional hypochlorination.
62-01	870	Next to 1457 Eaton Rd	None	Active	Water lube. **SCADA**. 75 hp motor. Onsite chlorine generation. Continuous operation.
63-01	1070	Across from 626 W. Shasta	None	Active	Water lube. **SCADA**. 75 hp motor.
64-01	760	Across from 1423 Marauder St	See 44-01	Active	Water lube. **SCADA**. 75 hp motor (VFD). 5,000-gallon pressure tank (no longer used). 44-01 auxiliary power supports this well.
65-01	1160	Next to154 Picoline	None	Active	Water lube. **SCADA**. 150 hp motor. Pressure tank (3,000-gallon) for surge.
67-01	1300	Next to1201 Yosemite	Diesel generator	Active	Water lube. **SCADA**. 150 hp motor. Operates daily. Serves Tank 74 via Booster Station 73 and Zone 475.
S1 & S2	330	SW corner of Chico Cemetery	None	Active	These wells are owned by the Dept. of Toxic Substances Control. Both wells have submersible pumps. GAC treatment (two vessels). Operate continuously. **SCADA**
S3 & S4	400	Chico High and Junior High schools	None	Active	These wells are owned by the Dept. of Toxic Substances Control. Both wells have submersible pumps. GAC treatment (two vessels). Operate continuously. **SCADA**
68-01	*1250*	*Across from 1934 W Sacramento*	*None*	*Inactive*	*Slated for destruction.*
69-01	1070	Next to 318 Newport Dr	None	Active	Water lube. **SCADA**. 100 hp motor.
70-01	830	Behind 1777 Manzanita (fire station)	Diesel generator	Active	Water lube. **SCADA**. 125 hp motor. 2,000-gallon pressure tank.
71-01	1250	Corner of Flying V and La Rocco	None	Active	Water lube. **SCADA**. 150 hp motor.
72-01	1000	Ceanothus Ave. near Colonial Dr.	Diesel generator	Active	Water lube. **SCADA**. 150 hp motor. Designed for High (475) Zone but currently feeds Main (350) Zone. 10,000-gallon pressure (surge) tank.
75-01	1500	at Valley Court	Diesel generator	Active	Water lube. **SCADA**. 200 hp motor. 10,000-gallon pressure tank.
76-01	1300	NE corner of Preservation Oak Dr. and E 20th Street	Diesel generator	Active	Water lube. **SCADA**. 200 hp motor.
79-01	1,250	SE corner of Springfield Dr. and Bedford Dr.	Diesel generator	Active	150 hp motor. **SCADA**.
80-01	1,200	Degarmo Drive and Penzance Ave in north Chico	Diesel generator	Active	125 HP submersible. **SCADA**.
Total	**42,885**	**← Active wells**			

* Flow measurements are taken every 24 hours using SCADA, and totalizing flow readings are sent to a server where operators hand-enter values to a database for daily, monthly, and yearly totals. The System is scheduled to upgrade to ClearSCADA in August of 2019, which will allow totalizing flow measurements to be taken and stored in the system without any human interface.

Discussion & appraisal (i.e., does source capacity comply with Waterworks Standards?) Yes, see discussion in Section A.4, above.

At the time of the inspection, 55 wells were on active status and two were on standby. There are currently 13 wells that are inactive, but not yet destroyed and all are physically disconnected from the distribution system. An RP device provides protection from the irrigation line and an air gap separates the pump-to-waste line that runs to the sewer.

C. TREATMENT

1. Surface Water Sources

There are no surface water sources.

2. Groundwater Sources

Is continuous disinfection provided? Yes, water leaving each well station is disinfected using sodium hypochlorite.

Describe facilities: The Chico District uses a single type of chlorine solution pump, the Alldos Model 208 (or equivalent Grundfos brand—both made by Grundfos-Alldos Company). These pumps have a two-stage system that first pumps chlorine solution from the bulk tank to a cylinder built into the pump. The second stage pumps the solution from the cylinder into the well discharge piping. A 12.5% chlorine solution is pumped into the discharge line from the well. For wells that have GAC treatment for VOCs, hypochlorination is applied downstream from the treatment.

If disinfection is not provided, are provisions & connections for emergency chlorination provided per DDW guidelines? Disinfection is provided.

Discussion & appraisal: The hypochlorination systems appear to be well operated and maintained. Wells (24-01, 64-01, and 40-01) with recurring bacteria problems (absent for fecal/E. coli) in the raw water have signs on the switchgear at the wellhead that tell the operator what specific higher chlorine residual to maintain and are equipped with alarms that automatically shut off if the hypochlorination feed is lost. Hypochlorite solution older than 180 days is discarded because of the potential for perchlorate formation. Hypochlorite is NSF 61 certified.

3. Other Treatment or Blending Facilities

Describe facilities & parameters treated/blended (i.e. iron, & manganese, fluoridation, nitrate, corrosion control, organics, etc. Due to groundwater contamination from several different plumes in the Chico urban area, seven wells have been impacted to the point where treatment is necessary. The California Department of Toxic Substances Control and the Regional Water Quality Control Board have been involved in cleanup efforts. CWS has seven treatment systems for removing TCE, PCE, or other VOCs from groundwater supplies. Treatment systems are summarized in Table 3 below.

Table 3 – VOC Treatment

Station	Contaminant	Treatment Type
21-01	PCE	single vessel GAC
46-01	PCE	single vessel GAC
52-01	PCE	duel vessel GAC
S Wells	PCE cis-1,2-DCE	dual vessel GAC

4. Describe Records Maintained of Treatment

CWS maintains records of chlorine usage, water production, and chlorine residuals at each well site. Per prior agreement with CWS, those records are not submitted to the Division. However, distribution system chlorine residual levels are checked and results submitted in quarterly reports in accordance with the Disinfection Byproducts Rule (RAA MCL chlorine residual) and with monthly bacteriological reports per the Total Coliform Rule. CWS typically maintains chlorine residuals of 0.5 to 0.8 ppm chlorine in the distribution system.

Wells 21-01, 46-01, 52-01, S-1, S-2, S-3 and S-4 are sampled monthly for constituents being treated. Raw, treated, and if applicable, intermediate samples are collected. A report of sampling results is submitted monthly to the Division and includes information on water produced and the status of GAC filter change out. CWS operators take samples.

D. STORAGE DATA

Table 4 - Storage Data

Name	Type	Capacity (MG)	Zone	Comments	Inspected/Cleaned/ Re-coated
Tank 1	Steel	0.10*	Main	Elevated tank Installed 1905	2016/2016/2010
Tank 2	Steel	0.15*	Main	Elevated tank Installed 1913	2013/2013/2006
Tank 3	Steel	0.30*	Main	Elevated tank with pump station	2013/2013/2007
Tank 4	Steel	0.30*	Main	Elevated tank Installed 1950	2014/2014/2008
Tank 66-1	Steel	0.50	475	Ground level tank Installed 1974	2016/2016/NA
Tank 66-2	Steel	0.50	475	Ground level tank Installed 2003	2015/2015/NA
Tank 74-1	Steel	0.50	635	Ground level tank Installed 2003	2015/2015/NA
Tank 79-1	Steel	1.50	475	Ground level tank Installed 2015	2016/2016/NA
Tank 81-1	Steel	1.50	Main	Ground level tank Installed 2011	2013/2013/NA
Tank 82-1	Steel	0.75	475	Ground level tank Installed 2017	2017/2017/NA
Total		**5.55**			

* Elevated tanks are no longer connected to the system. Tanks 1 and 2 will remain as historical construction. Tanks 3 and 4 will be destroyed. Capacity not counted in total.

Does storage capacity comply with Waterworks Standards? Yes. See discussion under Section A.4, above.

Are all data sheets completed & on file? Yes, refer to the permit and amended permit reports.

Are Title 22 coating procedures adhered to? Yes.

Discussion & appraisal (i.e., were reservoirs coated, cleaned &/or inspected last year? Plans for re-coatings, cleanings &/or inspections? See above table. The tanks are inspected every five years and coatings applied as necessary. Tanks have active cathodic protection.

STA 66, 3252 Shadybrook Ln. consists of two 500,000-gallon storage tanks, two 10,000-gallon hydropneumatic tanks, two booster pumps (each booster has a dedicated Mercoid pressure switch), and two onsite generators. One is located outside and the other inside the pump room. The outdoor generator is a Cummins, with fuel storage directly below the generator. The indoor generator is a Kohler Power System generator, with 500-gallons of diesel fuel storage located outside with proper secondary containment.

E. TRANSMISSION FACILITIES

Describe transmission facilities: Two sections of transmission main exist. One is a raw water transmission main, approximately 0.6 miles long, from Well S4 to the GAC system. The other is the pipeline connecting the main water system to the Airport pressure zone. This pipeline has an automatic valve, normally shut, that opens in the event of significant loss of pressure on either side.

Are there low-head lines? No. Cal Water has a re-pressurizing valve to ensure the raw water main from S4 remains pressurized when the well isn't running.

Discussion & appraisal: N/A.

F. DISTRIBUTION SYSTEM

1. Pressure Zones

Table 5 - Pressure Zones

Pressure Zone Name	Pressure Range	Water Sources	Storage Capacity	No. of Conn.
Main (350)	45 to 95	Wells	2.35 MG	92%
Intermediate Zone "A"	65 to 80	From 475 Zone	None	<1%
Intermediate Zone "B"	65 to 80	From 475 Zone	None	<1%
Upper (475)	60 to 115	Wells 33, 50, 65, 67, & 76	1.00 MG	5%
Higher (635)	55 to 75	From 475 Zone	0.50 MG	1%
Airport System (400)	55 to 75	Wells 44 & 64	None	1%
Highest (795)	115 to 140	From 475 Zone	H-P tank	1%
Dayton Road (325)	65 to 75 (has PRV)	From 350 Zone	None	< 1%

Discussion & appraisal: System pressures are slightly higher along the west edge of Chico, as this is the lowest part of town. Construction of the highest zone (795) has been completed; a new 680 Zone is proposed but is on hold. A comprehensive system pressure survey is done yearly by CWS placing electronic transducer-recorder devices on fire hydrants for a couple of days. Wells S3 and S4 have lines that run to the S1-S2 treatment plant and that have pressure maintained by a line (protected with backflow device) from distribution system. Two new pressure zones have been added to the distribution system; Intermediate Zone "A" and Intermediate Zone "B". See details in the table above.

2. Booster or Reducing Stations

Table 6 – Booster Stations

Station	Status	Number of Pumps	Power (HP)	From Zone	To Zone	Comments
66-01 A&B	Daily	2	30	475	635	10,000 gal pressure tank
66-01 C&D	Daily	2	40	475	795	10,000 gal pressure tank
73-01 A&B	Daily	2	40	475	635	2,500 gal pressure tank
8-01	Daily	1	25	350	350	At Tank 3. No backup generator.
81-01	Daily	3	50/50/100	350	350	5,000 gal pressure tank. Flow (at 60 psi) is 1000 gpm for each of 50 HP pumps and 2000 gpm for 100 HP.

Discussion & appraisal: Booster pump Station 66-01 A&B and Station 66-01 C&D are each located adjacent to the ground level storage tanks 66-1 and 66-2. At each station, except 8-01 and 81-01, water is pumped from storage into a higher pressure zone. Each booster station is equipped with a backup diesel generator, and each is plumbed for a third pump if additional capacity is required in the future. Booster pump Station 73-01 A&B is located at 100 Delaney Drive. The station pumps water from the 475 Zone to Station 74, Tank 1, in the 635 Zone. Station 73-01 is equipped with a backup diesel generator.

3. Mains

Table 7 – Distribution System Materials

Material	Amount %	Size	Condition	Comments
Steel	5	Varies	Fair	Size varies from 2 to 12-inches
Ductile Iron	17	Varies	Good	for all mains.
AC	44	Varies	Good	
PVC (C900)	25	Varies	Good	Being used for new 6- & 8-inch lines
Airport - Cast iron	9	Varies	Good	All of Airport service area mains are cast iron. This is the only cast iron in the distribution system.

The Chico District has approximately 1,971,200 lineal feet (373.3 miles) of distribution line.

Discuss leak history during past 12 months: In 2019, a total of 194 breaks or leaks were reported. All breaks or leaks were investigated and repaired in accordance with AWWA C651-14 requirements.

Are Distribution facilities constructed in accordance with Waterworks Standards? The water system is said to be generally built in accordance with the Waterworks Standards in effect at the time of construction.

Describe water main & sewer line separation practices: CWS staff ensure facilities are constructed in accordance with Waterworks Standards and separation requirements. CWS staff are familiar with Waterworks Standards and work closely with the City of Chico on new projects. CWS reports that USA marking is done in field and encroachment permits are obtained as needed from the City of Chico. CWS reports that normally water lines <12 inches in diameter are designed in field and water lines >12 inches are designed by CWS Engineering Unit in San Jose.

Extent of lead pipes, joints, &/or lead solder used in distribution system & present policy: There are no known lead components in the distribution system.

Discussion & appraisal: Reportedly, the CWS main replacement program is based on the number of leaks and the size of the pipe. The replacement and capital improvement plan is regulated by the PUC and every three years main replacement projects are approved via rate payer advocacy.

G. WATER QUALITY & MONITORING

1. Bacteriological Monitoring

Description of program: The most recent BSSP was submitted in November 2017 and is up to date. A minimum of 25 samples are collected weekly from representative locations throughout the distribution system, designed to preserve appropriate dispersion of sample sites. Distribution staff collect all bacteriological samples following proper sampling procedure. Repeat sample locations are at customer hose bibs and are located within the required five service connections of each routine dedicated sample location. Raw water bacteriological monitoring (enumerated) is done quarterly on all active and standby wells. For any total coliform (TC) positives that are over 50 MPN/100 mL, the test schedule for that well changes from quarterly to weekly and stays weekly until there are six consecutive negative results, after which the station is placed back on a quarterly schedule. A well with a quarterly TC result over 50 MPN/ 100 mL is immediately shut down and super-chlorinated. A bacteriological sample is then collected, and if results are negative, the well is placed back into service and put on a weekly sampling schedule until there are six consecutive negative weekly results. CWS will sometimes use FGL lab in Chico for bacteriological testing. CWS has filed a Groundwater Rule Monitoring Plan with the Division.

Sampling plan approved & current (do we have a copy?) Yes, the plan is current (November 13, 2017), and there is a copy on file at the Division's Redding office.

Controlling factor is population or service connections? Population dictates a minimum of 25 samples per week.

Number of samples per month or week required? 25 per week.

MCL violations in past year? There were no positive routine bacteriological samples in the last 12 months.

Discussion & appraisal: CWS Chico District, appears to have an adequate bacteriological monitoring program. Raw bacteriological samples are collected from wells on a quarterly basis. Wells that have been prone to positive results are sampled more frequently, sometimes weekly. Raw water results are submitted to the Division. Items of note: CWS has been in the process of converting well in the Chico area from oil-lubed pumps to water-lubed pumps. At the time of this report, only few oil-lubed well pumps remain in operation. Older water-lubed wells in the system use a tube that is plumbed into the distribution piping just below the chlorine injector. As a result, chlorinated water does go back into the well, but only when the well is supplying water to the distribution system. If the well is pumping to waste, the operators must spray the pump with hand-pumped water from the distribution system. The more recently replumbed wells use a 1/4inch line to run a continuous drip of distribution water back into the well. The purpose for this configuration is so the well pump can be operated when diverted from the distribution system, should the operator have a need to pump to waste (for maintenance, testing, etc.).

2. Chemical Monitoring

Description of program: CWS maintains its own internal tracking system for chemical source monitoring, which is periodically checked against monitoring schedules produced from the Division's WQI database. CWS's laboratory in San Jose analyzes the samples for general mineral, inorganic, and volatile organic compounds (VOCs). The CWS lab is ELAP certified (Certificate No. 1621). Pesticides and radiological analysis are not done by the CWS lab, but are contracted out to a different State certified laboratory.

Seven VOC groundwater plumes have been identified in Chico. These are (primary contaminants in parentheses):

Central Plume (PCE), Chico Municipal Airport Plume (TCE), North Central Plume (PCE, 1,2-DCE), North Valley Cleaners Plume (PCE, 1,2-DCE), Skyway Plume (PCE, TCE), Southwest Plume (PCE), and Victor/20th Street Plume (TCE). The table below shows which active wells have had VOC detections.

Table 8 – Wells With Ongoing Detections of Regulated VOCs*

Well	Contaminant	Results ppb	MCL ppb	Comments
08-01	PCE	≤ 0.81	5	First detected in 2005. Appears stable.
14-01	PCE	≤ 0.68	5	Appears stable at < 2 µg/L.
16-01	PCE	≤ 0.63	5	Raw water hasn't been above MCL since 1988. GAC. Active.
17-01	cis-1,2-DCE	≤ 0.86	5	Usually below 1.0 ppb
	PCE	≤ 0.5	5	ND since 2017
21-01	PCE	≤ 8.9	5	GAC
40-01	cis-1,2-DCE	≤ 1.4	6	GAC – Typically less than 2 ppb
	1,1-DCA	≤ 0.5	5	GAC – Typically less than 1 ppb
	1,1-DCE	≤ 0.5	6	GAC – Typically less than 1 ppb
46-01	PCE	≤ 9.85	5	GAC – Typically 7 to 14 ppb
52-01	PCE	0.68	5	Typically less than 1 ppb
	cis-1,2-DCE	3.4	6	Started to increase, reaching as high as 9 ppb back in 2015. Results in 2020 range between 3.4 & 5.7 ppb
S-1 Well	PCE	≤ 22	5	GAC. Typically less than 100 ppb.
	Styrene	≤ 0.5	100	Less than 1 ppb since 2015
S-2 Well	TCE	1.5	5	GAC
	PCE	180	5	GAC – As high as 1000 ppb in 2004
	cis-1,2-DCE	≤ 0.5	6	GAC – ND since 2005
	Styrene	≤ 0.5	100	

Well	Contaminant	Results ppb	MCL ppb	Comments
S-3 Well	PCE	14	5	GAC
S-4 Well	PCE	3.2	5	GAC

* Table updated July 2019.

Who collects samples? CWS operators collect chemical samples.

Discussion & appraisal: Chemical monitoring appears to be generally up to date. Sources which are tested monthly almost always show up as due for sampling in the Division's WQIR database report.

3. **Other Organics**

Description of program: The following wells are classified as vulnerable to agricultural chemicals (class = CLGA--community-large-groundwater-agricultural) and, as such, are tested every three years for selected SOCs (synthetic organic chemicals): 08-01, 16-01, 17-01, 21-01, 32-01, 39-01, 42-01, 46-01, 49-01, 54-01, 59-01, 62-01, 63-01, 64-01, 69-01, and 70-01. The SOCs tested are: Atrazine, Bentazon, Carbofuran, Dinoseb, Diquat, Endothall, Glyphosate, Molinate, Simazine, Thiobencarb, 1,2,3-TCP, and 2,4-D. According to the Division's WQI database, which currently contains chemical data back to the 1980s, SOCs have not been detected in any of the sources tested, other than as described below.

1,2,3-trichloropropane (1,2,3 TCP) has been detected in Well 22-01 (8 samples; 2010 to 2012) at levels ranging from 0.006 - 0.008 ppb. Cal Water has notified the Butte County Board of Supervisors, by letter, that 1,2,3-TCP is present. Well 22-01 is currently inactive.

Discussion & appraisal: Samples have not been taken from Well 47 as it has been under repair since 2013 and is currently inactive. DWSAPs were last done in 2001, 2002, and 2003 for source wells that existed at the time. Wells that have been constructed since then, have had their own DWSAPs performed.

4. **Disinfection Byproducts**

Description of program: CWS has been monitoring for disinfection byproducts since January 2003. Monitoring was quarterly until after the third quarter of 2004, when it became annual. Prior to 2004 there were no detections of HAA5, and TTHMs were detected at very low levels. CWS began routine quarterly sampling under the Stage 2 DPBR in 2012 (6 sample sites). Of the six Stage 2 DBP sample locations, the highest LRAA for TTHM's and HAA5's for the last year are 0.7 ppb and non-detectable, respectively, as of the first quarter of 2021.

Discussion & appraisal: In compliance.

5. **Radiological**

Description of program: Cal Water has completed initial radionuclides monitoring, in conformance with Title 22, §64442. Radionuclides have not been a compliance issue.

6. **Additional Monitoring**

Description of program (Physical quality of distribution system, corrosion, lead monitoring, etc.) CWS Chico system has a large proportion of asbestos cement pipe. Title 22, §64432.2, requires that the distribution system be tested for asbestos within the compliance period (currently January 2020 thru December 2022). CWS reports that asbestos testing has been done from the distribution system and shows results below the MCL of 7 MFL (million fibers per liter). CWS is due for sampling within the current compliance period.

7. **Lead and Copper Monitoring**

Cal Water is on a three-year schedule for lead and copper sampling. Lead and copper samples were last collected in August 2020. The lead 90th percentile value was non-detect and the value for copper was 0.14 mg/L. The next round of sampling is due by the end of September 2023.

8. **Is an approved water quality monitoring plan on file** (T22 §64416)? (i.e., briefly summarize plan & needed additions) Section 64416 requires that a water system with more than 10,000 service connections prepare a sampling plan to the Division for monitoring the quality of water (except for bacteriological quality). A water quality monitoring plan was given to the 2015-2016 inspector. The plan outlines the testing/monitoring schedules for all sample points throughout the distribution system, and includes the day, time, and parameter being tested. Reportedly, the plan is still valid as of the date of this inspection report.

H. OPERATION & MAINTENANCE

1. **Planning & Personnel**

Are system improvements made in accordance with the Waterworks Standards? CWS reports that all improvements are made in accordance with the Waterworks Standards. If water/sewer separation standards cannot be met, CWS requests a waiver in writing with mitigation measures from a professional engineer claiming equivalent protection is provided. Thus far, all waiver requests have been approved in writing.

Does the utility have up-to-date distribution system maps? System maps are up-to-date. CWS maintains a detailed, bound system atlas and hard copies in CWS utility trucks.

Is up-to-date copy of system schematic on file? A copy of a system schematic is in the permit file with a supplement showing the recently constructed pressure zones.

What is the minimum grade requirement? Grade 5 Distribution Operator and Grade 2 Treatment Operator.

Certified Personnel ? A list of certified operators is provided by CWS in the electronic annual report.

Discussion & appraisal: Satisfactory. CWS – Chico's Chief Operator is George Barber. He has passed the D5 exam and is awaiting his certificate. He passed the exam several months ago, however; had to wait until he had a full 2 years of D4 experience to receive his certificate. CWS has stated that Mike Mares, a D5 operator from their San Jose office, will also be available on call in the event of an emergency.

2. **Cross-Connection Control Program**

Name of cross-connection control inspector(s): John Graham is Cal Water's cross-connection control specialist. John completed USC FCCHR training in 2002. His certification number is 10376.

Is there a copy of the cross-connection control ordinance on file? Regarding cross-connection control, CWS is governed by the CPUC's Rule 16, a copy of which is in our files. Rule 16 can also be found on CWS's web site, at https://www.calwater.com/docs/rates/rules/rule_16.pdf

Discussion & appraisal: Plan checking for proposed new service connections is done to determine if a backflow protection device is required. CWS sends letters on an annual basis to all customers with backflow protection requiring that their devices be tested and repaired/replaced as needed, and for the test results to be sent to CWS. Customers with backflow devices are provided a list of qualified testers and given a certain amount of time to have devices tested. Customers that do not have backflow devices tested on time may have their water service shut off. CWS has dedicated backflow inspectors. One goal of the program is to have every non-residential customer checked every 5 – 7 years. CWS also trains meter readers to review potential need for backflow protection while reading meters. CWS reports that the Chico water system does not have a connection to any wastewater treatment plant. CWS requires trucks hauling water for construction purposes to have an air-gap on the feed side. CWS is diligent in maintaining a robust backflow protection program that meets Title 17 requirements.

According to the 2019 Annual Report to the Division, there are 3,297 backflow devices in the Chico District, of which 3,297 devices were tested in 2019. The number of devices that failed and were repaired or replaced is 144. The number of new devices added in 2019 is 133.

3. **Complaints**

Table 9 – 2015 Complaints Summary

Type	Number	Comments
Taste and Odor	18	
Color	0	
Turbidity	13	
Visible Organisms	0	
Pressure (High or Low)	51	
Waterborne Illness	0	
Other	0	
Total	**82**	All complaints were investigated.

Discussion & appraisal: Customer complaints are received by the clerical staff, who inform maintenance crews. Complaints are followed up within 24 hours. Records of complaints are kept on monthly summary sheets. The complaints tabulated above were taken from the 2019 Annual Report.

4. **Emergency Response**

Is an up-to-date emergency notification plan on file? Yes, received 6/14/2019.

Emergency response plan: An emergency response plan (ERP) was submitted in June 2004 and updated in March 2006. The ERP appears satisfactory.

Notification of DWP of significant system problems: The Chico district office of CWS maintains very good communications with the Division.

Discussion & appraisal: CWS works diligently to prepare for and respond to problems and emergencies. Required emergency plans for the Chico District are updated as needed.

5. **Main Disinfection Program**

Describe main disinfection program (i.e., method, contact time, chlorine residual, bacteriological tests, records) for new & repaired mains: CWS reports to follow American Water Works Association (AWWA) Standard C651 for disinfection of new and repaired water mains. Field distribution foreman ensure disinfection is done.

Does the main disinfection program comply with AWWA specifications? Yes.

Discussion & appraisal: Satisfactory.

6. **Valve Maintenance Program**

Describe program: There are an estimated 9,538 valves in the Chico water system. Of these, 134 were exercised in 2019. CWS adheres to a target of 20% of total system valves exercised each year over a 5-year period. Additional exercising takes place on an as-needed basis.

Are number & location of valves satisfactory? (i.e., mainline, ARVR, blowoff valves, etc.) Yes. CWS reports that the Chico water system has an adequate number of valves in suitable locations.

Discussion & appraisal (i.e., are valves recorded on maps available to field crews? Are all valves located with valve covers raised to grade?) Yes, valves are indicated on maps and appear to be constructed with covers raised to grade.

7. **Flushing**

Describe flushing program (i.e. dead ends, records, etc.) According to the 2019 Annual Report, dead ends are flushed as needed.

Approximate number of dead ends 1,278 Number with flushing valves 958 with blowoffs.

Discussion & appraisal: Satisfactory.

I. OVERALL SYSTEM APPRAISAL

The Division finds the CWS Chico Public Water System to be well operated and maintained in accordance with regulations relating to drinking water in Division 4, Title 22, California Code of Regulations. The distribution system and facilities were found to be in good condition and well operated. Reports and records show the water system is in compliance with the regulations and MCLs. Water system staff are certified at levels required for the water system and remediate deficiencies as needed.

J. APPENDIX

System Deficiency Record

Report Updated by: James M. Reade P.E.

5/28/2021
Date

SYSTEM DEFICIENCY RECORD
NAME OF SYSTEM: Cal-Water Chico SYSTEM NO. 0410002

DATE NOTED	DESCRIPTION OF DEFECT OR HAZARD	*Priority Code	DATE REPORTED	DATE CONFIRMED
6/27-28/12	No new deficiencies noted			
4/23-24/13	Station 19: Replace fine mesh on end of pump-to-waste line. Station 29: Uncover end of pump-to-waste and install flap gate, or other means of precluding access by animals. Station 61: Repair broken flapper on pump-to-waste.14 Stations: Have single-walled heat exchanger plumbed to water mains. Some are protected by RPs, some are not. Cal Water is investigating the issue.	3		6/29/14
5/28-29/14	See attached Inspection Notes page. There is a list of items to correct at nine sites.	3		4/26/16
7/8/2015	No new deficiencies noted.			
4/26/2016	No new deficiencies noted.			
7/18/2018	No new deficiencies noted.			
4/27/2021	No new deficiencies noted.			

***Priority Code:**

1. Serious health hazard; corrective action must be taken immediately.
2. Critical system or operational defect and/or potential health hazard; must be corrected as soon as possible.
3. System or operational defect and/or potential contamination hazards of lesser public health significance. Must be corrected as workload permits.
4. System or operational defect and/or potential health hazard - costly to correct - to be included in any long-range water improvement project.

R = Recommended

Attachment 4-5: Willows 2020 Sanitary Survey Inspection Report

Water Boards

RECEIVED
AUG 31 2020
BY: Rd

State Water Resources Control Board
Division of Drinking Water

AUG 26 2020

California Water Service Company
1720 North First Street
San Jose, CA 95112

Attention: Sophie James, Director of Water Quality

Subject: Public Water System No. 1110003 Willows District 2020 Sanitary Survey Report

On July 14, 2020, Paul Rowe of my staff met with Loni Lind and Evan Markey to conduct a sanitary survey of the Willows District public water system. The water system appears to be operated and maintained in a professional manner and is in general compliance with regulatory requirements. No deficiencies were noted. A copy of the inspection report is enclosed

If you have any questions, please contact Paul Rowe at (530) 224-4861, or me at (530) 224-4861.

Reese B. Crenshaw, P.E.
Valley District Engineer
Drinking Water Field
Operations Branch

cc: Loni Lind, Water Quality PM
Evan Markey, Manager-Willows

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF DRINKING WATER
2020 Sanitary Survey Report

Purveyor California Water Service - Willows System Number 1110003
Person(s) Contacted/Title Loni Lind (Water Quality Project Manager), Evan Markey (Manager, Willows District)
Date of Inspection July 14, 2020 Reviewing Engineer Paul Rowe, P.E.
Prev. Annual Inspection December 13, 2017, by Dan Ciluth, P.E. District Engineer Reese B. Crenshaw, P.E.

A. INTRODUCTION

1. Permit Status (Date Issued/Amendment Purpose)

Full The first full permit was issued to California Water Service Company in 1954 for operation and maintenance of the public water system serving the City of Willows service area.

Amendment(s) The 1954 permit was amended in 1965 to include Well 02-01, Well 04-01, Well 05-01, Well 6-01, Well 7-01, and the S.P. Well (later abandoned in 1986). The 1965 amendment also discusses the disinfection systems and the 100,000-gallon elevated storage tank. A 1981 permit amendment addressed Well 10-01 and a 1990 amendment covered Wells 8-01 and 9-01. Two permit amendments were adopted in 2012: a permit amendment for continuous chlorination and another for the 750,000-gallon distribution system reservoir. On December 20, 2016, a Lead Sampling in Schools permit amendment was issued. Finally, a permit amendment for hexavalent chromium treatment on Wells 4-01, 7-01, 8-01, and 9-01 was issued on July 17, 2017.

Are the permit provisions complied with? Yes

Is the permit up to date? Yes

List data sheets on file (permit, files, etc.) The following data sheets are in the permit file: Well Data Sheets – 2-01, 4-01, 5-01, 6-01, 7-01, 8-01, 9-01, and 10-01; Disinfection Data Sheets – 2-01 and 8-01; Elevated Tank; and Distribution System. Data sheets for the treatment systems at Station Nos. 4-01, 7-01, 8-01, and 9-01 were received prior to issuance of the permit amendment.

2. Changes in System

Since last annual inspection No notable changes

Planned future changes:

- Well 2-01 will be destroyed once there is a finalized long-term plan for the elevated tank.
- The Willows District will be submitting an operations plan with detailed hexavalent chromium treatment operations for each of the four treated sources.
- Variable frequency drive pump installation at Well 9, when elevated tank is taken out of service.
- Two new pressure vessels will be installed in the system, dependent on elevated tank project.
- Long term plans include dismantling the elevated storage tank or at least taking it out of service. This project has been pushed to 2022 (pending CPUC approval).
- Consolidation with South Willows Industrial Park. This is dependent on the city's ability to install infrastructure before 2023 (when the assembly bill expires to waive a prop 218 vote).

3. Consumer & Production Data – (from the 2019 Annual Report)

Number of service connections 2,379 Number with meters All

Approximate population served 7,153

Water produced during recent 12-month period (Jan 2019 to Dec 2019)

Amount 373.8 MG

Maximum month 45.0 MG (August) Maximum day Not Reported

4. Past Water Production Data

Table 1 – Water Use Data

Year	Max Mnth MG	Max Day x1.5 gpm	Rprt Max Day MG	Max Day gpm	M or D	GPM PC	Total Conn	Meter Conn	Flat Conn	Source Cpcity	Max Pop
2005	94.9	3,189	3.5	2,431	M	1.04	2,345	1,472	873	4,945	7,156

Year	Max Mnth MG	Max Day x1.5 gpm	Rprt Max Day MG	Max Day gpm	M or D	GPM PC	Total Conn	Meter Conn	Flat Conn	Source Cpcity	Max Pop
2006	94.9	3,189	*	*	M	*	2,330	1,472	858	4,945	7,156
2007	87.5	2,940	*	*	M	*	2,367	1,547	820	4,945	7,198
2008	79.4	2,668	2.9	2,014	M	0.85	2,371	1,610	761	4,945	7,111
2009	84.2	2,829	1.8	1,250	M	1.20	2,360	1,744	616	4,945	7,183
2010	50.3	1,690	2.95	2,049	D	0.87	2,349	1,846	503	4,945	7,222
2011	66.5	2,235	2.5	1,736	M	0.95	2,342	2,032	310	4,595	7,008
2012	69.3	2,329	2.6	1,806	M	0.99	2,342	2,068	274	4,595	7,028
2013	65.2	2,191	2.6	1,806	M	0.92	2,376	2,168	208	4,245	7,028
2014	46.3	1,629	2.20	1,530	M	0.69	2,342	2,342	0	4,245	7,045
2015	40.6	1,361	1.49	1,035	M	0.58	2,342	2,342	0	2,650**	7,118
2016	43.7	1,468	*	*	M	0.62	2,354	2,354	0	2,750	7,110
2017	49.7	1,670	-	-	M	0.72	2,325	2,325	0	2,750	7,140
2018	45.6	1,585	-	-	M	0.66	2,378	2,378	0	2,750	7,156
2019	45.0	1,512	-	-	M	0.64	2,370	2,370	0	2,750	7,153
5-year average = **0.64**											

* Unknown or not given.

** Source capacity is lower because, when addressing hexavalent chromium contamination, several wells were taken out of active service. See Table 2.

Discussion & appraisal Since the complete elimination of flat connections by 2014, customer demand dropped, compared to previous years of usage. Because the bias of unmetered service connections no longer exists, the estimated maximum day demand (MDD) is calculated from production since 2014. The highest demand since 2014 occurred in 2017, making the MDD 2.4 MG (1670 gpm); resulting in a peak hourly demand (PHD = 1.5 x MDD) flow of 2,505 gpm.

The California Drinking Water Regulations (T22 CCR, §64554) require that community water systems have source capacity at least equivalent to MDD and that all community systems with 1,000 or more service connections be able to meet four hours of PHD flow by a combination of sources, storage, or interties. The Cal Water Willows water system has sufficient source capacity to meet MDD (2,750 gpm > 1,670 gpm) and can provide four hours of PHD (601k gallons) with source capacity and storage. The system's source capacity alone fulfills the PHD requirement (2,750 > 2,505 gpm). The water system has 350,000 gallons of storage (100,000-gallon elevated tank + 250,000-gallons at Station 11).

B. SOURCE DATA

Table 2 – Source Data

Sources	Status	Capacity	Comments
Groundwater			
Well No. 2-01	Inactive	(350 gpm)	40 HP pump, near the 100,000-gal elevated tank. This well is approaching the nitrate MCL (45 mg/L). To be destroyed.
Well No. 4-01	Active	400 gpm	60 HP pump, hypo-chlorination, sand separator. Capacity downsized after installation of Cr+6 treatment system. Treatment for hexavalent chromium. 4 vessels.
Well No. 5-01	Standby	(715 gpm)	40 HP pump, hypo-chlorination, sand separator, submersible.
Well No. 6-01	Standby	(665 gpm)	60 HP pump, hypo-chlorination, sand tester, auxiliary power from auto start diesel drive engine. Engine speed based on local pressure.
Well No. 7-01	Active	500 gpm	60 HP pump, hypo-chlorination, sand separator, submersible. Treatment for hexavalent chromium. 4 vessels.

Sources	Status	Capacity	Comments
Well No. 6-01	Active	1350 gpm	150 HP pump, hypo-chlorination, automatic pump to waste, auto start auxiliary power from diesel generator. New pump and motor essentially doubled the capacity of this well. Treatment for hexavalent chromium: 8 vessels.
Well No. 9-01	Active	500 gpm	50 HP pump, hypo-chlorination, sand separator, auto start auxiliary power from diesel generator, Dry Lube top bearing. Treatment for hexavalent chromium: 4 vessels.
Well No. 10-01	Standby	(440 gpm)	40 HP pump, hypo-chlorination, auto start auxiliary power from diesel generator, no air release but has auto pump to waste.
	Total =	2,750 gpm	Standby sources not included in total.

Discussion & appraisal:
For discussion of source capacity, see Section A.4.

C. TREATMENT

1. Surface Water Sources None

2. Groundwater Sources

Is continuous disinfection provided? Yes.
Describe facilities Sodium hypochlorite (12.5%) and Grundfos Alldos DDE solution pumps.
If disinfection is not provided, are provisions & connections for emergency chlorination provided per DDWEM guidelines? N/A - Disinfection is provided.
Discussion & appraisal Chlorination systems appear well operated and maintained.

3. Other Treatment or Blending Facilities

Describe facilities & parameters treated/blended (i.e. iron, & manganese, fluoridation, nitrate, corrosion control, organics, etc. Although there is no longer a current maximum contaminant level for hexavalent chromium, Cal Water has chosen to continue removing the contaminant at Wells 4, 7, 8, & 9. While the remaining wells (2, 5, 6, & 10) are on inactive or standby status.

Hexavalent chromium exists in a dissolved state as the chromate ion (CrO_4^{2-}) and is removed using strong-base ion exchange in which negatively charged chromate ions in the feed water displace negatively charged chloride ions on the treatment resin. The resin media (Purolite A600E-9149 high capacity SBA resin) has been shown through pilot testing to be highly selective for chromate. When the resin eventually loads up, individual treatment vessels are sequentially regenerated onsite using salt brine solution and a minor amount of caustic. Regeneration events are evenly staggered over approximately 30 days. A plant with four treatment vessels (Stations 4-01, 7-01, and 9-01) regenerates a vessel each week, while one with eight vessels (Station 8-01) regenerates about twice a week. While the ion-exchange treatment method is fairly straightforward, the regeneration process is quite complicated. The treatment plants were designed and built by Loner SG. Because Loner SG has since gone out of business, A Cal-Water operator, and a contract operator (Ian Moulton from Moulton Water Treatment) now perform the treatment systems operation and maintenance.

Regeneration proceeds in four stages. In Stage 1, approximately 3 bed volumes of waste (0.2 M) salt brine is passed through the vessel resulting in chloride ions displacing sulfate on the resin. Stage 2 uses a half bed volume of strong (2 M) brine solution adjusted to a pH of 9.3, which removes (displaces) chromate ions. The chromate containing waste is conveyed to a waste tank, which contents are periodically trucked off site. Stage 3 also uses strong brine, approximately 2.5 bed volumes, but without the pH adjustment, and removes nitrate. Stage 3 brine is collected in tanks for use in a later regeneration. The final stage (4) consists of a fresh water rinse (3 bed volumes) serving to clean the resin before the vessel is placed back in service. Spent rinse water is used to make brine in the next regeneration.

4. **Describe Records Maintained of Treatment**

Cal Water provides monthly reports of treatment operations. The reports include the following information for each treatment plant: (a) Bacteriological test results (total coliform and E. coli) for raw, filtered, and disinfected water, as well as HPC test results for filtered and for disinfected water; (b) Monthly raw and treated hexavalent chromium results along with a hexavalent chromium field data form for each treated source; and (c) Daily operational information including hours the plant operated, plant flow rate in gpm, total production in k-gallons, conductivity reading, pressure differential across filters, inspection check results (exterior tanks and valves), and finally, % capacity used for brine maker and waste tank.

D. STORAGE DATA

Table 3 – Storage Reservoir Data

Name	Type	Capacity	Zone	Comments
Tank 1-Elevated Tank: outlet of tank is 61 feet high (or 26 psi) & top of tank is 101 feet high (or 44 psi)	Steel	100,000 gal	Main	Last cleaned and inspected in March 2020. The tank exterior was freshly coated in August 2004 and appears to be in good condition. The tank interior was recoated in 2007.
Tank 11-Walmart ground level tank	Steel	750,000 gal (but only 250,000 gal for water system)	Main	500,000 of the 750,000-gallon capacity is set aside for fire protection at the nearby Walmart, while the remaining 250,000 gallons is for Cal Water's use. The tank has a booster station and an altitude valve. During construction in 2010, the tank interior was lined with an ANSI/NSF 61 standard epoxy coating to a thickness of 15-18 Mils. The exterior was painted with an epoxy/urethane coat to a thickness of 11-15 Mils. Last cleaned in 2011
Total		**350,000 gal**		Note: 500,000 gallons dedicated to Walmart not included in total.

Does storage capacity comply with Waterworks Standards? Yes, see discussion in Section A.4.

Are all data sheets completed & on file? Yes.

Are DDWEM coating procedures adhered to? Yes. NSF 61 coatings are used in all new maintenance and construction.

Discussion & appraisal (i.e., were reservoirs coated, cleaned, &/or inspected last year? Plans for re-coatings, cleanings &/or inspections? Satisfactory. Reportedly, there is a possibility that the elevated tank may not be taken down, due to its historical value.

E. TRANSMISSION FACILITIES

Describe transmission facilities: There are no transmission mains. The wells and tanks discharge directly to the distribution grid.

Are there low-head lines? No.

Discussion & appraisal: N/A

F. DISTRIBUTION SYSTEM

1. **Pressure Zones**

Table 4 - Pressure Zone Data

Pressure Zone Name	Pressure Range	Water Sources	Storage Capacity	No. of Conn.
Main	35 to 43 psi	4 active wells and 3 standby wells	350,000 gallons	All

2. **Booster or Reducing Stations**

Table 5 – Booster or Reducing Stations

Station	Capacity	Status	From Zone	To Zone	Comments
Booster station at 750 k-gallon tank	500 gpm (20 HP) 750 gpm (25 HP) 1000 gpm (40 HP)	Active	750k gallon tank	Main	Includes 3,700-gal pressure (surge) tank.

Discussion & appraisal A booster station was included as part of the new 750k-gal storage reservoir. The 35-psi minimum pressure exceeds the minimum required by the Waterworks Standards (20 psi for an existing water system).

3. **Mains**

Table 6 – Distribution System Materials

Material	Percent	Size - in	Condition	Comments
Steel	5	Mostly 4, some 1	Fair	
Iron (ductile, cast, or wrought)	28	Mostly 4, 6, 8, some 2	Good	
Asbestos-Cement (Transite)	60	Mostly 8 & 6, some 4 & 12	Good	
PVC	7	Not reported	Good	

4. **Discuss leak history during 2019 (mains & connections)**
There were 8 main breaks/leaks and 16 service connection breaks/leaks reported for 2019.

5. **Are distribution facilities constructed in accordance with Waterworks Standards?**
The distribution system is reportedly constructed in accordance with the Waterworks Standards.

6. **Describe water main & sewer line separation practices**
California Water Service is aware of the current water main separation requirements. All water mains are believed to have adequate separation from sewer pipelines. The wastewater treatment plant is located approximately ½-mile south of the city, outside the current Cal Water service area. The City plans to consolidate South Willows Industrial Park to the Cal Water system at some point, but currently the city does not have the budge for this project. This consolidation was to go to the public for a vote in the summer of 2018, but the vote never happened. There is a possible budget solution in the works, but it will take some time. The COVID-19 pandemic has slowed this process down. Updated plans for a nearby subdivision are to be submitted soon as well.

7. **Extent of lead pipes, joints, &/or lead solder used in distribution system** Reportedly, there are no lead facilities in the distribution system.

Discussion & appraisal Main repairs are made by a contractor, under the supervision of Cal Water operators.

G. **WATER QUALITY & MONITORING**

1. **Bacteriological Monitoring**
Description of program Weekly bacteriological samples are collected on Tuesdays from dedicated sampling stations. Samples are collected by operators and analyzed by the company's ELAP-certified laboratory in San Jose.
Sampling plan approved & current (do we have a copy?) Yes – dated December 27, 2019.
Controlling factor is population or service connections? Population

Number of samples per month or week required? Two (2) samples are required each week (8 to 10 per month). The water system collects 20 to 25 water samples per month (5 per week).

MCL violations in past year? All routine and raw bacteriological samples collected in 2019 were negative for total coliform and E coli.

Discussion & appraisal Quarterly raw water samples are taken at the wells.

2. **Chemical Monitoring**

Description of program In-house tracking of monitoring requirements.

Who collects samples? Cal Water operators.

Discussion & appraisal Chemical source water monitoring is up to date.

3. **Other Organics**

Description of program Four quarters of required 1,2,3-Trichloropropane (1,2,3-TCP) monitoring in all active wells was performed in 2018.

Discussion & appraisal All active wells showed no detection of 1,2,3-TCP.

4. **Disinfection By-Products**

Description of program Stage 2 reduced monitoring consists of one dual sample set collected at 451 4th Street each August.

Discussion & appraisal The most recent round of DBPR2 sampling was on August 6, 2019. Both the TTHM and HAA5 results were not detectable (ND).

5. **Additional Monitoring**

Description of program (Physical quality of distribution system, corrosion, lead monitoring, etc.) The most recent round of Lead and Copper Rule (LCR) sampling was from July 12-14, 2017. The 90th percentile lead value was Pb=<0.005 mg/l. The 90th percentile copper value was Cu=0.130 mg/l. Both results are well below their respective action levels. The next round of LCR sampling is due by the end of September 2020.

H. OPERATION & MAINTENANCE

1. **Planning & Personnel**

Are system improvements made in accordance with the Waterworks Standards? Yes.

Does the utility have up-to-date distribution system maps? Yes. Maps are updated electronically after each water main project has been completed.

Is up-to-date copy of system schematic on file? Most current version of system map was December 27, 2019.

What is the minimum grade requirement? Grade T2 and D2. Last calculated on 7/28/2020.

Table 7 – Personnel*

Name	Title	Grade
Evan Markey	Local Manager	T2/D2
Bryan W. Otterson	Serviceman/inspector	T2/D2
Clifford M. Wade	Serviceman/inspector	T2/D3
Loni Lind	Water Quality Project Manager	

*Operators from Chico can fill in in case of vacation, illness, etc.

2. **Cross-Connection Control Program**

Name of cross-connection control inspector(s) Per the 2019 Annual Report, Jason Beasley is the Cal Water - Willows cross-connection coordinator (Cert No. 2567).

Is there a copy of the cross-connection control ordinance on file? Yes. Cal-Water has staff that are dedicated to keeping this ordinance up to date.

Discussion & appraisal A total of 131 backflow prevention devices were reported in 2019. Two of these devices were newly installed in 2019. All devices were tested. Nine failed and were repaired/

replaced. Every year, Cal Water mails letters asking customers to have backflow devices tested by a certified individual. Devices are tracked using Tokay software.

3. **Complaints**

Table 8 – Complaints Summary (2019)

Type	Number	Comments
Taste and Odor	3	
Color	0	
Turbidity	0	
Visible Organisms	0	
Pressure (High of Low)	2	
Water Leaks/Outages	0	
Other	0	
Total	**5**	

Discussion & appraisal All customer complaints are responded to individually within one hour of receiving the complaint. Detailed records of all complaints and corrective actions are maintained in Cal Water's Customer Care and Billing Database (CC&B) as well as at the Cal Water customer center. During work hours, customer service forwards complaints to the appropriate operator. During non-work hours, complaints are taken by an answering service which then contacts the on-call supervisor.

4. **Emergency Response**

Is an up-to-date emergency notification plan on file? Yes – dated July 15, 2020 and uploaded to the State's Drinc Portal.

Emergency response plan A complete Bioterrorism Act ERP was submitted to the Division in December 2004.

Notification of significant system problems Cal Water maintains good communications with the Division of Drinking Water.

Discussion & appraisal Satisfactory.

5. **Main Disinfection Program**

Describe main disinfection program (i.e., method, contact time, chlorine residual, bacteriological tests, records) for new & repaired mains Most main repairs are made without loss of pressure. When the system must be depressurized, AWWA water main disinfection standards are followed. Cal Water contracts with West Valley Construction for main repairs.

Does the main disinfection program comply with AWWA specifications? Yes

6. **Valve Maintenance Program**

Describe program The number of valves reported in the 2019 Electronic Annual Report is 903. They range from two to twelve inches in diameter. 15 valves were exercised in 2019. The goal in the Willows District is to exercise 20% of the total system valves each year over a five-year period. Additional exercising takes place as needed.

Are number & location of valves satisfactory? (i.e., mainline, ARVR, blow-off valves, etc.) Yes

Discussion & appraisal (i.e., are valves recorded on maps available to field crews? Are all valves located with valve covers raised to grade?) All valves are shown on distribution maps and marked in the field. White valve covers indicate a normally closed valve.

7. **Flushing**

Describe flushing program (i.e. dead-ends, records, etc.) Cal Water's unidirectional flushing was suspended in 2014, due to an ongoing drought. Mains are flushed "as needed."

Approximate number of dead-ends 122 Percent with flushing valves 63

Discussion & appraisal According to the Willows District 2019 Electronic Annual Report 25 dead ends were flushed in 2019.

I. CLIMATE CHANGE VULNERABILITY ASSESSMENT

1. **Fire**
   Is a Defensible Space of 100 feet (California Public Resources Code, 4291) maintained around all structures managed by this CWS?
   Comment: Yes

2. **Flooding**
   Are any of the drinking water facilities vulnerable to flooding?
   Comment: Per FEMA flood maps, Wells 4 & 10 are in special flood zones. The remaining active wells are not in danger of flooding.

3. **Drought**
   Is system prepared for drought related shortages or outages? (interties, backup supply, increased storage)
   Comment: Yes, the System has redundant groundwater sources.

4. **Backup Power**
   Is backup power available via portable generators or permanent generators?
   Comment: Several well sites have auto-start diesel generators.
   If liquid fuel is used is it properly contained and stored away from source?
   Comment: Yes

Discussion: Per the 2019 Annual Report, the system has a medium sensitivity to drought related issues, surface water quality issues (algal blooms, invasive species, etc.), and peak demand surges. It has high sensitivity to, or already experiencing storm event water quality issues, and fire related issues (fire risk and disruption of power).

J. OVERALL SYSTEM APPRAISAL

The Cal Water Willows domestic water system is operated and maintained in a professional manner. No deficiencies were noted during the December 2020 inspection.

K. APPENDIX

Deficiency list

Report prepared by: Paul Rowe, P.E.
Sanitary Engineer

Paul Rowe 8-24-2020
Signature Date

SYSTEM DEFICIENCY RECORD

Name of System Cal-Water Service - Willows System Number 1110003

Date Noted	Description of Defect or Hazard	Order No.	Reported Corrected	Confirmed Corrected
3-13-06	Please provide an up-to-date copy of the distribution system schematic.	3		4-21-08
3-13-06	The ENP dated 5/3/05 references Bob Thompson. Please submit a revised ENP.	3	5-1-08	5-7-07
3-13-06	Casing vents are needed at Wells 2 and 5.	3	Well 5 corrected in 2008. Since Well 2 is being placed on standby status and correcting the problem would be costly, this item has been removed from the deficiency list.	
3-13-06	The Bioterrorism Act ERP for the Willows District is missing in the Redding Field office, please submit.	3	5-7-07	5-7-07
5-7-07	Ensure that chlorination records are entered completely and with correct units.	3	3-21-08	3-21-08
3-21-08	No new deficiencies identified.		–	–
2-9-09	Complete and return a new Bacteriological Sample Siting Plan (BSSP) as soon as workload permits.	2		4-20-09
2-9-09	Collect and/or submit a perchlorate sample result from Wells 2-01 and 6-01 as soon as possible.	3		10-15-09
2-23-10	No new deficiencies		–	–
4-12-11	No deficiencies observed		–	–
5-29-12	The standby well, Well 2-01, is overdue on chemical testing for perchlorate.	3	11-7-2012	11-7-2012
6-13-2013	Sand Separator tank at Well 5-01 is leaking due to corrosion.	3		3-3-2014
3-3-2014	Collect and/or report overdue chemical samples according to the attached Delinquent Monitoring Schedule Report.	2		3-9-2015
3-19-2015	Wells 6 & 10 need RPP devices on supply lines to heat exchangers.	2		3-22-2016 (photographed during inspection)
3-22-16	No deficiencies.			
12-13-17	No deficiencies.			
7-28-2020	No deficiencies			

Order Number

1. Serious health hazard; corrective action must be taken immediately.
2. Critical system or operational defect &/or potential health hazard; must be corrected as soon as possible.
3. System or operational defect &/or potential contamination hazards of lesser public health significance. Must be corrected as workload permits.
4. System or operational defect &/or potential health hazard - costly to correct - to be included in any long-range water improvement project.

Attachment 4-6: Example Excerpt of Cal Water Response to DR NMH-004, Attachment #2 – Historical Replacements

CALIFORNIA WATER SERVICE COMPANY
1720 NORTH FIRST STREET
SAN JOSE, CA 95112 • (408) 367-8200 • F (408) 367-8428 – Page 1

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	Public Advocates Office		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Niamh Murphy Utilities Engineer	Phone: Email:	(415) 703-2107 niamh.murphy@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	California Water Service Company		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: Aug 18, 2021	Request Received from CPUC: August 2, 2021
Re: Partial Response # 2 to NMH-004	Requested Due Date: August 9, 2021
Subj: Common Plant – Pump and Motor Replacement	Extension for Q1d: August 18, 2021

Comments:

- Response provided by Engineering.

- Does not contain confidential information.
- Partial Response # 2 identified in blue font.
- This response refers to the following attachments included separately:
  - Attachment #1 – A2107002 Cal Advocates
  - Attachment #2 – Historical Replacements.xlsx

Data Requests and Responses

1. Refer to project justification book "Common Plant_2021_GRC_Justification Book", Section B.e. – Pump and Motor Replacements.

   a. For each of the pump and motor replacements listed in Table 3, use Excel file "DR NMH-004 Attachment 1", tab "Requested Replacement" to provide the following:

      i. District Name
      ii. Station ID
      iii. Pump ID
      iv. Horsepower
      v. OPE Score
      vi. CPUC Corresponding OPE rank
      vii. Last OPE test year
      viii. A brief description of known maintenance problems (If any)
      ix. Last work date
      x. Brief last work description
      xi. Planned work date
      xii. Brief planned work description
      xiii. Is the pump a De Laval pump? Yes/no drop-down menu
      xiv. Is the pump an Oil Lubricated Shaft Pump? Yes/no drop-down menu
      xv. Is the motor a Mercury Seal Submersible motor? Yes/no drop-down menu

      Response: Please see Attachment #1, tab "Requested Replacement".

   b. If there are any additional asset management or critical asset rankings that Cal Water uses to rank pump replacement, please add a column with those rankings for each pump to the Excel file "DR NMH-004 Attachment 1", tab "Requested Replacement".

      Response: In the 2021 GRC filing for pump replacement, no additional asset management or critical asset rankings were used.

   c. If there are any additional asset management or critical asset rankings that Cal Water uses to rank pump replacement, please provide a description of the ranking system and how it is applied.

      Response: In the 2021 GRC filing for pump replacement, no additional asset management or critical asset rankings were used.

d. Refer to *Figure 1 – Historical Pump Replacement Rate* on page Common Plant PJ-43. For each of the pumps shown as replaced during 2017, 2018 or 2019, use Excel file "DR NM-004 Attachment 1", tab "Historical Replacement" to provide the following:

   i. District Name
   ii. Station ID
   iii. Pump ID
   iv. Horsepower
   v. OPE Score at time of replacement
   vi. CPUC Corresponding OPE rank at time of replacement
   vii. Last OPE test year before replacement
   viii. Replacement year
   ix. Age of the equipment at replacement
   x. If the replacement was planned or non-specific
   xi. A brief description of the reason for replacement

Response #2: Please see Attachment #2, tab "Historical Replacement".

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	A	B	C	D	E	F	G	H	I	J	K
1	District Name	Station ID	Pump ID	HP	OPE Score at replacement	CPUC rank at replacement	Last OPE test year	Replacement year	Age at Replacement	Planned or Non-Specific replacement?	Reason for replacement
62	Palos Verdes	22	E	450	71.5	Very Good	2016	2017	34	Non-Specific	Check Valve failed
63	Palos Verdes	22	G	450	76.6	Very Good	2015	2017	34	Non-Specific	Mechanical Seal Failed
64	Palos Verdes	22	H	450	74	Very Good	2016	2017	27	Non-Specific	Mechanical Seal failed
65	Palos Verdes	23	D	450	34.3	Low	2012	2017	32	Planned	Pump Shelter replaced to protect pump & motor
66	Salinas	12	01	75	62	Fair	2015	2017	12	Non-Specific	Pumping equipment Failed
67	Salinas	16	A	60	57.6	Low	2015	2017	6	Non-Specific	Pumping equipment Failed
68	Salinas	16	B	60	37.19	Very Low	2012	2017	29	Planned	Low efficiency & Improve reliability
69	Salinas	46	01	50	60	Fair	2014	2017	5	Non-Specific	Low water table, column extension
70	Salinas	61	01	40	35.6	Very Low	2012	2017	14	Planned	Low efficiency & Improve reliability
71	Salinas	201	A	15	67.5	Good	2012	2017	7	Non-Specific	Packing failed, strong water leakage
72	Salinas	201	B	15	61.9	Fair	2012	2017	17	Non-Specific	Packing failed. Mechanical seal installed
73	Salinas	205	01	75	78.9	Very Good	2014	2017	10	Non-Specific	Well sanding into treatment plant
74	So. San Francisco	4	B	25	52.4	Low	2016	2017	12	Non-Specific	Coupling failed
75	So. San Francisco	101	B	30	56.1	Low	2015	2017	3	Non-Specific	Damaged Wear Ring
76	Westlake	10	A	75	61.8	Fair	2014	2017	15	Planned	Low efficiency & Improve reliability
77	Willows	4	01	60	66.6	Good	2014	2017	11	Non-Specific	Pumping equipment Failed
78	Willows	7	01	50	54.6	Low	2014	2017	5	Non-Specific	Motor Failed
79	Willows	9	01	50	65.5	Good	2014	2017	9	Non-Specific	Mechanical Seal failed
80	Bakersfield	68	A	25	68.59	Very Good	2017	2018	21	Non-Specific	Bearing Failed
81	Bakersfield	73	D	40	44.2	Low	2017	2018	5	Non-Specific	Low flow/OPE
82	Bakersfield	77	2	125	66.88	Good	2016	2018	6	Non-Specific	Pump Failed
83	Bakersfield	85	2	100	45.1	Very Low	2014	2018	18	Non-Specific	Noise and vibration
84	Bakersfield	86	1	75	70.3	Very Good	2017	2018	50	Non-Specific	NRR Installation
85	Bakersfield	116	G	75	47.7	Low	2017	2018	5	Non-Specific	Motor Failed, Drive Coupling Failure
86	Bakersfield	186	A	30	68.7	Very Good	2016	2018	36	Non-Specific	Motor Failed
87	Bakersfield	216	A	350	50.3	Low	2015	2018	16	Planned	Low efficiency & Improve reliability
88	Bear Gulch	24	B	25	68.2	Very Good	2017	2018	2	Non-Specific	Pump Failed, Rocks in system
89	Bear Gulch	26	A	30	67	Very Good	2017	2018	41	Non-Specific	Motor failure, motor rebuilt
90	Bear Gulch	36	B	15	63.21	Very Good	2017	2018	N/A	Non-Specific	Pump and motor failed
91	Chico	8	1	60	73	Very Good	2017	2018	8	Non-Specific	Pump failed and motor repair
92	Chico	26	1	75	74.7	Very Good	2017	2018	9	Non-Specific	Pump and motor failed
93	Chico	34	1	75	57.8	Fair	2011	2018	18	Planned	Low efficiency & Improve reliability

Attachment 4-7: Cal Water Response to DR NMH-016 and DR NMH-016 Attachment #1 – Historical Replacements

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Niamh Murphy Utilities Engineer	Phone: Email:	(415) 703-2107 niamh.murphy@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date:	**December 7, 2021**	Request Received from CPUC:	**November 29, 2021**
Re:	**NMH-016**	Requested Due Date:	**December 7, 2021**
Subj:	**Historical Replacements**	**Extension Due Date**	**December 13, 2021**

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Does not contain confidential information.**

- **This response refers to the following attachments included separately:**
  - **Attachment #1 – Historical Replacements**

Data Requests and Responses

1. Please provide the historical replacements or overhauls for the following common plant issues. Use Excel File DR NMH-016 Attachment 1 to provide this information from 2015 to 2020 for all districts.

    a. Pump and Motor historical replacements, in dollars spent per year
    Response: Please see Attachment #1.

    b. Control Valve historical overhauls, in dollars spent per year
    Response: Please see Attachment #1.

    c. Control Valve historical replacements, in dollars spent per year
    Response: Please see Attachment #1.

    d. Water Quality Analyzer historical replacements, in dollars spent per year
    Response: Please see Attachment #1.

    e. Water Quality sample site historical replacements, in dollars spent per year
    Response: Please see Attachment #1.

    f. Water Quality sample site historical replacements, in number of replacements per year
    Response: Please see Attachment #1.

District Code	District	2015	2016	2017	2018	2019	2020
129	Antelope Valley		$7,915		$11,990		$47,658
101	Bakersfield	$882,555	$1,967,592	$490,980	$675,688	$103,657	$529,907
152	Bayshore	$129,098	$110,655	$203,272	$36,999	$301,067	$740,941
102	Bear Gulch	$55,968	$787,184	$290,123	$692,254	$228,998	$399,434
104	Chico	$312,066	$809,174	$563,543	$391,000	$66,268	$564,906
149	Coast Springs		$984	$2,363			
105	Dixon	$134,967					$247,320
128	Dominguez	$283,973	$745,644	$179,394	$89,849	$949,005	
106	East Los Angeles		$477,095	$250,703	$330,920	$498,284	$2,767,906
108	Hermosa Redondo		$52,957	$104,824	$153,339	$123,756	$38,523
134	Kern River Valley	$48,451	$121,971	$87,653	$72,412	$32,924	$163,910
109	King City		$370,602		$27,573	$64,590	$68,741
110	Livermore	$45,533	$605,405	$535,706	$50,656	$81,669	$11,672
111	Los Altos	$35,313	$248,184	$105,377	$171,945	$121,176	$251,604
147	Lucerne						
112	Marysville			$26,742			$25,282
113	Oroville			$61,898	$70,131	$43,388	$28,055
122	Palos Verdes		$348,848	$19,914	$74,225	$88,062	$90,040
146	Redwood Valley		$597,031	$214,930	$316,301	$252,625	$394,980
114	Salinas	$263,415	$1,024,332	$452,916	$361,105	$153,848	$199,133
117	Selma	$29,043	$76,874				
119	Stockton	$93,519	$270,298	$08,237			$28,279
120	Visalia	$152,891	$404,609	$285,793	$177,616	$188,219	$398,841
123	Westlake			$45,432		$289,785	$30,137
121	Willows		$19,109			$8,067	
151	Rancho Dominguez						

District Code	District	2015	2016	2017	2018	2019	2020
129	Antelope Valley						
101	Bakersfield				$106,017		
152	Bayshore			$82,593	$75,995	$71,665	$263,331
102	Bear Gulch				$106,940		$64,539
104	Chico						
149	Coast Springs						
105	Dixon						
128	Dominguez			$49,130			
106	East Los Angeles						
108	Hermosa Redondo						
134	Kern River Valley						
109	King City						
110	Livermore				$42,513		
111	Los Altos				$34,917	$33,285	$64,086
147	Lucerne						
112	Marysville						
113	Oroville						
122	Palos Verdes						
146	Redwood Valley						
114	Salinas						
117	Selma						
119	Stockton						
120	Visalia						
123	Westlake						
121	Willows						
151	Rancho Dominguez						

District Code	District	2015	2016	2017	2018	2019	2020
129	Antelope Valley						
101	Bakersfield						$110,264
152	Bayshore				$19,010	$236,338	
102	Bear Gulch				$59,404	$270,377	
104	Chico						
149	Coast Springs						
105	Dixon						
128	Dominguez						
106	East Los Angeles				$70,339		$40,664
108	Hermosa Redondo				$95,789	$5,889	
134	Kern River Valley						
109	King City						
110	Livermore						$74,573
111	Los Altos						
147	Lucerne						
112	Marysville						
113	Oroville						
122	Palos Verdes					$221,341	
140	Redwood Valley						
114	Salinas				$437,054		$40,744
117	Selma						
119	Stockton						
120	Visalia						
123	Westlake						
121	Willows						
151	Rancho Dominguez						

District Code	District	2015	2016	2017	2018	2019	2020
129	Antelope Valley						
101	Bakersfield	$33,235			$85,027	$18,750	
152	Bayshore						
102	Bear Gulch						
104	Chico				$86,224		
149	Coast Springs						
105	Dixon						
128	Dominguez	$31,975		$81,123	$25,093		
106	East Los Angeles		$13,941		$6,779		
108	Hermosa Redondo			$28,944		$29,752	$12,360
134	Kern River Valley			$3,069			
109	King City						
110	Livermore				$6,586		
111	Los Altos		$47,744				
147	Lucerne						
112	Marysville						
113	Oroville					$5,287	$7,512
122	Palos Verdes						
146	Redwood Valley			$4,968			$16,782
114	Salinas	$41,235					
117	Selma						
119	Stockton				$33,358		
120	Visalia				$34,127		
123	Westlake						
121	Willows						
151	Rancho Dominguez						

District Code	District	2015	2016	2017	2018	2019	2020
129	Antelope Valley						
101	Bakersfield						
152	Bayshore						
102	Bear Gulch	$38,370	$84,580		$69,435		
104	Chico		$19,138		$28,859		$17,063
149	Coast Springs						
105	Dixon			$34,112			
128	Dominguez		$47,574				
106	East Los Angeles						
108	Hermosa Redondo	$4,052					
134	Kern River Valley						
109	King City						
110	Livermore		$16,153				
111	Los Altos						
147	Lucerne						
112	Marysville						
113	Oroville						
122	Palos Verdes						
146	Redwood Valley		$10,431				$59,160
114	Salinas	$46,914	$15,417				$3,733
117	Selma				$15,782		
119	Stockton	$100,640	$11,772	$17,109			
120	Visalia						
123	Westlake						
121	Willows		$3,382				
151	Rancho Dominguez						

District Code	District	2015	2016	2017	2018	2019	2020
129	Antelope Valley						
101	Bakersfield						
152	Bayshore						
102	Bear Gulch	5	10		10		10
104	Chico		5		10		5
149	Coast Springs						
105	Dixon			9			
128	Dominguez		6				
106	East Los Angeles						
108	Hermosa Redondo	1					
134	Kern River Valley						
109	King City						
110	Livermore		4				
111	Los Altos						
147	Lucerne						
112	Marysville						
113	Oroville						
122	Palos Verdes						
146	Redwood Valley		2				6
114	Salinas	1	2				1
117	Selma				2		
119	Stockton	13	4	4			
120	Visalia						
123	Westlake						
121	Willows		1				
151	Rancho Dominguez						

CHAPTER 5 Tank Coatings

I. INTRODUCTION

CWS requests funding for tank painting projects to reduce corrosion in the existing tanks and extend the tank's useful life. CWS amortizes the proposed project costs over a ten-year period.[139] CWS conducts an inspection of its tanks at least once every five years.[140] The most recent tank inspection report was reviewed to determine the reasonableness of CWS' request. This chapter presents the analysis and recommendations regarding CWS' requests for tank painting in its districts.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize $6,765,099 in 2022, $5,641,551 in 2023 and $5,345,109 in 2024 for tank painting projects excluding projects in Travis.[141] One project should be rejected and the project scope of ten projects should be modified due to the most recent tank inspection reports. The Commission should also remove the project contingency from the proposed project costs, consistent with Cal Advocates' recommendation regarding contingency.[142] Tables 5-1 to 5-3 below show a cost comparison between CWS' and Cal Advocates' recommendations for the proposed tank painting projects excluding Travis.[143]

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[139] CWS RO model file "Y_CH07_RO_RB_SD_Tank Painting," tab: "OUT_Tank Paint. ACB Projects."

[140] Common Plant Issues Capital Project Justification, p. 56.

[141] The Commission should authorize **<<BEGIN CONFIDENTIAL>>** [redacted] **<< END CONFIDENTIAL >>** in Travis.

[142] Public Advocates Office Report on Common Issues.

[143] The Commission should authorize **<<BEGIN CONFIDENTIAL>>** [redacted] **<< END CONFIDENTIAL >>.**

Table 5-1: 2022 Tank Painting Projects—Cost Comparison[144]

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Project Cost	
						CWS	Cal Advocates
BG	123388	28	T1	2022	Complete Interior	$ 235,974	$ 215,455
BK	123474	73	T5	2022	Complete Exterior	$ 122,998	$ 122,998
BK	123476	116	T1	2022	Complete Interior	$ 308,129	$ 294,123
BK	123483	116	T3	2022	Complete Interior	$ 464,803	$ 464,803
BK	123484	188	T1	2022	Complete Exterior	$ 145,234	$ 145,234
BK	123485	188	T2	2022	Complete Exterior	$ 273,176	$ 273,176
DOM	123487	203	T3	2022	Complete Interior	$ 680,638	$ 680,638
ELA	123488	4	T1	2022	Complete Exterior & Interior	$ 719,530	$ 719,530
HR	123489	23	T3	2022	Complete Interior	$ 304,685	$ 140,567
HR	123491	26	T2	2022	Complete Exterior & Interior	$ 691,326	$ 691,326
KC	123525	8	PT1	2022	Complete Exterior	$ 7,625	$ 7,279

[144] CWS Response to Public Advocates Office Data Request JMI-001, # 1.b.

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Project Cost	
						CWS	Cal Advocates
LAS	123493	10	T2	2022	Partial Interior	$ 169,293	$ 148,132
LAS	123497	104	T1	2022	Complete Exterior	$ 57,337	$ 52,351
LIV	123670	14	PT1	2022	Complete Exterior	$ 18,884	$ 18,025
LIV	123671	14	PT2	2022	Complete Exterior	$ 18,884	$ 18,025
MPS	123535	33	T1	2022	Complete Interior	$ 267,531	$ 244,267
MPS	123536	33	T2	2022	Complete Interior	$ 350,205	$ 319,752
MPS	123538	106	T3	2022	Exterior Roof	$ 86,528	$ 79,003
MPS	123539	112	T1	2022	Complete Exterior	$ 174,696	$ 159,505
MPS	123542	112	T2	2022	Complete Exterior	$ 229,049	$ 209,132
MPS	123544	112	T3	2022	Complete Exterior	$ 264,253	$ 241,274
MRL	124794	10	T2	2022	Exterior Roof, Shell & Balcony	$ 127,040	$ 115,993
ORO	123545	15	T1	2022	Exterior Roof, Chime & 6" of Ext Shell	$ 145,923	$ 139,290

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Project Cost	
						CWS	Cal Advocates
PV	123546	49	T1	2022	Complete Interior	$ 709,120	$ 709,120
SLN	123547	47	T1	2022	Exterior Shell	$ 130,500	$ 124,568
SLN	124782	61	PT1	2022	Complete Exterior	$ 6,063	$ 5,788
VIS	123593	12	T2	2022	Partial Interior, Exterior Roof & Balcony	$ 175,954	$ 167,956
VIS	123594	59	T3	2022	Complete Interior	$ 254,451	$ 242,885
VIS	123672	60	PT1	2022	Complete Exterior	$ 14,901	$ 14,901
Total						$ 7,154,731	$ 6,765,099

Table 5-2: 2023 Tank Painting Projects—Cost Comparison[145]

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Project Cost	
						CWS	Cal Advocates
BG	123549	22	T1	2023	Exterior Shell	$ 85,457	$ 78,026
BG	123550	37	T1	2023	Exterior Shell & Complete Interior	$ 136,148	$ 124,309
BG	123551	41	T2	2023	Partial Interior	$ 166,813	$ 145,961
BK	124798	23	T2	2023	Complete Exterior & Interior	$ 886,853	$ 631,304

[145] CWS Response to Public Advocates Office Data Request JMI-001, # 1.b.

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Project Cost	
						CWS	Cal Advocates
BK	123554	164	T1	2023	Complete Exterior & Interior	$ 329,279	$ 266,316
BK	123555	216	T1	2023	Complete Exterior	$ 429,840	$ 429,840
DOM	123556	232	T1	2023	Complete Exterior	$ 370,974	$ 370,974
HR	123557	5	T2	2023	Complete Exterior & Interior	$ 804,861	$ 741,189
HR	123558	27	T1	2023	Complete Interior	$ 441,744	$ 441,744
KC	123559	10	T1	2023	Complete Exterior & Partial Interior	$ 261,323	$ 238,599
LAS	123560	7	T1	2023	Exterior Roof	$ 30,024	$ 27,413
LAS	123562	19	T1	2023	Exterior Roof	$ 68,213	$ 62,281
LAS	123563	114	T1	2023	Complete Exterior	$ 221,801	$ 134,223
LAS	123565	123	T1	2023	Complete Interior	$ 257,707	$ 235,297
MPS	123583	23	T1	2023	Partial Interior	$ 262,016	$ 229,264
MPS	123584	24	T1	2023	Exterior Shell	$ 81,394	$ 74,317

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Project Cost	
						CWS	Cal Advocates
MPS	123566	25	T2	2023	Complete Interior	$ 226,003	$ 125,352
MPS	123567	30	T1	2023	Exterior Roof & Complete Interior	$ 388,073	$ 354,328
MPS	123589	109	T2	2023	Complete Interior	$ 202,057	$ 184,487
MPS	123569	123	T3	2023	Complete Interior	$ 204,631	$ 123,873
SSF	123570	1	T1	2023	Exterior Roof	$ 133,911	$ 122,266
SSF	123571	1	T2	2023	Partial Interior	$ 29,026	$ 25,397
SSF	123572	14	T1	2023	Exterior Roof & Complete Interior	$ 592,051	$ 474,789
Total						$ 6,610,201	$ 5,641,551

Table 5-3: 2024 Tank Painting Projects—Cost Comparison[146]

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Project Cost	
						CWS	Cal Advocates
BG	123573	19	T1	2024	Complete Interior	$ 260,076.87	$ 237,461
BG	123575	32	T1	2024	Complete Interior	$ 209,579.53	$ -
DIX	123576	1	T1	2024	Complete Exterior	$ 196,670.20	$ 179,568
HR	123577	5	T1	2024	Complete Exterior	$ 355,799.17	$ 355,799

[146] CWS Response to Public Advocates Office Data Request JMI-001, # 1.b.

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Project Cost	
						CWS	Cal Advocates
LAS	123494	28	T2	2024	Exterior Roof	$ 60,113	$ 54,886
LAS	123495	28	T3	2024	Exterior Roof	$ 60,113	$ 54,886
LAS	124795	119	T2	2024	Complete Interior	$ 228,681	$ 208,796
LIV	123579	9	T4	2024	Exterior Roof & Partial Interior	$ 309,685	$ 282,756
MPS	123533	17	T1	2024	Exterior Shell	$ 79,794	$ 72,856
MPS	123581	17	T2	2024	Exterior Shell & Complete Interior	$ 343,464	$ 313,598
MPS	123582	17	T3	2024	Exterior Shell	$ 85,238	$ 77,826
MPS	123586	27	T1	2024	Complete Exterior	$ 383,307	$ 349,976
MPS	123587	27	T2	2024	Complete Exterior & Partial Interior	$ 815,914	$ 744,965
MPS	123590	32	T1	2024	Complete Exterior & Partial Interior	$ 271,898	$ 237,911

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Project Cost	
						CWS	Cal Advocates
MPS	123588	32	T2	2024	Complete Exterior	$ 191,111	$ 174,492
MPS	123568	106	T2	2024	Exterior Roof & Complete Interior	$ 260,987	$ 198,096
MPS	123591	123	T4	2024	Exterior Roof & Partial Interior	$ 217,570	$ 190,374
PV	124796	49	T2	2024	Roof & Complete	$ 1,437,162	$ 1,371,837
SLN	123592	72	T1	2024	Complete Interior	$ 137,337	$ 57,956
SSF	123548	13	T1	2024	Complete Exterior	$ 198,315	$ 181,070
Total						$ 6,102,816	$ 5,345,109

III. ANALYSIS

CWS provided the most recent tank inspection report for the projects CWS requests tank painting projects.[147] The inspection reports were evaluated to determine the reasonableness of the proposed tank painting improvements.

CWS requests $7,154,731 in 2022, $6,610,201 in 2023, and $6,102,816 in 2024 for the tank coating program in its districts excluding Travis.[148] Tables 5-4 to 5-6 below show the tank coating projects CWS proposes in 2022-2024 excluding projects in Travis.[149]

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[147] CWS Response to Public Advocates Office Data Request JMI-001, # 1.a.

[148] CWS Response to Public Advocates Office Data Request JMI-001, # 1.b.

[149] CWS proposes **<<BEGIN CONFIDENTIAL>>** [redacted] **<< END CONFIDENTIAL >>** in Travis.

Table 5-4: 2022 Proposed Tank Painting Projects[150]

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Proposed Amount
BG	123388	28	T1	2022	Complete Interior	$ 235,974
BK	123474	73	T5	2022	Complete Exterior	$ 122,998
BK	123476	116	T1	2022	Complete Interior	$ 308,129
BK	123483	116	T3	2022	Complete Interior	$ 464,803
BK	123484	188	T1	2022	Complete Exterior	$ 145,234
BK	123485	188	T2	2022	Complete Exterior	$ 273,176
DOM	123487	203	T3	2022	Complete Interior	$ 680,638
ELA	123488	4	T1	2022	Exterior & Interior	$ 719,530
HR	123489	23	T3	2022	Complete Interior	$ 304,685
HR	123491	26	T2	2022	Complete Exterior & Interior	$ 691,326
KC	123525	8	PT1	2022	Complete Exterior	$ 7,625
LAS	123493	10	T2	2022	Partial Interior	$ 169,293
LAS	123497	104	T1	2022	Complete Exterior	$ 57,337

[150] CWS Response to Public Advocates Office Data Request JMI-001, # 1.b.

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Proposed Amount
LIV	123670	14	PT1	2022	Complete Exterior	$ 18,884
LIV	123671	14	PT2	2022	Complete Exterior	$ 18,884
MPS	123535	33	T1	2022	Complete Interior	$ 267,531
MPS	123536	33	T2	2022	Complete Interior	$ 350,205
MPS	123538	106	T3	2022	Exterior Roof	$ 86,528
MPS	123539	112	T1	2022	Complete Exterior	$ 174,696
MPS	123542	112	T2	2022	Complete Exterior	$ 229,049
MPS	123544	112	T3	2022	Complete Exterior	$ 264,253
MRL	124794	10	T2	2022	Exterior Roof, Shell & Balcony	$ 127,040
ORO	123545	15	T1	2022	Exterior Roof, Chime & 6" of Ext Shell	$ 145,923
PV	123546	49	T1	2022	Complete Interior	$ 709,120
SLN	123547	47	T1	2022	Exterior Shell	$ 130,500
SLN	124782	61	PT1	2022	Complete Exterior	$ 6,063

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Proposed Amount
VIS	123593	12	T2	2022	Partial Interior,	$ 175,954
VIS	123594	59	T3	2022	Complete Interior	$ 254,451
VIS	123672	60	PT1	2022	Complete Exterior	$ 14,901

Table 5-5: 2023 Proposed Tank Painting Projects[151]

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Proposed Amount
BG	123549	22	T1	2023	Exterior Shell	$ 85,457
BG	123550	37	T1	2023	Exterior Shell & Complete	$ 136,148
BG	123551	41	T2	2023	Partial Interior	$ 166,813
BK	124798	23	T2	2023	Complete Exterior & Interior	$ 886,853
BK	123554	164	T1	2023	Complete Exterior & Interior	$ 329,279
BK	123555	216	T1	2023	Complete Exterior	$ 429,840
DOM	123556	232	T1	2023	Complete Exterior	$ 370,974

[151] CWS Response to Public Advocates Office Data Request JMI-001, # 1.b.

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Proposed Amount
HR	123557	5	T2	2023	Complete Exterior & Interior	$ 804,861
HR	123558	27	T1	2023	Complete Interior	$ 441,744
KC	123559	10	T1	2023	Complete Exterior & Partial Interior	$ 261,323
LAS	123560	7	T1	2023	Exterior Roof	$ 30,024
LAS	123562	19	T1	2023	Exterior Roof	$ 68,213
LAS	123563	114	T1	2023	Complete Exterior	$ 221,801
LAS	123565	123	T1	2023	Complete Interior	$ 257,707
MPS	123583	23	T1	2023	Partial Interior	$ 262,016
MPS	123584	24	T1	2023	Exterior Shell	$ 81,394
MPS	123566	25	T2	2023	Complete Interior	$ 226,003
MPS	123567	30	T1	2023	Exterior Roof & Complete Interior	$ 388,073
MPS	123589	109	T2	2023	Complete Interior	$ 202,057

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Proposed Amount
MPS	123569	123	T3	2023	Complete Interior	$ 204,631
SSF	123570	1	T1	2023	Exterior Roof	$ 133,911
SSF	123571	1	T2	2023	Partial Interior	$ 29,026
SSF	123572	14	T1	2023	Exterior Roof & Complete Interior	$ 592,051

Table 5-6: 2024 Proposed Tank Painting Projects[152]

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Proposed Amount
BG	123573	19	T1	2024	Complete Interior	$ 260,077
BG	123575	32	T1	2024	Complete Interior	$ 209,580
DIX	123576	1	T1	2024	Complete Exterior	$ 196,670
HR	123577	5	T1	2024	Complete Exterior	$ 355,799
LAS	123494	28	T2	2024	Exterior Roof	$ 60,113
LAS	123495	28	T3	2024	Exterior Roof	$ 60,113
LAS	124795	119	T2	2024	Complete Interior	$ 228,681
LIV	123579	9	T4	2024	Exterior Roof & Partial Interior	$ 309,685
MPS	123533	17	T1	2024	Exterior Shell	$ 79,794
MPS	123581	17	T2	2024	Exterior Shell & Complete Interior	$ 343,464
MPS	123582	17	T3	2024	Exterior Shell	$ 85,238

[152] CWS Response to Public Advocates Office Data Request JMI-001, # 1.b.

District/ Service Area	Project ID	Station	Tank	Year	Project Scope	Proposed Amount
MPS	123586	27	T1	2024	Complete Exterior	$ 383,307
MPS	123587	27	T2	2024	Complete Exterior & Partial Interior	$ 815,914
MPS	123590	32	T1	2024	Complete Exterior & Partial Interior	$ 271,898
MPS	123588	32	T2	2024	Complete Exterior	$ 191,111
MPS	123568	106	T2	2024	Exterior Roof & Complete Interior	$ 260,987
MPS	123591	123	T4	2024	Exterior Roof & Partial Interior	$ 217,570
PV	124796	49	T2	2024	Exterior Roof & Complete Interior	$ 1,437,162
SLN	123592	72	T1	2024	Complete Interior	$ 137,337
SSF	123548	13	T1	2024	Complete Exterior	$ 198,315

The Commission should also remove the project contingency from the proposed project costs,[153] consistent with Cal Advocates' recommendation regarding contingency.[154]

[153] CWS uses a contingency between zero to fifteen percent (depending on the individual projects) for its tank painting project cost estimates.

[154] Public Advocates Office Report on Common Plant Issues.

A. Specific Projects

1. Bakersfield (BK) Station 164-Tank (T)1 – Complete Exterior and Interior (PID 123554)

The Commission should authorize $266,316 to recoat the exterior and interior of Tank 1 at Station BK 164 since the interior roof and upper interior shell do not need to be repainted at this time.

CWS' most recent tank inspection report for Tank 1 at Station 164 found that the Society for Protective Coatings (SSPC)-VIS 2 Rust Grade for the interior roof and interior upper shell area of Tank 1 are eight and nine, respectively.[155] A SSPC-VIS 2 Rust Grade of at least eight means no corrective action needed.[156] Therefore, the interior roof and upper shell area of Tank 1 does not need to be repainted at this time.

The cost of PID 123554 was modified to remove the cost associated with the interior roof and interior upper shell. The "Contractor Interior: Vapor Zone" costs were excluded from the PID 123554 cost estimate. The removal of the "Contractor Interior: Vapor Zone" costs also affects the number of project management and support labor hours.[157] The revised cost estimate for PID 123554 is shown in Attachment 5-12.[158]

The Commission should authorize $266,316 for PID 123554.

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[155] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123554-BK 164-T1-Insp. Report). According to the visual standard SSPC-VIS 2, a rust grade of eight means that between 0.03% -0.10% of the tank surface is rusted. A rust grade of ten means that the percent of surface rusted is at most 0.01%. In addition, a visual standard SSPC-VIS 2, a rust grade of nine means that between 0.01% -0.03% of the tank surface is rusted.

[156] Common Plant Issues Capital Project Justification, p. 59.

[157] CWS calculates the number of project management and support hours by the following formula: Project management and support Hours = 32.5 + 0.00075 ×amount of square footage painted. This reduces the project management and support labor costs to approximately $5,092.

[158] Attachment 5-12 (Revised Project Cost Estimates).

2. BK Station 23-T2 – Complete Exterior and Interior (PID 124798)

The Commission should authorize $631,304 in 2023 for PID 124798 to recoat the exterior and interior of Tank 2 at Station BK 23 since the interior roof and interior shell do not need to be repainted at this time.

CWS' most recent tank inspection report for Tank 2 at Station 23 found that the SSPC-VIS 2 Rust Grade for the interior roof of Tank 2 is eight.[159] A SSPC-VIS 2 Rust Grade of eight means no corrective action needed[160] In addition, CWS' most recent inspection report for Tank 2 at Station 23 found there are no calcareous deposits and no issues regarding the metal condition with the tank's interior shell. Therefore, the interior roof and interior shell of Tank 2 does not need to be repainted at this time.

The cost of PID 124798 was modified to remove the cost associated with the interior roof and interior shell. The "Contractor Interior: Vapor Zone" costs was reduced in the PID 124798 cost estimate to remove the area associated with the interior roof. The "Contractor Interior: Vapor Zone" costs is based on the area of the tank that is painted.[161] The area of the interior roof was calculated. The inspection report states that Tank 2 has a diameter of 102 feet.[162] Therefore, the area of roof is approximately 8,171 square feet[163] In addition, the "Contractor Interior: Immersed Zone" cost was reduced in the PID 124798 cost estimate to only include the area associated with the interior floor. The "Contractor Interior: Immersed Zone" costs is based on the area of the tank that is

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[159] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (124798-BK 23-T2-Insp. Report). According to the visual standard SSPC-VIS 2, a rust grade of eight means that between 0.03% -0.10% of the tank surface is rusted.

[160] Common Plant Issues Capital Project Justification, p. 59.

[161] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2023 BK 124798 23-T2 Coating Estimate).

[162] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (124798-BK 023-T2-Insp. Report).

[163] Roof area $= A = \pi \times (tank\ radius)^2 = \pi \times (0.5 \times 102ft)^2 = 8171ft^2$.

painted.[164] The interior floor area is similar to the area of the interior roof. Therefore, an area of 8,171 square feet was used. The reduction of the "Contractor Interior: Vapor Zone" and "Contractor Interior: Immersed Zone" costs also affects the number of project management and support labor hours.[165] The revised cost estimate for PID 124798 is shown in Attachment 5-12.[166]

The Commission should authorize $631,304 for project cost for PID 124798.

3. Bear Gulch (BG) Station 32-T1 – Complete Interior (PID 123575)

The Commission should reject $209,584 in 2024 because CWS fails to adequately justify the need for repainting the interior of Tank 1 at Station BG 32.

CWS' most recent tank inspection report for Tank 1 at Station 32 shows that interior of the tank was not inspected at the time of the inspection of the report.[167] Therefore, the current condition of the inside coating of the tank is unknown at this time. As a result, funds should not be authorized until an inspection of Tank 1 at Station 32 determines that repainting is warranted.

4. Hermosa Redondo (HR) Station 23-T3 – Complete Interior (PID 123489)

The Commission should authorize $140,567 in 2022 for PID 123489 to recoat the interior of Tank 3 at Station HR 23 since only the interior roof, not the interior shell and upper shell area, needs to be repainted at this time.

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[164] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2023 BK 124798 23-T2 Coating Estimate).

[165] CWS calculates the number of project management and support hours by the following formula: Project management and support Hours = 32.5 + 0.00075 ×amount of square footage painted. This reduces the project management and support labor costs to approximately $7,917.

[166] Attachment 5-12 (Revised Project Cost Estimates).

[167] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123575-BG 032-T1-Insp. Report).

CWS' most recent tank inspection report for Tank 3 at Station 23 found that the SSPC-VIS 2 Rust Grade for the interior upper shell area of the Tank 3 is eight.[168] A SSPC-VIS 2 Rust Grade of eight means no corrective action needed.[169] In addition, CWS' most recent inspection report for Tank 3 at Station 23 found there are no calcareous deposits and no issues regarding the metal condition with the tank's interior shell and floor.[170] Therefore, the interior shell and upper shell area of Tank 3 does not need to be repainted at this time.

The cost of PID 123489 was modified to remove the cost associated with the interior shell and floor. The "Contractor Interior: Immersed Zone" costs was removed from the PID 123489 cost estimate.

In addition, the "Contractor Interior: Vapor Zone" costs was reduced in the PID 123489 cost estimate to only include the area associated with the interior roof. The "Contractor Interior: Vapor Zone" costs is based on the area of the tank that is painted.[171] The area of the interior roof was calculated. The inspection report states that Tank 3 has a diameter of 52.5 feet.[172] Therefore, the area of roof is approximately 2,165 square feet.[173] The removal of the "Contractor Interior: Immersed Zone" and modifying the "Contractor Interior: Vapor Zone" costs also affects the number of project management

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[168] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123489-HR 23-T3-Insp. Report). According to the visual standard SSPC-VIS 2, a rust grade of eight means that between 0.03% -0.10% of the tank surface is rusted. A rust grade of ten means that the percent of surface rusted is at most 0.01%.

[169] Common Plant Issues Capital Project Justification, p. 59.

[170] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123489-HR 023-T3-Insp. Report).

[171] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2022 HR 123489 23-T3 Coating Estimate).

[172] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123489-HR 023-T3-Insp. Report).

[173] Roof area = $A = \pi \times (tank\ radius)^2 = \pi \times (0.5 \times 52.5ft)^2 = 2165ft^2$.

and support labor hours.[174] The revised cost estimate for PID 123489 is shown in Attachment 5-12.[175]

The Commission should authorize $140,567 for PID 123489.

5. HR Station 5-T2 – Complete Exterior and Interior (PID 123557)

The Commission should authorize $741,189 in 2023 for PID 123557 to recoat the interior of Tank 2 at Station HR 5 since the interior roof does not need to be repainted at this time.

CWS' most recent tank inspection report for Tank 2 at Station 5 found that the SSPC-VIS 2 Rust Grade for the interior roof of Tank 2 is eight.[176] A SSPC-VIS 2 Rust Grade of eight means no corrective action needed.[177] In addition, CWS' most recent inspection report for Tank 2 at Station 5 found there are no calcareous deposits and no issues regarding the metal condition with the tank's interior shell and floor.[178] Therefore, the interior roof of Tank 3 does not need to be repainted at this time.

The cost of PID 123557 was modified to remove the cost associated with the interior roof. The "Contractor Interior: Vapor Zone" costs was reduced in the PID 123557 cost estimate to exclude the area associated with the interior roof. The "Contractor Interior: Vapor Zone" costs is based on the area of the tank that is painted.[179]

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[174] CWS calculates the number of project management and support hours by the following formula: Project management and support Hours = 32.5 + 0.00075 ×amount of square footage painted. This reduces the project management and support labor costs to approximately $4143.

[175] Attachment 5-12 (Revised Project Cost Estimates).

[176] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123557-HR 005-T2-Insp. Report). According to the visual standard SSPC-VIS 2, a rust grade of eight means that between 0.03% -0.10% of the tank surface is rusted. A rust grade of ten means that the percent of surface rusted is at most 0.01%.

[177] Common Plant Issues Capital Project Justification, p. 59.

[178] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123557-HR 005-T2-Insp. Report).

[179] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2023 HR 123557 5-T2 Coating Estimate).

The area of the interior roof was calculated. The inspection report states that Tank 2 has a diameter of 150 feet.[180] Therefore, the area of roof is approximately 17,671 square feet.[181] The area included in the "Contractor Interior: Vapor Zone" costs was calculated by subtracting the interior roof area from the proposed amount of area included in the "Contractor Interior: Vapor Zone" (approximately 29,220 square feet). This results in an area of approximately 11,549 square feet (29,220-17,671). Modifying the "Contractor Interior: Vapor Zone" costs also affects the number of project management and support labor hours.[182] The revised cost estimate for PID 123557 is shown in Attachment 5-12.[183]

The Commission should authorize $741,189 for PID 123557.

6. Los Altos (LAS) Station 114-T1 – Complete Exterior (PID 123563)

The Commission should authorize $134,223 in 2023 for PID 123563 to recoat the exterior of Tank 1 at Station LAS 114 since the exterior shell does not need to be repainted at this time.

CWS' most recent tank inspection report for Tank 1 at Station 114 found that the SSPC-VIS 2 Rust Grade for the exterior shell of the Tank 1 is nine.[184] A SSPC-VIS 2 Rust Grade of nine means no corrective action needed.[185] In addition, CWS' most recent

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[180] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123557-HR 005-T2-Insp. Report).

[181] Roof area = $A = \pi \times (tank\ radius)^2 = \pi \times (0.5 \times 150ft)^2 = 17671ft^2$.

[182] CWS calculates the number of project management and support hours by the following formula: Project management and support Hours = 32.5 + 0.00075 ×amount of square footage painted. This reduces the project management and support labor costs to approximately $10,923.

[183] Attachment 5-12 (Revised Project Cost Estimates).

[184] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123563-LAS 114-T1-Insp. Report). According to the visual standard SSPC-VIS 2, a rust grade of nine means that between 0.01% -0.03% of the tank surface is rusted.

[185] Common Plant Issues Capital Project Justification, p. 59.

inspection report for Tank 1 at Station 114 found the exterior shell of Tank 1 in "good" condition.[186] According to CWS' Tank Engineering Tank Inspection Policy and Procedure, a tank in "good" condition means that the surface of the tank shows minimal coating defects or corrosion.[187] Therefore, the exterior shell of Tank 1 does not need to be repainted at this time.

The cost of PID 123563 was modified to remove the cost associated with the interior shell and floor. The "Contractor Exterior: Shell" costs were removed from the PID 123563 cost estimate. The removal of the "Contractor Exterior: Shell" costs also affects the number of project management and support labor hours.[188] The revised cost estimate for PID 123563 is shown in Attachment 5-12.[189]

The Commission should authorize $134,223 for PID 123563.

7. Mid-Peninsula (MPS) Station 25-T2 – Complete Interior (PID 123566)

The Commission should authorize $125,352 in 2023 for PID 123566 to recoat the interior of Tank 2 at Station MPS 25 since the interior roof and upper shell area of Tank 2 at Station MPS 25 do not need to be repainted at this time.

CWS' most recent tank inspection report for Tank 2 at Station 25 shows that the SSPC-VIS 2 Rust Grade for the interior roof and upper interior shell[190] of the Tank 2 is

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[186] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123563-LAS 114-T1-Insp. Report).

[187] Common Plant Issues Capital Project Justification, p. 59.

[188] CWS calculates the number of project management and support hours by the following formula: Project management and support Hours = 32.5 + 0.00075 ×amount of square footage painted. This reduces the project management and support labor costs to approximately $4,234.

[189] Attachment 5-12 (Revised Project Cost Estimates).

[190] The inspection report defines the upper interior shell as the top eight feet of the interior shell.

nine.[191] A SSPC-VIS 2 Rust Grade of nine means no corrective action needed.[192] Therefore, the interior roof and upper interior shell of Tank 2 does not need to be repainted at this time.

The cost of PID 123566 was modified to remove the cost associated with the interior roof and interior upper shell. The "Contractor Interior: Vapor Zone" costs was removed from the PID 123566 cost estimate. The removal of the "Contractor Interior: Vapor Zone" costs also affects the number of project management and support labor hours.[193] The revised cost estimate for PID 123566 is shown in Attachment 5-12.[194]

The Commission should authorize $125,352 for PID 123566.

8. MPS Station 123- T3 – Complete Interior (PID 123569)

The Commission should authorize $123,873 in 2023 for PID 123569 to recoat the interior of Tank 3 at Station MPS 123 since the interior roof and upper interior shell do not need to be repainted at this time.

CWS' most recent tank inspection report for Tank 3 at Station 123 shows that the SSPC-VIS 2 Rust Grade for the interior roof and upper interior shell[195] of the Tank 2 are eight and ten, respectively.[196] A SSPC-VIS 2 Rust Grade of at least eight means no

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[191] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123566-MPS 025-T2-Insp. Report). According to the visual standard SSPC-VIS 2, a rust grade of nine means that means that between 0.01% -0.03% of the tank surface is rusted.

[192] Common Plant Issues Capital Project Justification, p. 59.

[193] CWS calculates the number of project management and support hours by the following formula: Project management and support Hours = 32.5 + 0.00075 ×amount of square footage painted. This reduces the project management and support labor costs to approximately $4,429.

[194] Attachment 5-12 (Revised Project Cost Estimates).

[195] The inspection report defines the upper interior shell as the top eight feet of the interior shell.

[196] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123569-MPS 123-T3-Insp. Report). According to the visual standard SSPC-VIS 2, a rust grade of eight means that between 0.03% -0.10% of the tank surface is rusted. A rust grade of ten means that the percent of surface rusted is at most 0.01%.

corrective action needed.[197] Therefore, the interior roof and upper interior shell of Tank 3 does not need to be repainted at this time.

The cost of PID 123569 was modified to remove the cost associated with the interior roof and interior upper shell. The "Contractor Interior: Vapor Zone" costs was removed from the PID 123569 cost estimate. The removal of the "Contractor Interior: Vapor Zone" costs also affects the number of project management and support labor hours.[198] The revised cost estimate for PID 123569 is shown in Attachment 5-12.[199]

The Commission should authorize $123,873 for PID 123569.

9. MPS 106-T2 – Exterior Roof and Interior (PID 123568)

The Commission should authorize $198,096 in 2024 for PID 123568 to recoat exterior roof and interior of Tank 2 at Station MPS 106 since the interior roof does not need to be repainted at this time.

CWS' most recent tank inspection report for Tank 2 at Station 106 shows that the SSPC-VIS 2 Rust Grade for the interior roof and upper interior shell of the Tank 1 is eight.[200] A SSPC-VIS 2 Rust Grade of eight means no corrective action needed.[201] Therefore, the interior roof of Tank 2 does not need to be repainted at this time.

The cost of PID 123568 was modified to remove the cost associated with the interior roof. The "Contractor Interior: Vapor Zone" costs was reduced in the PID 123568 cost estimate to exclude the area associated with the interior roof. The

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[197] Common Plant Issues Capital Project Justification, p. 59.

[198] CWS calculates the number of project management and support hours by the following formula: Project management and support Hours = 32.5 + 0.00075 ×amount of square footage painted. This reduces the project management and support labor costs to approximately $4,428.

[199] Attachment 5-12 (Revised Project Cost Estimates).

[200] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123568-MPS 106-T2-Insp. Report). According to the visual standard SSPC-VIS 2, a rust grade of eight means that between 0.03% -0.10% of the tank surface is rusted.

[201] Common Plant Issues Capital Project Justification, p. 59.

"Contractor Interior: Vapor Zone" costs is based on the area of the tank that is painted.[202] The area of the interior roof was calculated. The inspection report states that Tank 2 has a diameter of 38 feet.[203] Therefore, the area of roof is approximately 1,134 square feet.[204] The area included in the "Contractor Interior: Vapor Zone" costs was calculated by subtracting the interior roof area from the proposed amount of area included in the "Contractor Interior: Vapor Zone" (approximately 1,990 square feet). This results in an area of approximately 856 square feet (1,900-1,134). The reduction of the "Contractor Interior: Vapor Zone" costs also affects the number of project management and support labor hours.[205] The revised cost estimate for PID 123568 is shown in Attachment 5-12.[206]

The Commission should authorize $198,096 for PID 123568.

10. South San Francisco (SSF) Station 14-T1 – Exterior Roof and Complete Interior (PID 123572)

The Commission should authorize $474,789 in 2023 for PID 123572 to recoat the exterior roof and interior of Tank 1 at Station SSF 14 since the interior roof does not need to be repainted at this time.

CWS' most recent tank inspection report for Tank 1 at Station 14 shows that the SSPC-VIS 2 Rust Grade for the interior roof and upper interior shell[207] of the Tank 1 is

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[202] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2024 MPS 123568 106-T2 Coating Estimate).

[203] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123568-MPS 106-T2-Insp. Report).

[204] Roof area = $A = \pi \times (tank\ radius)^2 = \pi \times (0.5 \times 38ft)^2 = 1134\ ft^2$.

[205] CWS calculates the number of project management and support hours by the following formula: Project management and support Hours = 32.5 + 0.00075 ×amount of square footage painted. This reduces the project management and support labor costs to approximately $4,618.

[206] Attachment 5-12 (Revised Project Cost Estimates).

[207] The inspection report defines the upper interior shell as the top seven feet of the interior shell.

nine.[208] A SSPC-VIS 2 Rust Grade of nine means no corrective action needed.[209] Therefore, the interior roof of Tank 1 does not need to be repainted at this time.

The cost of PID 123572 was modified to remove the cost associated with the interior roof. The "Contractor Interior: Vapor Zone" costs was reduced in the PID 123572 cost estimate to exclude the area associated with the interior roof. The "Contractor Interior: Vapor Zone" costs is based on the area of the tank that is painted.[210] The area of the interior roof was calculated. The inspection report states that Tank 1 has a diameter of 75 feet.[211] Therefore, the area of roof is approximately 4,418 square feet.[212] The area included in the "Contractor Interior: Vapor Zone" costs was calculated by subtracting the interior roof area from the proposed amount of area included in the "Contractor Interior: Vapor Zone" (approximately 8,200 square feet). This results in an area of approximately 3,782 square feet (8,200-4,418). The reduction of the "Contractor Interior: Vapor Zone" costs also affects the number of project management and support labor hours.[213] The revised cost estimate for PID 123572 is shown in Attachment 5-12.[214]

The Commission should authorize $474,789 for PID 123572.

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[208] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123572-SSF 14-T1-Insp. Report). According to the visual standard SSPC-VIS 2, a rust grade of nine means that between 0.01% -0.03% of the tank surface is rusted.

[209] Common Plant Issues Capital Project Justification, p. 59.

[210] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2022 HR 123489 23-T3 Coating Estimate).

[211] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123572-SSF 14-T1-Insp. Report).

[212] Roof area = $A = \pi \times (tank\ radius)^2 = \pi \times (0.5 \times 75ft)^2 = 4418ft^2$.

[213] CWS calculates the number of project management and support hours by the following formula: Project management and support Hours = 32.5 + 0.00075 ×amount of square footage painted. This reduces the project management and support labor costs to approximately $5,993.

[214] Attachment 5-12 (Revised Project Cost Estimates).

11. Salinas (SLN) Station 72 -T1 – Complete Interior (PID 123592)

The Commission should authorize $57,956 in 2024 for PID 123592 to recoat the interior of Tank 1 at Station SLN 72 because CWS fails to adequately justify the need for repainting the immersed zone of Tank 1 at Station SLN 72.

CWS' most recent tank inspection report for Tank 1 at Station 72 makes no comments on the tank's interior shell and floor tank coating.[215] Therefore, the current condition of the inside coating of the tank is unknown at this time. As a result, funds should not be authorized until an inspection of Tank 1 at Station 72 determines that repainting is warranted.

The cost of PID 123592 was modified to remove the cost associated with the interior shell and floor. The "Contractor Interior: Immersed Zone" costs was removed from the PID 123592 cost estimate. The removal of the "Contractor Interior: Immersed Zone" costs also affects the number of project management and support labor hours.[216] The revised cost estimate for PID 123592 is shown in Attachment 5-12.[217]

The Commission should authorize $57,956 for PID 123592.

IV. CONCLUSION

The Commission should authorize $6,765,099 in 2022, $5,641,551 in 2023, and $5,345,109 in 2024 excluding projects in Travis based on denying one project and adjusting the project scope of ten projects according to the most recent tank inspection reports. In addition, the Commission should authorize **<<BEGIN CONFIDENTIAL>>** [redacted] **<<END CONFIDENTIAL>>** in Travis. The recommended budgets also reflect removing the project contingency from the

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[215] CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123592-SLN 072-T1-Insp. Report).

[216] CWS calculates the number of project management and support hours by the following formula: Project management and support Hours = 32.5 + 0.00075 ×amount of square footage painted. This reduces the project management and support labor costs to approximately $4,028.

[217] Attachment 5-12 (Revised Project Cost Estimates).

1 proposed project costs, consistent with Cal Advocates' recommendation regarding
2 contingency.[218]

[218] Public Advocates Office Report on Common Issues.

Attachment 5-1: CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123554-BK 164-T1-Insp. Report)

GROUND LEVEL WELDED STEEL TANK INSPECTION REPORT

POTABLE WATER

DATE: 2/8/2010

District: BAKERSFIELD Station/Tank: STA. 164-T1 Inspection Cycle: 5 Years

Diameter: 38 Height: 40 Capacity: 340000 Roof Type: CONE Year Built: 0

EXTERIOR OF ROOF Coating URET-G.T.G Year 2001

CONDITION ASSESSMENT - % OF AREA * RUST GRADE PER SSPC VIS 2 GUIDE

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEARANCE
5-C	X	X	-	X	-	X	X	-	POOR

CUPOLA VENT OK HATCH N/A LANDING PLAFORM, RAILING OK

COMMENTS: 5 HAND HOLES. NO SAFETY RAILING.

EXTERIOR OF SHELL Coating URET-G.T.G Year 2001

CONDITION ASSESSMENT - % OF AREA

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEAR'CE
6-S	X	X	-	X	-	X	-	-	POOR

SHELL VENTS N/A LADDER OK SAFETY CLIMB OK

OUTLET PIPING OK (10" & 10") MANHOLES OK (30" & 24") CLEANOUT N/A

FOUNDATION NOT VISIBLE BERM POOR PAVEMENT

COMMENTS: NO FLEXTEND ON PIPING. LADDER NOT CONTINUOUSLY WELDED

INTERIOR OF TANK

Shell Lining EPOX-WHT Year 2007

Floor Lining C.T.ENAMEL Year 1988

Underside of Roof and 0 Ft. Upper Shell EPOX-WHT Year 2007

CONDITION ASSESSMENT - % OF AREA ** LIGHT, MEDIUM, HEAVY

UNDERSIDE OF ROOF AREA			UPPER SHELL AREA			REMAINING SHELL AREA**		FLOOR**	
RUST*	RUST STAIN	METAL COND.	RUST*	RUST STAIN	METAL COND.	CALC. DEP.	METAL COND.	CALC. DEP.	METAL COND.
6-S	X	OK	9-S	X	OK	0	PITTED	0	-

OVERFLOW OK (38 FT) RAFTERS OK (24) GIRDERS N/A

EARTHQUAKE RODS N/A TRUSSES N/A COLUMNS OK (1)

LADDER N/A SAFETY CLIMB N/A INLET PIPING OK

COMMENTS: NO VORTEX ON INLET PIPING. COAL TAR ON FLOOR.

CATHODIC PROTECTION Year 2007 Repairs

PERFORMANCE EFFECTIVE EFFECTIVE 0 FT BELOW ANODE DEPLETION MMO %

WIRING LOOPED

COMMENTS:

REPAIRS: NONE

BUDGET RECOMMENDATIONS: 1. COMPLETE INTERIOR AND EXTERIOR COATING IN YEAR 2023.

PHOTOS TAKEN: 71 INT. & 124 EXT. INSPECTED BY: M. CAMPOS

Attachment 5-2: CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (124798-BK 23-T2-Insp. Report)

GROUND LEVEL WELDED STEEL TANK INSPECTION REPORT

POTABLE WATER

DATE: 4/13/2018

District: BAKERSFIELD Station/Tank: STA. 02S-T2 (OWENS RES 2) Inspection Cycle: 5 Years

Diameter: 102 Height: 33 Capacity: 2000000 Roof Type: KNUCKLE Year Built: 1993

EXTERIOR OF ROOF Coating URET-G.T.G Year 2005

CONDITION ASSESSMENT - % OF AREA * RUST GRADE PER SSPC-VIS 2 GUIDE

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEARANCE
8-S	X	X	X	-	-	X	X	-	POOR

CUPOLA VENT OK HATCH OK (36") LANDING PLATFORM, RAILING OK

COMMENTS: 13 HAND HOLES. PEELING & DELAMINATION ON ROOF WELDS & KNUCKLE.

EXTERIOR OF SHELL Coating URET-G.T.G Year 2005

CONDITION ASSESSMENT - % OF AREA

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEAR'CE
9-S	-	-	-	-	-	X	-	-	GOOD

SHELL VENTS N/A LADDER OK SAFETY CLIMB OK

OUTLET PIPING OK (18") MANHOLES OK (24" & 30") CLEANOUT OK

FOUNDATION OK DERM OK

COMMENTS: NO EBBA ON INLET/OUTLET PIPE. NO AIRGAP ON OVERFLOW PIPE.

INTERIOR OF TANK

Shell Lining EPOX-WHT Year 1993

Floor Lining EPOX-WHT Year 1993

Underside of Roof and 0 Ft. Upper Shell EPOX WHT Year 1993

CONDITION ASSESSMENT - % OF AREA ** LIGHT, MEDIUM, HEAVY

UNDERSIDE OF ROOF AREA			UPPER SHELL AREA			REMAINING SHELL AREA**		FLOOR**	
RUST*	RUST STAIN	METAL COND.	RUST*	RUST STAIN	METAL COND.	CALC. DEP.	METAL COND.	CALC. DEP.	METAL COND.
8-S	X	-	7-S	X	-	0	-	0	-

OVERFLOW OK (31 FT) RAFTERS OK (13) GIRDERS N/A

EARTHQUAKE RODS OK TRUSSES N/A COLUMNS OK (1)

LADDER OK SAFETY CLIMB OK INLET PIPING OK (18")

COMMENTS: BLISTERING ON FLOOR

CATHODIC PROTECTION Year 1996 Repairs

PERFORMANCE EFFECTIVE EFFECTIVE 7 FT BELOW ANODE DEPLETION PT %

WIRING LOOPED

COMMENTS:

REPAIRS: NONE

BUDGET RECOMMENDATIONS: 1. COMPLETE INTERIOR & EXTERIOR COATING IN 2023.

PHOTOS TAKEN: 157 INT. & 202 EXT. INSPECTED BY: M. CAMPOS

Attachment 5-3: CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123575-BG 32-T1-Insp. Report)

GROUND LEVEL WELDED STEEL TANK INSPECTION REPORT

POTABLE WATER

DATE: 10/8/2018

District: BEAR GULCH Station/Tank: STA. 032-11 (WAYSIDE) Inspection Cycle: 5 Years

Diameter: 30 Height: 31 Capacity: 250000 Roof Type: KNUCKLE Year Built: 1960

EXTERIOR OF ROOF Coating URET-G.T.G Year 2016

CONDITION ASSESSMENT - % OF AREA * RUST GRADE PER SSPC-VIS 2 GUIDE

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEARANCE
10									NEW

CUPOLA VENT OK (36") HATCH OK (24" dia) LANDING PLATFORM, RAILING OK (36"x24"), 42" rails

COMMENTS: Final inspection of exterior roof coating.

EXTERIOR OF SHELL Coating URET-G.T.G Year 2002

CONDITION ASSESSMENT - % OF AREA

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEAR'CE
9-S	X					Lt.			GOOD

SHELL VENTS N/A LADDER OK SAFETY CLIMB OK

OUTLET PIPING OK (18") MANHOLES OK (1) - 24"dia CLEANOUT OK (flushed)

FOUNDATION Not visible BERM OK (asphalt)

COMMENTS:

INTERIOR OF TANK

Shell Lining C.T.ENAMEL Year 1968

Floor Lining C.T.ENAMEL Year 1968

Underside of Roof and 0 Ft. Upper Shell C.T.S. Year 1904

CONDITION ASSESSMENT - % OF AREA ** LIGHT, MEDIUM, HEAVY

UNDERSIDE OF ROOF AREA			UPPER SHELL AREA			REMAINING SHELL AREA**		FLOOR**	
RUST*	RUST STAIN	METAL COND.	RUST*	RUST STAIN	METAL COND.	CALC. DEP.	METAL COND.	CALC. DEP.	METAL COND.

OVERFLOW RAFTERS GIRDERS

EARTHQUAKE RODS TRUSSES COLUMNS

LADDER SAFETY CLIMB INLET PIPING

COMMENTS: Not inspected, tank in service, interior inspected 7/20/2016.

CATHODIC PROTECTION Year 2010 Repairs

PERFORMANCE EFFECTIVE ANODE DEPLETION %

WIRING

COMMENTS: Not inspected, tank in service

REPAIRS: None

BUDGET RECOMMENDATIONS: Paint complete interior per ASPA 3A & 3C. Hatch to be relocated away form ext. ladder & enlarged to 30" sq. Install additional rails on roof to enclose hatch. Replace upper 6' rungs of interior ladder & relocate along with hatch. Install 30" manway (2020).

PHOTOS TAKEN: Multiple (ext) INSPECTED BY: P. Lobato - Final ext. roof insp. WO 355335

Attachment 5-4: CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123489-HR 23-T3-Insp. Report)

GROUND LEVEL WELDED STEEL TANK INSPECTION REPORT

POTABLE WATER

DATE: 02/2017

District: HERMOSA REDONDO Station/Tank: STA. 023-T3 (RES.5C) Inspection Cycle: 5 Years

Diameter: 52.5 Height: 32 Capacity: 500000 Roof Type: CONE Year Built: 1954

EXTERIOR OF ROOF Coating EPOX-G.T.G Year 2017

CONDITION ASSESSMENT - % OF AREA * RUST GRADE PER SSPC VIS 2 GUIDE

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEARANCE
10	-	-	-	-	-	-	-	-	EXCELLENT

CUPOLA VENT OK (36") HATCH OK (20") LANDING PLAFORM, RAILING OK

COMMENTS: NO SAFETY RAILING. SCADA ANTENNA MOUNTED ON RUSTED CUPOLA VENT.

EXTERIOR OF SHELL Coating URET-G.T.G Year 2003

CONDITION ASSESSMENT - % OF AREA

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEAR'CE
8-S	X	-	-	-	-	X	-	-	GOOD

SHELL VENTS N/A LADDER OK SAFETY CLIMB OK

OUTLET PIPING OK (8") MANHOLES OK (20" CLEANOUT OK

FOUNDATION NOT VISIBLE BERM ok

COMMENTS: NEED TO ADD 30-INCH MANWAY

INTERIOR OF TANK

Shell Lining EPOX-WHT Year 2007

Floor Lining EPOX-WHT Year 2007

Underside of Roof and 0 Ft. Upper Shell EPOX-WHT Year 2007

CONDITION ASSESSMENT - % OF AREA ** LIGHT, MEDIUM, HEAVY

UNDERSIDE OF ROOF AREA			UPPER SHELL AREA			REMAINING SHELL AREA**		FLOOR**	
RUST*	RUST STAIN	METAL COND.	RUST*	RUST STAIN	METAL COND.	CALC. DEP.	METAL COND.	CALC. DEP.	METAL COND.
5-S	X	OK	8-9	X	-	0	OK	0	OK

OVERFLOW OK (36FT) RAFTERS OK (14) GIRDERS N/A

EARTHQUAKE RODS OK TRUSSES N/A COLUMNS OK

LADDER OK SAFETY CLIMB OK INLET PIPING OK

COMMENTS: UNDERSIDE OF ROOF COATING IN POOR CONDITION

CATHODIC PROTECTION Year 1984 Repairs 75/08

PERFORMANCE EFFECTIVE EFFECTIVE 3FT BELOW ANODE DEPLETION MMO %

WIRING LOOPED

COMMENTS:

REPAIRS: 1. CONTRACTOR TO REPLACE CUPOLA VENT, REPAIR HATCH HINGES, AND INSTALL SAFETY RAILING.

BUDGET RECOMMENDATIONS: 1. COMPLETE INTERIOR COATING IN 2022.

PHOTOS TAKEN: 40 INT. & 31 EXT. INSPECTED BY: M. CAMPOS

Attachment 5-5: CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123557-HR 5-T2-Insp. Report)

GROUND LEVEL WELDED STEEL TANK INSPECTION REPORT

POTABLE WATER

DATE: 4/3/2018

District: HERMOSA REDONDO Station/Tank: STA. 005-T2 (RES.100) Inspection Cycle: 5 Years

Diameter: 150 Height: 28 Capacity: 3500000 Roof Type: KNUCKLE Year Built: 1988

EXTERIOR OF ROOF Coating URET-G.T.G Year 2006

CONDITION ASSESSMENT - % OF AREA * RUST GRADE PER SSPC-VIS 2 GUIDE

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEARANCE
8-S	X	-	X	-	-	X	-	-	POOR

COPOLA VENT OK (4) HATCH OK (24") LANDING PLAFORM, RAILING OK

COMMENTS: 44 HAND HOLE COVERS. HAND HOLE AREA IS RUSTING. URETHANE IS CHALKING AND EPOXY IS VISIBLE.

EXTERIOR OF SHELL Coating URET-G.T.G Year 2006

CONDITION ASSESSMENT - % OF AREA

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEAR'CE
7-S	X	-	X	-	-	X	X	-	POOR

SHELL VENTS N/A LADDER OK SAFETY CLIMB OK

OUTLET PIPING OK (12" & 18") MANHOLES OK (30" & 20") CLEANOUT OK

FOUNDATION NOT VISIBLE BP/IM OK

COMMENTS:

INTERIOR OF TANK

Shell Lining C.T.ENAMEL Year 1993

Floor Lining C.T.ENAMEL Year 1993

Underside of Roof and _____ Ft. Upper Shell EPOX-WHT Year 2010

CONDITION ASSESSMENT - % OF AREA ** LIGHT, MEDIUM, HEAVY

UNDERSIDE OF ROOF AREA			UPPER SHELL AREA			REMAINING SHELL AREA**		FLOOR**	
RUST*	RUST STAIN	METAL COND.	RUST*	RUST STAIN	METAL COND.	CALC. DEP.	METAL COND.	CALC. DEP.	METAL COND.
8-S	X	-	6-S	X	PITTED	0	-	0	-

OVERFLOW OK (26 FT) RAFTERS OK (24) GIRDERS OK

EARTHQUAKE RODS OK TRUSSES N/A COLUMNS OK (19)

LADDER OK SAFETY CLIMB RUSTED/CAL INLET PIPING OK

COMMENTS: COAL TAR SHELL & FLOOR.

CATHODIC PROTECTION Year 2016 Repairs _____

PERFORMANCE EFFECTIVE EFFECTIVE 6 FT BELOW ANODE DEPLETION MMO %

WIRING LOOPED

COMMENTS:

REPAIRS: 1. DISTRICT TO CLEAN SAND DEBRIS. 2. TIGHTEN HAND HOLE COVERS AND PLUG INSULATOR HOLE ON ROOF.

BUDGET RECOMMENDATIONS: 1. COMPLETE INTERIOR AND EXTERIOR COATING IN YEAR 2023. 2. REPLACE TOP 8 FT OF INTERIOR LADDER AND INTERIOR SAFETY CLIMB.

PHOTOS TAKEN: 300 INT. & 343 EXT. INSPECTED BY: M. CAMPOS (W.O. 351652)

Attachment 5-6: CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123563-LAS 114-T1-Insp. Report)

GROUND LEVEL WELDED STEEL TANK INSPECTION REPORT

POTABLE WATER

DATE: 7/27/2015

District: LOS ALTOS SUBURBAN Station/Tank: STA. 114-T1 (O'KEEFE) Inspection Cycle: 1 Years

Diameter: 61 Height: 24 Capacity: 500000 Roof Type: CONE Year Built: 1951

EXTERIOR OF ROOF Coating URET-G.T.G Year 2010

CONDITION ASSESSMENT - % OF AREA * RUST GRADE PER SSPC VIS 2 GUIDE

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEARANCE
9-S	X	X		X		LI			Fair

CUPOLA VENT OK (35") HATCH New (30" sq) LANDING PLATFORM, RAILING None/New

COMMENTS: Ponding found near edges. New 30" sq hatch, (2) D-rings & safety railing installed.
Hatch relocated away from ext ladder to eliminate tripping hazard

EXTERIOR OF SHELL Coating URET-G.T.G Year 2010

CONDITION ASSESSMENT - % OF AREA

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEAR'CE
9-S	X								Good

SHELL VENTS Blocked LADDER OK SAFETY CLIMB OK

OUTLET PIPING OK MANHOLES OK (2)-20" & 30" CLEANOUT OK (flushed)

FOUNDATION Not visible BERM OK (asphalt)

COMMENTS: New 30" manway installed. Heavy rust found on overflow screen plate at airgap

INTERIOR OF TANK

Shell Lining EPOX-WHT-100% Year 2010

Floor Lining EPOX-WHT-100% Year 2018

Underside of Roof and 1 Ft. Upper Shell EPOX-WHT Year 2018

CONDITION ASSESSMENT - % OF AREA ** LIGHT, MEDIUM, HEAVY

UNDERSIDE OF ROOF AREA			UPPER SHELL AREA			REMAINING SHELL AREA**		FLOOR**	
RUST*	RUST STAIN	METAL COND.	RUST*	RUST STAIN	METAL COND.	CALC. DEP.	METAL COND.	CALC. DEP.	METAL COND.
10	-	-	10	-	-	0	Pitted	0	Seat pits

OVERFLOW OK RAFTERS OK (15) GIRDERS OK

EARTHQUAKE RODS N/A TRUSSES N/A COLUMNS OK (8)H-beam

LADDER OK* SAFETY CLIMB OK INLET PIPING OK

COMMENTS: Final insp. of complete int. coating per ASPS 3A & C using SW. Int. ladder relocated away from ext. ladder & upper 8' replaced.

CATHODIC PROTECTION Year 2018 Repairs

PERFORMANCE EFFECTIVE ANODE DEPLETION MMO %

WIRING -

COMMENTS: System removed for coating. Anodes reinstalled by Compro. To remain off during warranty period. Total of 8 anodes (5 & 3)

REPAIRS: Install lock on roof hatch

BUDGET RECOMMENDATIONS: Paint complete ext. per ASPS 4A (roof) & 6A (shell). Replace 30" manway & overflow screen cover plate (2023)

PHOTOS TAKEN: Multiple (int. & ext) INSPECTED BY: F. Loliato - WO 351511

Attachment 5-7: CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123566-MPS 25-T2-Insp. Report)

GROUND LEVEL WELDED STEEL TANK INSPECTION REPORT

POTABLE WATER

DATE: 10/24/2018

District: MID PENINSULA Station/Tank: STA. 025-T2 (LINCOLN) Inspection Cycle: 5 Years

Diameter: 40 Height: 28 Capacity: 250000 Roof Type: CONE Year Built: 61

EXTERIOR OF ROOF Coating URET-G.T.G. Year 2015

CONDITION ASSESSMENT - % OF AREA * RUST GRADE PER SSPC VIS 2 GUIDE

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEARANCE
10									Good

CUPOLA VENT OK (48" dia) HATCH New (30" sq) LANDING PLATFORM, RAILING New railing

COMMENTS: Outer 2' of roof & lip replaced to improve roof drainage. New 30" sq hatch installed & relocated away from ext ladder. New safety rail & (2) tie-off points installed

EXTERIOR OF SHELL Coating URET-G.T.G. Year 1999

CONDITION ASSESSMENT - % OF AREA

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEAR'CE
9-S	X					11			Good

SHELL VENTS Blocked LADDER OK SAFETY CLIMB OK

OUTLET PIPING OK MANHOLES New (2) 30" dia CLEANOUT OK (flushed)

FOUNDATION Not visible BERM OK (asphalt)

COMMENTS: (2) new 30" manways installed

INTERIOR OF TANK

Shell Lining C.T.ENAMEL Year 1961

Floor Lining C.T.ENAMEL Year 1961

Underside of Roof and 8 Ft. Upper Shell C.T.S. Year 1984

CONDITION ASSESSMENT - % OF AREA ** LIGHT, MEDIUM, HEAVY

UNDERSIDE OF ROOF AREA			UPPER SHELL AREA			REMAINING SHELL AREA**		FLOOR**	
RUST*	RUST STAIN	METAL COND.	RUST*	RUST STAIN	METAL COND.	CALC. DEP.	METAL COND.	CALC. DEP.	METAL COND.
9-S	X	-	9-S	X	-	60-M	Good	60-M	Etched

OVERFLOW OK RAFTERS OK (20) GIRDERS N/A

EARTHQUAKE RODS N/A TRUSSES N/A COLUMNS OK (1) - I-beam

LADDER New SAFETY CLIMB OK INLET PIPING OK (passive mixer)

COMMENTS: Rust & delamination present at base of rafters. Interior ladder replaced and relocated away from exterior ladder. Most of interior coating on immersed zone is cracking

CATHODIC PROTECTION Year 2018 Repairs

PERFORMANCE Adequate EFFECTIVE 3' from roof ANODE DEPLETION MMO %

WIRING Looped

COMMENTS: 11 total anode hand holes (8 outer ring, 3 inner ring). Only outer 8 hand holes have anodes

REPAIRS: None

BUDGET RECOMMENDATIONS: Paint complete interior per ASPS 3A & 3C (2022)

PHOTOS TAKEN: Multiple (int & ext) INSPECTED BY: F. Lobato

Attachment 5-8: CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123569-MPS 123-T3-Insp. Report)

GROUND LEVEL WELDED STEEL TANK INSPECTION REPORT

POTABLE WATER

DATE: 8/3/2018

District: MID PENINSULA Station/Tank: STA. 123-T3 (CHESTNUT) Inspection Cycle: 5 Years

Diameter: 38 Height: 31 Capacity: 250000 Roof Type: CONE Year Built: 48

EXTERIOR OF ROOF Coating URET-G T G Year 2002

CONDITION ASSESSMENT - % OF AREA * RUST GRADE PER SSPC VIS 2 GUIDE

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEARANCE
10									New

CUPOLA VENT OK (48" dia) HATCH OK (36" sq) LANDING PLAFORM, RAILING *

COMMENTS: Final insp. of exterior roof coating per ASPG GASP. Cupola vent doubler plate replaced.
*Safety railing installed & hatch relocated away from ext. ladder to address tripping hazard. (1) tie off point installed

EXTERIOR OF SHELL Coating URET-G T G Year 2002

CONDITION ASSESSMENT - % OF AREA

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEAR'CE
9-S	X					Lt			Good

SHELL VENTS Blocked LADDER OK SAFETY CLIMB OK (galv)

OUTLET PIPING OK (10" dia) MANHOLES OK (2) - 24" & 30" CLEANOUT OK (flushed)

FOUNDATION Not visible BERM OK (asphalt)

COMMENTS: New 30" dia. manway installed. Paint touch up needed on flexible fitting. Leak present on 24" manway

INTERIOR OF TANK

Shell Lining C.T.ENAMEL Year 1973

Floor Lining C.T.ENAMEL Year 1973

Underside of Roof and 8' Ft. Upper Shell EPOX-WHT Year 2008

CONDITION ASSESSMENT - % OF AREA ** LIGHT, MEDIUM, HEAVY

UNDERSIDE OF ROOF AREA			UPPER SHELL AREA			REMAINING SHELL AREA**		FLOOR**	
RUST*	RUST STAIN	METAL COND.	RUST*	RUST STAIN	METAL COND.	CALC. DEP.	METAL COND.	CALC. DEP.	METAL COND.
8-S	X	-	10	-	-	10-M	Etched	25-M	Scat. pits

OVERFLOW OK (8" dia) (12" from roof) RAFTERS OK (20 total) GIRDERS N/A

EARTHQUAKE RODS OK TRUSSES N/A COLUMNS OK (1)H-beam

LADDER New SAFETY CLIMB OK (fiberglass) INLET PIPING OK

COMMENTS: Int. ladder replaced & relocated away from ext ladder to address tripping hazard. Found rust & paint delam. on rafters.
Mixing system present

CATHODIC PROTECTION Year 2010 Repairs

PERFORMANCE Adequate EFFECTIVE 8' from roof ANODE DEPLETION MMO %

WIRING Looped

COMMENTS: 8 total anodes (total of 14 handholes not being used (11 outer ring, 3 inner ring))

REPAIRS: None

BUDGET RECOMMENDATIONS: Replace cupola vent (48" dia) & existing 24" dia. manway w/ 30" manway (2023). Coating project (complete int.) included in 2024 GRC

PHOTOS TAKEN: Multiple (int. & ext) INSPECTED BY: F. Lobato & R. Chee (WO 351155)

Attachment 5-9: CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123568-MPS 106-T2-Insp. Report)

GROUND LEVEL WELDED STEEL TANK INSPECTION REPORT

POTABLE WATER

DATE: 5/5/2017

District: MID PENINSULA Station/Tank: STA. 106-T2 (HIGHLAND) Inspection Cycle: 5 Years

Diameter: 98 Height: 31 Capacity: 250000 Roof Type: CONE Year Built: 47

EXTERIOR OF ROOF Coating URET-G.T.G Year 2010

CONDITION ASSESSMENT - % OF AREA * RUST GRADE PER SSPC VIS 2 GUIDE

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEARANCE
8-S	X			X		LI	X		Fair

CUPOLA VENT OK (48" dia.) HATCH OK (20"x22") LANDING PLATFORM, RAILING None

COMMENTS: Paint shows signs of cracking on weld seams. Larger hatch & roof railing recommended. Gap found between cupola vent top and neck body.

EXTERIOR OF SHELL Coating URET-G.T.G Year 2010

CONDITION ASSESSMENT - % OF AREA

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEAR'CE
10	X					LI			Excellent

SHELL VENTS None LADDER OK SAFETY CLIMB OK

OUTLET PIPING OK MANHOLES OK (30") CLEANOUT OK (flushed)

FOUNDATION Not visible BERM OK (asphalt)

COMMENTS: Heavy rust found around overflow airgap bolts (at screen)

INTERIOR OF TANK

Shell Lining C.T.ENAMEL Year 1973

Floor Lining C.T.ENAMEL Year 1973

Underside of Roof and 6' Ft. Upper Shell EPOX-WHT Year 2010

CONDITION ASSESSMENT - % OF AREA ** LIGHT, MEDIUM, HEAVY

UNDERSIDE OF ROOF AREA			UPPER SHELL AREA			REMAINING SHELL AREA**		FLOOR**	
RUST*	RUST STAIN	METAL COND.	RUST*	RUST STAIN	METAL COND.	CALC. DEP.	METAL COND.	CALC. DEP.	METAL COND.
8-S	X	-	9-S	X	Pitted	20-L	Good	10-L	Good

OVERFLOW OK RAFTERS OK (18) GIRDERS N/A

EARTHQUAKE RODS N/A TRUSSES N/A COLUMNS OK (1) - I-beam type

LADDER OK SAFETY CLIMB Needs replacement INLET PIPING OK

COMMENTS: Self-climb not operational due to coal tar build up on ladder. Coal tar peeling off on upper shell.

CATHODIC PROTECTION Year 2018 Repairs

PERFORMANCE Adequate EFFECTIVE 9' from roof ANODE DEPLETION MMO %

WIRING Looped

COMMENTS: (16) total anodes ((12) outer ring, (4) inner ring)

REPAIRS: None

BUDGET RECOMMENDATIONS: Paint complete int. (ASPS 3A & 3C) & ext. roof (ASPS 4A). Replace interior self-climb rail. Replace roof hatch (36" sq) & relocate away from ext. ladder. Install 42" high rail on roof (2021)

PHOTOS TAKEN: Multiple (int. & ext) INSPECTED BY: F. Lobato - WO 320526

Attachment 5-10: CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123572-SSF 14-T1-Insp. Report)

GROUND LEVEL WELDED STEEL TANK INSPECTION REPORT

POTABLE WATER

DATE: 3/16/2018

District: SO. SAN FRANCISCO Station/Tank: STA. 014-T1 (RES.11-WINSTON) Inspection Cycle: 5 Years

Diameter: 75 Height: 35 Capacity: 1000000 Roof Type: KNUCKLE Year Built: 72

EXTERIOR OF ROOF Coating URET-G.T.G Year 2005

CONDITION ASSESSMENT - % OF AREA * RUST GRADE PER SSPC-VIS 2 GUIDE

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEARANCE
6-S	X					Lt			Fair

CUPOLA VENT 48" (marginal cond) HATCH OK (24" sq)-rusted LANDING PLATFORM RAILING OK (42" railing)

COMMENTS: Found heavy rust on cupola vent screen (including a hole), hatch & around CP hand hole covers

EXTERIOR OF SHELL Coating URET-G.T.G Year 2005

CONDITION ASSESSMENT - % OF AREA

RUST*	RUST STAIN	PEEL'G	BLISTER'G	CRACK'G	CHECK'G	CHALK'G	DELAM'G	FUNGI	APPEAR'CE
9-S	X								Good

SHELL VENTS N/A LADDER OK SAFETY CLIMB OK

OUTLET PIPING OK (12") MANHOLES OK (1)-24" CLEANOUT OK (flushed)

FOUNDATION Not visible BERM OK (asphalt)

COMMENTS: Scattered cracks found on berm

INTERIOR OF TANK

Shell Lining C.T.ENAMEL Year 1972

Floor Lining C.T.ENAMEL Year 1972

Underside of Roof and 7 Ft. Upper Shell C.T.S Year 1991

CONDITION ASSESSMENT - % OF AREA ** LIGHT, MEDIUM, HEAVY

UNDERSIDE OF ROOF AREA			UPPER SHELL AREA			REMAINING SHELL AREA**		FLOOR**	
RUST*	RUST STAIN	METAL COND.	RUST*	RUST STAIN	METAL COND.	CALC. DEP.	METAL COND.	CALC. DEP.	METAL COND.
9-S	X	-	7-S	X	-	10L	Good	25L	Good

OVERFLOW OK (12" dia) RAFTERS OK (19) GIRDERS N/A

EARTHQUAKE RODS OK TRUSSES N/A COLUMNS OK (1)-I-beam type

LADDER OK SAFETY CLIMB OK INLET PIPING OK (12"dia)

COMMENTS:

CATHODIC PROTECTION Year 2016 Repairs

PERFORMANCE Adequate EFFECTIVE 6' below roof ANODE DEPLETION MMO %

WIRING Looped

COMMENTS: System upgraded w/ CRC-100 rectifier and MMO anodes (2016). (25 total anodes - (3) rings, 15, 8 & 2), (2) hand holes omitted in center ring)

REPAIRS: None

BUDGET RECOMMENDATIONS: Paint complete interior (ASPS 3); Paint exterior roof (ASPS 4A); Install 30" manway; Replace upper 7' of interior ladder, roof hatch & cupola vent (2023)

PHOTOS TAKEN: Multiple (int & ext) INSPECTED BY: F. Lobato - WO 351163

Attachment 5-11: CWS Response to Public Advocates Office Data Request JMI-001, Q1A Attachment (123592-SLN 72-T1-Insp. Report)

CONCRETE TANK INSPECTION REPORT

POTABLE WATER

DATE: 4/17/2019

District: SALINAS Station/Tank: STA. 072 T1 Inspection Cycle: 5 Years

Diameter: 25.5' ID Height: 15.5' Capacity: 60000 Year Built: 0

TOP OF ROOF *Mineral Surface Covering - Year* *Repairs* *Paint - Year* 2019

CONDITION ASSESSMENT

- [x] CONCRETE: Fine cracking filled in & painted
- [x] PAINT: New per ASPS 11
- [ ] MINERAL SURFACE COVERING:
- [ ] VENTS and SCREENS: [x] HATCH: 24" x 24" (plate) - New
- [x] OTHER: Final insp. of ext roof painting per ASPS 11 & new hatch

UNDERSIDE OF ROOF

CONDITION ASSESSMENT

- [x] CONCRETE: Fine cracking throughout
- [ ] WOOD SHEATHING:
- [ ] RAFTERS: [ ] RAFTER TIES:
- [ ] BEAMS: [ ] TRUSSES:
- [ ] COLUMNS: [ ] COLUMN SUPPORTS:
- [ ] BRACING:
- [ ] OTHER:

INTERIOR WALLS AND FLOOR *Fiberglass Lining - Year* *Cathodic Protection System - Year* *Repairs*

CONDITION ASSESSMENT

- [ ] CONCRETE: [ ] JOINT SEALANT:
- [ ] BARE WOOD
- [ ] FIBERGLASS LINING: [ ] SEAL COATING:
- [x] LADDER: New fiberglass ladder [x] OUTLETS: 12" dia. 12" above floor
- [ ] DRAIN: [x] OVERFLOW: 4" dia. 15' high
- [ ] C.P. SYSTEM:
- [x] OTHER: Inlet 8" dia. PVC, 10' high

EXTERIOR WALLS *Paint - Year* 2019

CONDITION ASSESSMENT

- [x] CONCRETE: Fine cracking filled in & painted
- [x] PAINT: New per ASPS 11
- [ ] STAVES: [ ] HOOPS:
- [ ] SHELL VENTS and SCREENS:
- [ ] LADDER: [ ] ANTI-CLIMB:
- [ ] PIPING:
- [x] OTHER: Final insp. of ext shell painting per ASPS 11

FOUNDATION AND SUPPORTS

CONDITION ASSESSMENT

- [x] CONCRETE: Not visible [x] MUDSILLS:
- [ ] CRAWL JOISTS:
- [ ] OTHER: Tank partially buried

REPAIRS: None

BUDGET RECOMMENDATIONS: Paint complete interior (ASPS 12) - 2024

PHOTOS TAKEN: Multiple (int & ext) INSPECTED BY: F. Lobato

Attachment 5-12: Revised Project Cost Estimates

Att. Table 5-1: PID 123554 —Cost Comparison[219]

Item	Unit	Unit Cost	Quantity		Total	
Direct Costs			CWS	Cal Advocates	CWS	Cal Advocates
Contractor Interior: Vapor Zone	SQFT	$ 27.94	1990	0	$ 55,600.60	$ -
Contractor Interior: Immersed Zone	SQFT	$ 10.48	6500	6500	$ 68,120.00	$ 68,120.00
Contractor Exterior: Roof	SQFT	$ 30.50	1230	1230	$ 37,515.00	$ 37,515.00
Contractor Exterior: Shell	SQFT	$ 12.92	4860	4860	$ 62,791.20	$ 62,791.20
Contractor Heat and Dehumidification Contingency	LS	$ 26,000	1	1	$ 26,000	$ 26,000
Contractor Removal and Re-Installation of Cathodic Protection System	LS	$ 6,380	1	1	$ 6,380	$ 6,380
Contractor Total					$ 256,406.80	$ 200,806.20
Project Management & Support Labor	HR	$ 121.41	43.435	41.9425	$ 5,273.44	$ 5,092.24
Field and Coating Inspection Labor*	HR	$ 75.29	368	368	$ 27,706.72	$ 27,706.72
Electrical & Mechanical Technician	HR	$ 97.22	24	24	$ 2,333.28	$ 2,333.28
Direct Internal Labor Total					$ 35,313.44	$ 35,132.24
Direct Cost Subtotal					$ 291,720.24	$ 235,938.44
Indirect Cost						
Consumables, Waste Management, Etc.	LS		5%	5%	$ 14,586.01	$ 11,796.92
Contingency: Additional Engineered Controls & Bid Variance	LS		0%	0%	$ -	$ -
Indirect Cost Total					$ 14,586.01	$ 11,796.92
Subtotal					$ 306,306.26	$ 247,735.36
Escalation	LS	7.50%	1	1	$ 22,972.97	$ 18,580.15
Total Cost					$ 329,279.22	$ 266,315.51

[219] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2023 BK 123554 164-T1 Coating Estimate).

Att. Table 5-2: PID 124798 —Cost Comparison[220]

Item	Unit	Unit Cost	Quantity		Total	
Direct Costs			**CWS**	**Cal Advocates**	**CWS**	**Cal Advocates**
Contractor Interior: Vapor Zone	SQFT	$ 11.87	24120	15949	$ 286,304.40	$ 189,311.28
Contractor Interior: Immersed Zone	SQFT	$ 9.49	20280	8171	$ 192,457.20	$ 77,545.47
Contractor Exterior: Roof	SQFT	$ 16.11	8840	8840	$ 142,412.40	$ 142,412.40
Contractor Exterior: Shell	SQFT	$ 6.46	10650	10650	$ 68,799.00	$ 68,799.00
Contractor Heat and Dehumidification Contingency	LS	$ 36,400	1	1	$ 36,400	$ 36,400
Contractor Removal and Re-Installation of Cathodic Protection System	LS	$ 6,870	1	1	$ 6,870	$ 6,870
Contractor Total					$ 733,243.00	$ 521,338.15
Project Management & Support Labor	HR	$ 121.41	80.418	65.208	$ 9,763.49	$ 7,916.84
Field and Coating Inspection Labor*	HR	$ 75.29	536	368	$ 40,355.44	$ 27,706.72
Electrical & Mechanical Technician	HR	$ 97.22	24	24	$ 2,333.28	$ 2,333.28
Direct Internal Labor Total					$ 52,452.21	$ 37,956.84
Direct Cost Subtotal					$ 785,695.21	$ 559,294.99
Indirect Cost						
Consumables, Waste Management, Etc.	LS		5%	5%	$ 39,284.76	$ 27,964.75
Contingency: Additional Engineered Controls & Bid Variance	LS		0%	0%	$ -	$ -
Indirect Cost Total					$ 39,284.76	$ 27,964.75
Subtotal					$ 824,979.97	$ 587,259.74
Escalation	LS	7.50%	1	1	$ 61,873.50	$ 44,044.48
Total Cost					$ 886,853.47	$ 631,304.22

[220] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2023 BK 124798 023-T2 Coating Estimate).

Att. Table 5-3: PID 123489 —Cost Comparison[221]

Item	Unit	Unit Cost	Quantity		Total	
Direct Costs			**CWS**	**Cal Advocates**	**CWS**	**Cal Advocates**
Contractor Interior: Vapor Zone	SQFT	$ 27.94	4450	2165	$ 124,333.00	$ 60,483.22
Contractor Interior: Immersed Zone	SQFT	$ 10.48	8250	0	$ 86,460.00	$ -
Contractor Exterior: Roof	SQFT	$ -	0	0	$ -	$ -
Contractor Exterior: Shell	SQFT	$ -	0	0	$ -	$ -
Contractor Heat and Dehumidification Contingency	LS	$ 26,000	1	1	$ 26,000	$ 26,000
Contractor Removal and Re-Installation of Cathodic Protection System	LS	$ 6,230	1	1	$ 6,230	$ 6,230
Contractor Total					$ 243,023.00	$ 92,713.22
Project Management & Support Labor	HR	$ 121.41	42.025	34.124	$ 5,102.26	$ 4,142.94
Field and Coating Inspection Labor*	HR	$ 75.29	344	376	$ 25,899.76	$ 28,309.04
Electrical & Mechanical Technician	HR	$ 97.22	24	24	$ 2,333.28	$ 2,333.28
Direct Internal Labor Total					$ 33,335.30	$ 34,785.26
Direct Cost Subtotal					$ 276,358.30	$ 127,498.48
Indirect Cost						
Consumables, Waste Management, Etc.	LS		5%	5%	$ 13,817.91	$ 6,374.92
Contingency: Additional Engineered Controls & Bid Variance	LS		0%	0%	$ -	$ -
Indirect Cost Total					$ 13,817.91	$ 6,374.92
Subtotal					$ 290,176.21	$ 133,873.40
Escalation	LS	5.00%	1	1	$ 14,508.81	$ 6,693.67
Total Cost					$ 304,685.02	$ 140,567.07

[221] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2022 HR 123489 023-T3 Coating Estimate).

Att. Table 5-4: PID 123557 —Cost Comparison[222]

Item	Unit	Unit Cost	Quantity		Total	
Direct Costs			**CWS**	**Cal Advocates**	**CWS**	**Cal Advocates**
Contractor Interior: Vapor Zone	SQFT	$ 8.31	29220	11549	$ 242,788.98	$ 95,956.83
Contractor Interior: Immersed Zone	SQFT	$ 6.64	32690	32690	$ 217,159.67	$ 217,159.67
Contractor Exterior: Roof	SQFT	$ 7.40	19120	19120	$ 141,488.00	$ 141,488.00
Contractor Exterior: Shell	SQFT	$ 6.46	13260	13260	$ 85,659.60	$ 85,659.60
Contractor Heat and Dehumidification Contingency	LS	$ 36,400	1	1	$ 36,400	$ 36,400
Contractor Removal and Re-Installation of Cathodic Protection System	LS	$ 6,870	1	1	$ 6,870	$ 6,870
Contractor Total					$ 730,366.25	$ 583,534.10
Project Management & Support Labor	HR	$ 121.41	103.218	89.964	$ 12,531.64	$ 10,922.52
Field and Coating Inspection Labor*	HR	$ 75.29	792	795	$ 59,629.68	$ 59,855.55
Electrical & Mechanical Technician	HR	$ 97.22	24	24	$ 2,333.28	$ 2,333.28
Direct Internal Labor Total					$ 74,494.60	$ 73,111.35
Direct Cost Subtotal					$ 804,860.85	$ 656,645.45
Indirect Cost						
Consumables, Waste Management, Etc.	LS		5%	5%	$ 40,243.04	$ 32,832.27
Contingency: Additional Engineered Controls & Bid Variance	LS		0%	0%	$ -	$ -
Indirect Cost Total					$ 40,243.04	$ 32,832.27
Subtotal					$ 845,103.89	$ 689,477.72
Escalation	LS	7.50%	1	1	$ 63,382.79	$ 51,710.83
Total Cost					$ 908,486.68	$ 741,188.55

[222] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2022 HR 123557 005-T2 Coating Estimate).

Att. Table 5-5: PID 123563 —Cost Comparison[223]

Item	Unit	Unit Cost	Quantity		Total	
Direct Costs			**CWS**	**Cal Advocates**	**CWS**	**Cal Advocates**
Contractor Interior: Vapor Zone	SQFT	$ -	0	0	$ -	$ -
Contractor Interior: Immersed Zone	SQFT	$ -	0	0	$ -	$ -
Contractor Exterior: Roof	SQFT	$ 30.50	3170	3170	$ 96,685.00	$ 96,685.00
Contractor Exterior: Shell	SQFT	$ 12.92	4650	0	$ 60,078.00	$ -
Contractor Heat and Dehumidification Contingency	LS	$ -	0	0	$ -	$ -
Contractor Removal and Re-Installation of Cathodic Protection System	LS	$ -	0	0	$ -	$ -
Contractor Total					$ 156,763.00	$ 96,685.00
Project Management & Support Labor	HR	$ 121.41	38.365	34.878	$ 4,657.89	$ 4,234.48
Field and Coating Inspection Labor*	HR	$ 75.29	208	208	$ 15,660.32	$ 15,660.32
Electrical & Mechanical Technician	HR	$ 97.22	24	24	$ 2,333.28	$ 2,333.28
Direct Internal Labor Total					$ 22,651.49	$ 22,228.08
Direct Cost Subtotal					$ 179,414.49	$ 118,913.08
Indirect Cost						
Consumables, Waste Management, Etc.	LS		5%	5%	$ 8,970.72	$ 5,945.65
Contingency: Additional Engineered Controls & Bid Variance	LS		10%	0%	$ 17,941.45	$ -
Indirect Cost Total					$ 26,912.17	$ 5,945.65
Subtotal					$ 206,326.67	$ 124,858.73
Escalation	LS	7.50%	1	1	$ 15,474.50	$ 9,364.40
Total Cost					$ 221,801.17	$ 134,223.14

[223] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2023 LAS 123563 114-T1 Coating Estimate).

Att. Table 5-6: PID 123566 —Cost Comparison[224]

Item	Unit	Unit Cost	Quantity		Total	
Direct Costs			**CWS**	**Cal Advocates**	**CWS**	**Cal Advocates**
Contractor Interior: Vapor Zone	SQFT	$ 27.94	2560	0	$ 71,526.40	$ -
Contractor Interior: Immersed Zone	SQFT	$ 10.48	5310	5310	$ 55,648.80	$ 55,648.80
Contractor Exterior: Roof	SQFT	$ -	0	0	$ -	$ -
Contractor Exterior: Shell	SQFT	$ -	0	0	$ -	$ -
Contractor Heat and Dehumidification Contingency	LS	$ 26,000	1	1	$ 26,000	$ 26,000
Contractor Removal and Re-Installation of Cathodic Protection System	LS	$ 6,380	1	1	$ 6,380	$ 6,380
Contractor Total					$ 159,555.20	$ 88,028.80
Project Management & Support Labor	HR	$ 121.41	38.4025	36.483	$ 4,662.45	$ 4,429.34
Field and Coating Inspection Labor*	HR	$ 75.29	216	216	$ 16,262.64	$ 16,262.64
Electrical & Mechanical Technician	HR	$ 97.22	24	24	$ 2,333.28	$ 2,333.28
Direct Internal Labor Total					$ 23,258.37	$ 23,025.26
Direct Cost Subtotal					$ 182,813.57	$ 111,054.06
Indirect Cost						
Consumables, Waste Management, Etc.	LS		5%	5%	$ 9,140.68	$ 5,552.70
Contingency: Additional Engineered Controls & Bid Variance	LS		10%	0%	$ 18,281.36	$ -
Indirect Cost Total					$ 27,422.04	$ 5,552.70
Subtotal					$ 210,235.60	$ 116,606.76
Escalation	LS	7.50%	1	1	$ 15,767.67	$ 8,745.51
Total Cost					$ 226,003.27	$ 125,352.27

[224] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2023 MPS 123566 025-T2 Coating Estimate).

Att. Table 5-7: PID 123569 —Cost Comparison[225]

Item	Unit	Unit Cost	Quantity		Total	
Direct Costs			**CWS**	**Cal Advocates**	**CWS**	**Cal Advocates**
Contractor Interior: Vapor Zone	SQFT	$ 27.94	1990	0	$ 55,600.60	$ -
Contractor Interior: Immersed Zone	SQFT	$ 10.48	5300	5300	$ 55,544.00	$ 55,544.00
Contractor Exterior: Roof	SQFT	$ -	0	0	$ -	$ -
Contractor Exterior: Shell	SQFT	$ -	0	0	$ -	$ -
Contractor Heat and Dehumidification Contingency	LS	$ 26,000	1	1	$ 26,000	$ 26,000
Contractor Removal and Re-Installation of Cathodic Protection System	LS	$ 6,380	1	1	$ 6,380	$ 6,380
Contractor Total					$ 143,524.60	$ 87,924.00
Project Management & Support Labor	HR	$ 121.41	37.968	36.475	$ 4,609.63	$ 4,428.43
Field and Coating Inspection Labor*	HR	$ 75.29	200	200	$ 15,058.00	$ 15,058.00
Electrical & Mechanical Technician	HR	$ 97.22	24	24	$ 2,333.28	$ 2,333.28
Direct Internal Labor Total					$ 22,000.91	$ 21,819.71
Direct Cost Subtotal					$ 165,525.51	$ 109,743.71
Indirect Cost						
Consumables, Waste Management, Etc.	LS		5%	5%	$ 8,276.28	$ 5,487.19
Contingency: Additional Engineered Controls & Bid Variance	LS		10%	0%	$ 16,552.55	$ -
Indirect Cost Total					$ 24,828.83	$ 5,487.19
Subtotal					$ 190,354.34	$ 115,230.90
Escalation	LS	7.50%	1	1	$ 14,276.58	$ 8,642.32
Total Cost					$ 204,630.92	$ 123,873.21

[225] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2023 MPS 123569 123-T3 Coating Estimate).

Att. Table 5-8: PID 123568 —Cost Comparison[226]

Item			Quantity		Total	
Direct Costs	Unit	Unit Cost	CWS	Cal Advocates	CWS	Cal Advocates
Contractor Interior: Vapor Zone	SQFT	$ 27.94	1990	856	$ 55,601	$ 23,913
Contractor Interior: Immersed Zone	SQFT	$ 10.48	5300	5300	$ 55,544	$ 55,544
Contractor Exterior: Roof	SQFT	$ 30.50	1230	1230	$ 37,515	$ 37,515
Contractor Exterior: Shell	SQFT	$ -	0	0	$ -	$ -
Contractor Heat and Dehumidification Contingency	LS	$ 26,000	1	1	$ 26,000	$ 26,000
Contractor Removal and Re-Installation of Cathodic Protection System	LS	$ 6,530	1	1	$ 6,530	$ 6,530
Contractor Total					$ 181,190	$ 149,502
Project Management & Support Labor	HR	$ 121.41	38.89	38.04	$ 4,722	$ 4,618
Field and Coating Inspection Labor*	HR	$ 75.29	240	200	$ 18,070	$ 15,058
Electrical & Mechanical Technician	HR	$ 97.22	24	24	$ 2,333	$ 2,333
Direct Internal Labor Total					$ 25,125	$ 22,010
Direct Cost Subtotal					$ 206,314	$ 171,512
Indirect Cost						
Consumables, Waste Management, Etc.	LS		5%	5%	$ 10,316	$ 8,576
Contingency: Additional Engineered Controls & Bid Variance	LS		10%	0%	$ 20,631	$ -
Indirect Cost Total					$ 30,947	$ 8,576
Subtotal					$ 237,261	$ 180,088
Escalation	LS	10.00%	1	1	$ 23,726	$ 18,009
Total Cost					$ 260,987	$ 198,096

[226] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2024 MPS 123568 106-T2 Coating Estimate).

Att. Table 5-9: PID 123572 —Cost Comparison[227]

Item	Unit	Unit Cost	Quantity		Total	
Direct Costs			**CWS**	**Cal Advocates**	**CWS**	**Cal Advocates**
Contractor Interior: Vapor Zone	SQFT	$ 13.10	8200	3782	$ 107,420.00	$ 49,545.97
Contractor Interior: Immersed Zone	SQFT	$ 10.48	13920	13920	$ 145,881.60	$ 145,881.60
Contractor Exterior: Roof	SQFT	$ 30.50	4780	4780	$ 145,790.00	$ 145,790.00
Contractor Exterior: Shell	SQFT	$ -	0	06	$ -	$ -
Contractor Heat and Dehumidification Contingency	LS	$ 36,400	1	1	$ 36,400	$ 36,400
Contractor Removal and Re-Installation of Cathodic Protection System	LS	$ 6,380	1	1	$ 6,380	$ 6,380
Contractor Total					$ 441,871.60	$ 383,997.57
Project Management & Support Labor	HR	$ 121.41	52.675	49.362	$ 6,395.27	$ 5,992.99
Field and Coating Inspection Labor*	HR	$ 75.29	376	376	$ 28,309.04	$ 28,309.04
Electrical & Mechanical Technician	HR	$ 97.22	24	24	$ 2,333.28	$ 2,333.28
Direct Internal Labor Total					$ 37,037.59	$ 36,635.31
Direct Cost Subtotal					$ 478,909.19	$ 420,632.88
Indirect Cost						
Consumables, Waste Management, Etc.	LS		5%	5%	$ 23,945.46	$ 21,031.64
Contingency: Additional Engineered Controls & Bid Variance	LS		10%	0%	$ 47,890.92	$ -
Indirect Cost Total					$ 71,836.38	$ 21,031.64
Subtotal					$ 550,745.57	$ 441,664.53
Escalation	LS	7.50%	1	1	$ 41,305.92	$ 33,124.84
Total Cost					$ 592,051.49	$ 474,789.37

[227] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2023 SSF 123572 014-T1 Coating Estimate).

Att. Table 5-10: PID 123592 —Cost Comparison[228]

Item	Unit	Unit Cost	Quantity		Total	
Direct Costs			**CWS**	**Cal Advocates**	**CWS**	**Cal Advocates**
Contractor Interior: Vapor Zone	SQFT	$ 32.89	900	900	$ 29,601.00	$ 29,601.00
Contractor Interior: Immersed Zone	SQFT	$ 32.89	1920	0	$ 63,148.80	$ -
Contractor Exterior: Roof	SQFT	$ -	0	0	$ -	$ -
Contractor Exterior: Shell	SQFT	$ -	0	0	$ -	$ -
Contractor Heat and Dehumidification Contingency	LS	$ 10,000	1	1	$ 10,000	$ 10,000
Contractor Removal and Re-Installation of Cathodic Protection System	LS	$ 6,230	0	0	$ -	$ -
Contractor Total					$ 102,749.80	$ 39,601.00
Project Management & Support Labor	HR	$ 121.41	34.615	33.175	$ 4,202.61	$ 4,027.78
Field and Coating Inspection Labor*	HR	$ 75.29	56	56	$ 4,216.24	$ 4,216.24
Electrical & Mechanical Technician	HR	$ 97.22	24	24	$ 2,333.28	$ 2,333.28
Direct Internal Labor Total					$ 10,752.13	$ 10,577.30
Direct Cost Subtotal					$ 113,501.93	$ 50,178.30
Indirect Cost						
Consumables, Waste Management, Etc.	LS		5%	5%	$ 5,675.10	$ 2,508.91
Contingency: Additional Engineered Controls & Bid Variance	LS		5%	0%	$ 5,675.10	$ -
Indirect Cost Total					$ 11,350.19	$ 2,508.91
Subtotal					$ 124,852.12	$ 52,687.21
Escalation	LS	10%	1	1	$ 12,485.21	$ 5,268.72
Total Cost					$ 137,337.33	$ 57,955.93

[228] CWS Response to Public Advocates Office Data Request JMI-001, Q1B Attachment (2024 SLN 123592 072-T1 Coating Estimate).

CHAPTER 6 Cathodic Protection Systems

I. INTRODUCTION

Cathodic Protection Systems are used to protect metal infrastructure from corrosion. The system usually employs a sacrificial component that is eventually consumed in the process of protecting the metal infrastructure.[229] Cal Water utilizes cathodic protection systems on tanks in its system to protect them from corrosion and rust. As the sacrificial component of each system is consumed, they must be replaced to continue protecting the tank.[230]

II. SUMMARY OF RECOMMENDATIONS

The Commission should approve a cathodic protection budget of $147,728 in 2022, $54,242 in 2023 and $42,479 in 2024, to protect ratepayers from funding projects that are unlikely to be completed. Table 6-1 below shows each district's recommended budget for each year.

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[229] Webpage, "Cathodic Protection" from Wikipedia.org. Available at https://en.wikipedia.org/wiki/Cathodic_protection .

[230] A.21-07-002, file "Common Plant_2021_GRC_Justification Book", Section g. Cathodic Protection Systems and Components.

Table 6-1: Cal Advocates' Recommendations for Each District[231]

District Code	District	2022	2023	2024	Total
129	Antelope Valley	$ 5,243	$ 10,748	$ 5,509	$ 21,500
101	Bakersfield	$ 26,664	$ -	$ -	$ 26,664
152	Bayshore	$ -	$ -	$ 11,063	$ 11,063
102	Bear Gulch	$ -	$ -	$ -	$ -
104	Chico	$ -	$ -	$ -	$ -
149	Coast Springs	$ 5,479	$ -	$ -	$ 5,479
105	Dixon	$ -	$ -	$ -	$ -
128	Dominguez	$ 5,243	$ -	$ -	$ 5,243
106	East Los Angeles	$ 18,096	$ -	$ -	$ 18,096
108	Hermosa Redondo	$ -	$ 14,157	$ -	$ 14,157
134	Kern River Valley	$ 10,200	$ 5,081	$ -	$ 15,281
109	King City	$ -	$ -	$ -	$ -
110	Livermore	$ 5,519	$ -	$ -	$ 5,519
111	Los Altos	$ 10,530	$ -	$ -	$ 10,530
147	Lucerne	$ -	$ -	$ 5,757	$ 5,757
112	Marysville	$ -	$ -	$ -	$ -
113	Oroville	$ -	$ -	$ -	$ -
122	Palos Verdes	$ 41,706	$ -	$ -	$ 41,706
146	Redwood Valley	$ -	$ -	$ -	$ -
114	Salinas	$ 19,048	$ 18,599	$ 14,642	$ 52,289
117	Selma	$ -	$ -	$ -	$ -
119	Stockton	$ -	$ 5,657	$ -	$ 5,657
157	Travis	$ -	$ -	$ -	$ -
650	Unified Area	$ -	$ -	$ -	$ -
120	Visalia	$ -	$ -	$ -	$ -
123	Westlake	$ -	$ -	$ 5,509	$ 5,509
121	Willows	$ -	$ -	$ -	$ -
330	Customer Support Services	$ -	$ -	$ -	$ -
151	Rancho Dominguez	$ -	$ -	$ -	$ -
	Total	$ 147,728	$ 54,242	$ 42,479	

[231] For Cathodic Protection recommendations for PID#126039 see testimony of Mr. Zaved Sarkar on Tank Retrofits in Chapter 9 of this report.

III. ANALYSIS

The Commission should approve a budget of $147,728 in 2022, $54,242 in 2023 and $42,479 in 2024 to replace Cathodic protection system components.

Cal Water requests a cathodic protection budget of $478,885 in 2022, $138,761 in 2023, and $108,667 in 2024.[232] However, Cal Water has a long-term trend of not using the requested budgets to complete the proposed replacements. For example, in 2019, Cal Water only used 29% of the authorized 2019 budget for cathodic protection system components.[233] From 2015 to 2020, Cal Water has only used 43% of its authorized budget for cathodic protection replacements. This means that 57% of the cathodic protection replacement budget that ratepayers funded was not used for its intended purpose to benefit the ratepayer. Since 2015, a total of $1.3 million worth of cathodic protection measures that ratepayers funded have not been installed.[234]

To prevent ratepayers from funding budgets and not receiving the intended benefit, the Commission should authorize a budget of $147,728 in 2022, $54,242 in 2023 and $42,479 in 2024 to replace cathodic protection systems. This budget is 43% of Cal Water's requested budget and includes a contingency factor of 0%. See direct testimony of Mr. Suliman Ibrahim in Chapter 16 of this report for further discussion on contingency.

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[232] A.21-07-002, file "Common Plant_2021_GRC_Justification Book" Section g. Cathodic Protection Systems and Components, p. Common Plant PJ-64.

[233] Actual budget spent in 2019: $23,010, from Attachment 6-1: Cal Water Response to DR NMH-006, Attachment 1, tab "Historical Replacement Rate ($)". Authorized budget in 2019: $78,740 from D.20-12-007 settlement agreement, Attachment 1, Table 17. $23,010/$78,740 = 0.29 = 29%.

[234] Calculated from data provided in Attachment 6-1: Cal Water Response to DR NMH-006 Attachment 1; D.20-12-007, Attachment 1, Exhibit A - Settlement Agreement of A.18-07-001; D.16-12-042, Exhibit A - Settlement Agreement.

1 **IV. CONCLUSION**

2 The Commission should authorize a cathodic protection budget of $147,728 in
3 2022, $54,242 in 2023 and $42,479 in 2024 to protect ratepayers from paying for projects
4 that may not benefit them.

Attachment 6-1: Excerpt from Cal Water Response to DR NMH-006, Attachment 1 – Cathodic Protection System

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Niamh Murphy Utilities Engineer	Phone: Email:	(415) 703-2107 niamh.murphy@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **Aug 17, 2021**	Request Received from CPUC: **August 4, 2021**
Re: **NMH-006**	Requested Due Date: **August 17, 2021**
Subj: **Common – Cathodic Protection**	

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Response contains Confidential Information (Category #5).**

- This response refers to the following attachments included separately:
  - Attachment #1 – Cathodic Protection System
  - Attachment #1B – Confidential Cathodic Protection System (Category #5)

District	2015	2016	2017	2018	2019	2020
AV	N/A	N/A	N/A	N/A	N/A	N/A
BAR	N/A	N/A	N/A	N/A	N/A	N/A
BAY	$19,200.00	$87,000.00	$54,300.00	$74,990.00	N/A	N/A
BG	$ 5,100.00	$34,000.00	$48,597.00	$65,594.00	N/A	$12,260.00
BK	$25,200.00	$ 8,500.00	$51,000.00	$51,782.11	$10,860.00	$10,360.00
CH	N/A	N/A	N/A	$ 8,500.00	N/A	N/A
CSS	N/A	N/A	N/A	N/A	N/A	N/A
DIX	N/A	N/A	N/A	N/A	N/A	N/A
DOM	$ 4,600.00	N/A	N/A	N/A	N/A	N/A
ELA	$23,250.00	$36,150.00	$25,500.00	$ 8,500.00	N/A	N/A
HR	N/A	$ 8,500.00	$19,000.00	$15,904.00	N/A	N/A
KC	N/A	N/A	N/A	$ 6,408.00	N/A	N/A
KRV	N/A	N/A	N/A	N/A	N/A	N/A
LAS	$10,900.00	$49,100.00	$53,514.00	$34,000.00	N/A	N/A
LAR	N/A	N/A	N/A	N/A	N/A	N/A
LIV	N/A	$19,000.00	$16,275.41	$ 8,500.00	N/A	N/A
MRL	N/A	N/A	N/A	N/A	N/A	N/A
ORO	N/A	$ 9,500.00	N/A	N/A	N/A	N/A
PV	N/A	N/A	N/A	N/A	N/A	$22,960.00
RDV	N/A	$ 8,500.00	N/A	N/A	$12,150.00	N/A
SEL	N/A	N/A	N/A	N/A	N/A	N/A
SLN	N/A	$ 9,500.00	N/A	$12,702.00	N/A	N/A
STK	N/A	$ 8,500.00	N/A	$ 495.00	N/A	N/A
SVR	N/A	N/A	N/A	N/A	N/A	N/A
VIS	$ 5,450.00	N/A	N/A	N/A	N/A	N/A
WIL	N/A	N/A	N/A	N/A	N/A	N/A
WLK	N/A	N/A	$19,000.00	$ 6,980.00	N/A	N/A

District	2015	2016	2017	2018	2019	2020
AV	-	-	-	-	-	-
BAR	-	-	-	-	-	-
BAY	2	10	7	9	-	-
BG	1	4	6	8	-	1
BK	3	1	6	8	1	1
CH	-	-	-	1	-	-
CSS	-	-	-	-	-	-
DIX	-	-	-	-	-	-
DOM	1	-	-	-	-	-
ELA	2	4	3	1	-	-
HR	-	1	2	3	-	-
KC	-	-	-	1	-	-
KRV	-	-	-	-	-	-
LAS	1	7	7	4	-	-
LAR	-	-	-	-	-	-
LIV	-	2	3	1	-	-
MRL	-	-	-	-	-	-
ORO	-	1	-	-	-	-
PV	-	-	-	-	-	2
RDV	-	1	-	-	2	-
SEL	-	-	-	-	-	-
SLN	-	1	-	2	-	-
STK	-	1	-	1	-	-
SVR	-	-	-	-	-	-
VIS	1	-	-	-	-	-
WIL	-	-	-	-	-	-
WLK	-	-	2	1	-	-

CHAPTER 7 Control Valve Overhaul and Replacement

I. INTRODUCTION

Control valves are an important part of water systems that are used to help control the flow, pressure, and level of water in different portions of the system.[235] Cal Water states that it performs overhauls on each control valve every five years. A control valve overhaul allows worn internal parts of the valve to be replaced without removing the valve from the system, and without replacing parts of the valve that are still in good condition. Cal Water states that it uses a risk-based asset management program to determine and prioritize which control valves need to be replaced.[236]

II. SUMMARY OF RECOMMENDATIONS

The Commission should approve a control valve overhaul budget of $754,563 in 2022, $787,207 in 2023 and $806,632 in 2024. Table 7-1 below shows each district's recommended budget for each year.

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[235] Website page "Control Valve" on Wikipedia.org, available at: https://en.wikipedia.org/wiki/Control_valve

[236] A.21-07-002, file "Common Plant_2021_GRC_Justification Book", Section h. Control Valve Overhaul and Replacement, p. Common Plant PJ – 65.

Table 7-1: Cal Advocates' Recommended Overhaul Budget for Each District

District Code	District	2022	2023	2024	Total
129	Antelope Valley	$ -	$ -	$ -	$ -
101	Bakersfield	$ 34,444	$ 34,881	$ 36,067	$ 105,392
152	Bayshore	$ 104,611	$ 107,226	$ 109,907	$ 321,743
102	Bear Gulch	$ 70,041	$ 71,792	$ 73,587	$ 215,419
104	Chico	$ 13,940	$ 14,318	$ 15,212	$ 43,470
149	Coast Springs	$ -	$ -	$ -	$ -
105	Dixon	$ -	$ -	$ -	$ -
128	Dominguez	$ 41,002	$ 43,615	$ 45,968	$ 130,585
106	East Los Angeles	$ 12,613	$ 17,262	$ 16,490	$ 46,365
108	Hermosa Redondo	$ 30,466	$ 32,619	$ 34,328	$ 97,413
134	Kern River Valley	$ 30,742	$ 32,875	$ 34,607	$ 98,223
109	King City	$ -	$ -	$ -	$ -
110	Livermore	$ 9,494	$ 13,180	$ 11,035	$ 33,709
111	Los Altos	$ 43,607	$ 44,697	$ 45,814	$ 134,117
147	Lucerne	$ -	$ -	$ -	$ -
112	Marysville	$ -	$ -	$ -	$ -
113	Oroville	$ -	$ -	$ -	$ -
122	Palos Verdes	$ 295,379	$ 302,764	$ 310,333	$ 908,477
146	Redwood Valley	$ -	$ -	$ -	$ -
114	Salinas	$ 45,123	$ 48,300	$ 49,014	$ 142,437
117	Selma	$ -	$ -	$ -	$ -
119	Stockton	$ -	$ -	$ -	$ -
157	Travis	$ -	$ -	$ -	$ -
650	Unified Area	$ -	$ -	$ -	$ -
120	Visalia	$ -	$ -	$ -	$ -
123	Westlake	$ 23,102	$ 23,679	$ 24,271	$ 71,052
121	Willows	$ -	$ -	$ -	$ -
330	Customer Support Services	$ -	$ -	$ -	$ -
151	Rancho Dominguez	$ -	$ -	$ -	$ -
	Total	$ 754,563	$ 787,207	$ 806,632	

The Commission should approve a control valve replacement budget of $948,966 in 2022, $991,745 in 2023 and $662,661 in 2024. Table 7-2 below shows each district's recommended budget for each year.

Table 7-2: Cal Advocates' Recommended Replacement Budget for Each District

District Code	District	2022	2023	2024	Total
129	Antelope Valley	$ -	$ -	$ -	$ -
101	Bakersfield	$ 47,317	$ 54,909	$ 17,803	$ 120,029
152	Bayshore	$ 325,846	$ 339,804	$ -	$ 665,649
102	Bear Gulch	$ 52,865	$ 29,998	$ 32,226	$ 115,089
104	Chico	$ -	$ -	$ -	$ -
149	Coast Springs	$ -	$ -	$ -	$ -
105	Dixon	$ -	$ -	$ -	$ -
128	Dominguez	$ 68,238	$ 72,178	$ 100,906	$ 241,323
106	East Los Angeles	$ 61,933	$ 55,955	$ -	$ 117,888
108	Hermosa Redondo	$ 75,048	$ 76,557	$ 81,494	$ 233,098
134	Kern River Valley	$ 63,731	$ 45,720	$ 56,872	$ 166,323
109	King City	$ 21,266	$ 21,252	$ -	$ 42,518
110	Livermore	$ 46,176	$ 28,259	$ 37,368	$ 111,803
111	Los Altos	$ 132,639	$ 168,456	$ 173,680	$ 474,774
147	Lucerne	$ -	$ -	$ -	$ -
112	Marysville	$ -	$ -	$ -	$ -
113	Oroville	$ 17,508	$ 17,226	$ 17,325	$ 52,060
122	Palos Verdes	$ 36,400	$ 81,431	$ 133,738	$ 251,569
146	Redwood Valley	$ -	$ -	$ -	$ -
114	Salinas	$ -	$ -	$ 11,249	$ 11,249
117	Selma	$ -	$ -	$ -	$ -
119	Stockton	$ -	$ -	$ -	$ -
157	Travis	$ -	$ -	$ -	$ -
650	Unified Area	$ -	$ -	$ -	$ -
120	Visalia	$ -	$ -	$ -	$ -
123	Westlake	$ -	$ -	$ -	$ -
121	Willows	$ -	$ -	$ -	$ -
330	Customer Support Services	$ -	$ -	$ -	$ -
151	Rancho Dominguez	$ -	$ -	$ -	$ -
	Total	$ 948,966	$ 991,745	$ 662,661	

III. ANALYSIS

A. Control Valve Overhauls

The Commission should approve a control valve overhaul budget of $754,563 in 2022, $787,207 in 2023 and $806,632 in 2024.

Cal Water requests a budget of $3,728,683 to overhaul control valves from 2022 to 2024. However, from 2015 to 2020, Cal Water only used 70% of its authorized budget for control valve overhauls.[237] For every $1 of control valve overhauls that ratepayers have funded, only 70¢ of work has been completed. Since 2015, a total of $423,428 worth of control valve overhauls that ratepayers funded has not been installed.[238] In light of the overhaul history from 2015-2020, it is unrealistic to assume that Cal Water will be able to overhaul all the proposed control valves. Cal Water did not provide detailed information of the condition and necessity of each proposed control valve overhaul.[239] As a result, it is impossible to review the reasonableness of each valve's proposed overhaul. Instead, Cal Water's proposed budget should be reduced by 30% to more accurately estimate the budget that it will actually be able to use. A contingency factor of 0% was used for this budget. See Chapter 16 of this report for further discussion on contingency. This results in a control valve overhaul budget of $754,563 in 2022, $787,207 in 2023 and $806,632 in 2024.

The Commission should authorize a control valve overhaul budget of $754,563 in 2022, $787,207 in 2023 and $806,632 in 2024 to prevent ratepayers from funding projects that are unlikely to occur.

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[237] Calculated from Attachment 4-7: Cal Water response to DR NMH-016, Attachment #1; D.20-12-007, Attachment 1, Exhibit A - Settlement Agreement of A.18-07-001; D.16-12-042, Exhibit A - Settlement Agreement.

[238] Calculated from Attachment 4-7: Cal Water response to DR NMH-016, Attachment #1; D.20-12-007, Attachment 1, Exhibit A - Settlement Agreement of A.18-07-001; D.16-12-042, Exhibit A - Settlement Agreement.

[239] Attachment 7-1: Cal Water Response to DR NMH-005, Q.1.a. Cal Water does not use risk assessment matrix for control valve overhauls, and therefore could not provide a ranking of the control valve overhauls.

B. Control Valve Replacements

The Commission should authorize a budget of $948,966 in 2022, $991,745 in 2023 and $662,661 in 2024 for control valve replacements.

Cal Water requests a budget of $8,649,317 to replace control valves, many of which are in good condition. Cal Water provided the ranked risk of failure of each proposed valve.[240] Many of the valves did not rank above the lowest possible risk ranking, indicating that Cal Water believes these valves to be of lower importance for replacement.[241] Replacing all the control valves that Cal Water requests would result in the premature replacement of Cal Water's assets. This premature replacement exposes ratepayers to imprudent financial decisions and unnecessarily increases Cal Water's rates.

Additionally, Cal Water has historically only used 35% of its authorized budget to replace control valves.[242] From 2015 to 2020, Cal Water received approval for a total budget of $4.8 million to replace control valves. In that same time period, the utility only spent $1.7 million on control valve replacements. This means that Cal Water customers have funded $3.1 million worth of control valve replacements that were never completed. Ratepayers should be protected from fully funding projects that will not be completed and will not benefit them.

A contingency factor of 0% was used for this budget. See direct testimony of Mr. Suliman Ibrahim in Chapter 16 of this report for further discussion on contingency. Cal Water's proposed budget was reduced by 65% to reflect its historical control valve replacement rate. This results in a control valve overhaul budget of $948,966 in 2022, $991,745 in 2023 and $662,661 in 2024. This method protects ratepayers from paying for replacements that are unlikely to be performed by the utility.

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[240] Attachment 7-2: Cal Water Response to DR NMH-010 Attachment #2a, tab "Replacement". The risk assessment values range from 3 to 52.

[241] Attachment 7-1: Cal Water Response to DR NMH-005, Q.1.b and Q.1.c.

[242] Calculated from Attachment 4-7: Cal Water response to DR NMH-016, Attachment #1; D.20-12-007, Attachment 1, Exhibit A - Settlement Agreement of A.18-07-001; D.16-12-042, Exhibit A - Settlement Agreement.

IV. CONCLUSION

The Commission should approve a control valve overhaul budget of $754,563 in 2022, $787,207 in 2023 and $806,632 in 2024. The Commission should approve a control valve replacement budget of $948,966 in 2022, $991,745 in 2023 and $662,661 in 2024.

Attachment 7-1: Cal Water Response to DR NMH-005

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Niamh Murphy Utilities Engineer	Phone: Email:	(415) 703-2107 niamh.murphy@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **Aug 13, 2021**	Request Received from CPUC: **August 3, 2021**
Re: **NMH-005**	Requested Due Date: **August 13, 2021**
Subj: **Common Control Valve Overhaul and Replacements**	

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – Control Valve Overhaul and Replacement**

Data Requests and Responses

1. Refer to project justification book "Common Plant_2021_GRC_Justification Book", Section B.h – Control Valve Overhaul and Replacement.

   a. Provide a detailed risk ranking (as explained in Attachment A – Condition Assessment Matrix, page Common Plant PJ - 70) for each individual control valve overhaul or replacement requested in 2022, 2023, and 2024. (Use Excel file "DR NMH-005 Attachment 1" tabs "Overhaul Rating" and "Replacement Rating" to provide the detailed breakdown.)

   Response: While Cal Water does inspect all control valves annually, detailed risk ratings are only completed for control valve replacements. For years 2022, 2023, and 2024 the replacement ratings are presented in Attachment 1, tab "Replacement Rating".

   Unlike control valve replacements, Cal Water has a regular plan to overhaul all control valves at least once every five years, and annually performs visual and functional inspection on control valves to determine their general condition. Cal Water then performs overhauls as needed or based on schedule if the body and cover of a valve is still in good condition. This approach provides the most effective overhaul process, decreasing the probability of failure and ensuring a reliable water supply to customers. For this reason no risk ratings are available for control valves anticipated to be overhauled.

   For control valve replacements, Cal Water uses a rank based approach process described in the "Common Plant_2021_GRC_Justification Book", Section B.h – Control Valve Overhaul and Replacement. In addition, Cal Water prioritizes replacement of a valve if it meets any of the following requirements:

   1- Age of valve is over 40 years.
   2- Internal epoxy coating is deteriorated.
   3- Finding replacement parts is problematic.

   However, Cal Water doesn't perform condition assessments for two districts, Kern River Valley (KRV) and Palos Verdes (PV). Cal Water anticipates implementing its standard control valve rating in these district during the 2021 GRC period. KRV oversees its control valves from its locally operated system and Cal Water is working to incorporate this into Cal Water's CMMS standard process. Similarly, Cal Water is improving data gathering and management system for the control valves in Palos Verdes.

   b. Using Cal Water's Control Valve risk assessment matrix, what is the lowest possible ranking score?

Response: In theory, the lowest possible ranking score is 15.5. This score represents an asset in perfect or near perfect condition, in a very favorable environment, with a very low probability of failure (e.g., assuming 1 for each rating classification, applying the applicable weighting factor, with a criticality score of 1).

c. Using Cal Water's Control Valve risk assessment matrix, what is the highest possible ranking score?

Response: In theory, the highest possible ranking score is 620. This score represents an asset in very poor condition, in a very unfavorable environment, and with a very high probability of imminent failure (e.g. assuming 5 in all rating classifications, applying the applicable weighting factor, and having a criticality score of 8).

d. Provide a breakdown of the total number of control valves in each ranking across Cal Water's entire water system, from highest possible rank to lowest possible rank in Excel file "DR NMH-005 Attachment 1", tab "Total Ranking".

Response: Please see Attachment 1, tab "Total Ranking," for the total number of control valves ranked in each rating classification. The total number in each rank was determined based on the detailed analysis presented in Attachment 1, tab "Replacement Rating," and counting the number of valves with a rating in any classification equal to Column A of Attachment 1, tab "Total Ranking."

e. Provide the annual number of control valve replacements and overhauls performed for each district for the past 5 years in Excel file "DR NMH-005 Attachment 1". Please use tab "Historical Overhaul" for control valve overhauls and tab "Historical Replacement" for control valve replacements.

Response: Please see Attachment 1, tabs "Historical Overhaul" and "Historical Replacement." Please note the original Excel file provided by Cal Advocates requested data for six years (2015-2020) and the data is provided accordingly.

f. Refer to the subcategory of the Control Valve Risk Assessment Matrix concerning "Payback Period" under the category "Financial Efficiency". Page Common Plant PJ – 66 states "[I]f the old valve were to fail and cause leaks or main breaks, the cost can be in the millions of dollars. The cost of the new valve and installation would be paid back many times over by avoiding system failures."

   i. Describe the methodology CWS used to calculate the potential financial cost of a control valve failure event?

Response: Control valves have many characteristics which can impact the financial cost of their failures. While the "Payback Period" is a qualitative

assessment of these impacts, Cal Water considers the following valve characteristics to anticipate the potential financial cost of a control valve failure event:

1- Size: Generally failure of a large size valve causes more financial loss.

2- Pressure: Failure in sustaining defined pressure for downstream pipeline(s) and end users causes serious operational challenges and financial cost.

3- Location: The financial cost of failure in valves located in dense urban areas cause more financial cost due to higher number of impacted customers and facilities.

4- Monitoring System: Cal Water uses SCADA to monitor different infrastructure. If a valve with a SCADA connection fails, the operations team can respond promptly, reducing the financial cost of the failure. However, the failure of a remote valve causes more financial cost due to the delay in responding to the incident.

5- Environmental Concerns: If a valve failure causes a main break, and consequently the overflow of treated (or untreated) water to a natural habitat or sensitive river ecosystem, it can cause significantly more financial cost.

6- Severity of the Failure: Complete failure of operations cause more significant damage and associated financial cost.

7- Time required for Isolation: The more time needed for this effort, the more downstream infrastructure will be affected. In addition, potentially more water will be lost until the valve is isolated and repaired.

These financial impacts are accounted for in the classification rating for the "Payback Period," which compares the cost of a new valve and installation relative to the cost of the existing valve failing.

ii. Is the potential financial cost of a control valve failure event assumed to be the same for every control valve?

Response: No. There are many different factors that affect the cost incurred by a control valve failure as further discussed in the prior response above.

iii. If the estimated potential cost is not the same for every potential control valve failure, please describe in detail the factors that influence the estimated cost.

Response: Please see response to question 1f(i), above.

g. Is risk of failure to critical customers considered in the Control Valve Risk Assessment Matrix?

Response: Yes. Although Cal Water is committed to providing reliable water to all customers, Cal Water incorporates "Criticality" and "Emergency" as two important factors to modify the final scores of control valves.

h. If risk of failure to critical customers is considered in the Control Valve Risk Assessment Matrix, please describe how that risk is factored into the final risk score. Please describe in detail (numerically and in words), where applicable.

Response: Cal Water revises the ranking score of each control valve by incorporating "Criticality" and "Emergency" factors as follows:

- **A criticality score is assigned to each control valve based on different factors as described in response to question 1f(i). The criticality factor can be 1, 2, 3, and 4.**
- **An emergency score is assigned to each control valve based on need during an emergency operation. The emergency factor can be 1 or 2.**
- **Multiplying criticality and emergency factors create a new number, which Cal Water defines as "Criticality." Accordingly, this coefficient includes 1, 2, 3, 4, 6, and 8. The score of each control valve – calculated based on the risk assessment matrix – will be multiplied by this "Criticality" factor to reflect the importance of the associated valve according to the type of service it provides (emergency or non-emergency) and the importance of service (based on various factors as described in response to question 1f(i)).**

END RESPONSE

Attachment 7-2: Cal Water Response to DR NMH-010

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Niamh Murphy Utilities Engineer	Phone: Email:	(415) 703-2107 niamh.murphy@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date:	**October 21, 2021**	Request Received from CPUC:	**October 8, 2021**
Re:	**NMH-010 – Partial Response # 2**	Requested Due Date:	**October 18, 2021**
Subj:	**Pump and Motor 2**	Extension for Question # 2:	**October 21, 2021**

Comments:

- Partial response # 2 identified in blue font.
- Full response attached.
- Response provided by Engineering.
- Does not contain confidential information.
- The first response refers to the following attachments included separately for partial response #1 on October 18, 2021:
  - Attachment #1 – Pump and Motor Costs
  - Attachment #2 – Control Valve Overhaul List
  - Attachment #3 – Control Valve Overhaul Cost Estimates
- This response refers to the following attachments included separately:
  - Attachment #2a – Control Valve Replacement List
  - Attachment # 4 – Control Valve Replacement Cost Estimates

Data Requests and Responses

1. For each of the pump and motor replacements listed in DR NMH-010 Attachment 1, please provide the cost of each replacement in Column P.

   Response: Please see Attachment #1.

2. For each of the control valve replacements listed in DR NMH-010 Attachment 2, tab "Replacement", please provide the cost of each replacement in Column P.

   Response: Please see Attachment #2a, tab "Replacement" for the cost of each control valve replacement. Attachment #2a includes the cost of each replacement as an average cost per year for the number of valves proposed to be replaced in each district. However, as outlined in the Common Plant book, Cal Water intends to re-evaluate the list of control valve assets recommended for replacement each year as part of the 2021 GRC application to ensure they are still the most prudent and critical assets to be replacement at that time (Common Plant PJ – 72). For this reason an average cost of replacement is provided for each control valve presented at this time to be replaced as part of the 2021 GRC program. A detailed cost breakdown for each control valve replacement program is provided in Attachment #4.

3. For each control valve overhaul proposed in this GRC, use DR NMH-010 Attachment 2, tab "Overhaul" to provide the district, control valve ID, replacement year and cost of each proposed overhaul.

   Response: Cal Water does not assign specific control valves to be overhauled in advance. Cal Water completes overhauls as part of a programmatic approach so that all control valves are overhauled once every five years. Cal Water strives to perform visual and functional inspection on control valves annually to determine their general condition and from those assessments determines which valves can be overhauled. Please see Attachments #2 and #3 for the detailed cost estimates for the proposed control valve overhaul projects in the 2021 GRC.

AutoSave Off | A2107002 DR NMH-010 Attachment #2(partial response 1) - Protected View | Search (Alt+Q) | Murphy, Niamh

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1				Condition		Environmental Risk	Capacity	Functionality - LOS			Reliability	Financial Efficiency					
2	District	Control Valve ID	Replacement Year	Condition	age/RUL	Environmental Degradation Risk	Capacity	Code Compliance	Performance	Epoxy Coated Internals	Breakdown Frequency	Payback Period	Parts, equipment, obselescence	Technology Maturity	Total Score	Cost	
3	LIV	LIV-013-CV001	2022	3.0	4.5	3.0	3.0	0.0	0.0	1.5	0.0	0.0	1.5	4.5	21.0		
4	LIV	LIV-010-CV001	2025	5.0	4.5	3.0	3.0	0.0	0.0	1.5	0.0	0.0	1.5	4.5	21.0		
5	LIV	LIV-016-CV001	2024	5.0	7.5	3.0	3.0	0.0	0.0	7.5	0.0	0.0	1.5	4.5	32.0		
6	ORO	ORO-000-CV008	2025	5.0	6.0	4.0	3.0	0.0	4.5	7.5	4.0	0.0	1.5	4.5	38.0		
7	ORO	ORO-000-CV009	2024	3.0	6.0	4.0	3.0	0.0	4.5	7.5	4.0	0.0	1.5	4.5	38.0		
8	BK	BK-000-CV015	2022	4.0	0.0	4.0	3.0	0.0	4.5	4.5	0.0	0.0	7.5	7.5	35.0		
9	BK	BK-000-CV021	2022	4.0	0.0	3.0	3.0	0.0	4.5	4.5	0.0	0.0	7.5	7.5	34.0		
10	BK	BK-045-CV002	2025	1.0	0.0	2.0	3.0	0.0	4.5	4.5	0.0	0.0	1.5	1.5	18.0		
11	BK	BKNG-188-CV001	2023	3.0	0.0	1.0	1.0	0.0	1.5	1.5	0.0	0.0	1.5	1.5	11.0		
12	BK	BK-000-CV016	2025	5.0	0.0	2.0	2.0	0.0	4.5	4.5	0.0	0.0	1.5	1.5	19.0		
13	BK	BK-000-CV009	2024	1.0	0.0	2.0	3.0	0.0	4.5	4.5	0.0	0.0	1.5	1.5	18.0		
14	BK	BK-000-CV022	2024	1.0	0.0	2.0	3.0	0.0	4.5	4.5	0.0	0.0	1.5	1.5	18.0		
15	DOM	DOM-203-CV002	2022	3.0	0.0	3.0	3.0	0.0	4.5	4.5	0.0			4.5	22.5		
16	DOM	DOM-279-CV001	2022	4.0	0.0	3.0	3.0	0.0	4.5	4.5	0.0	0.0	4.5	4.5	28.0		
17	DOM	DOM-277-CV001	2023	3.0	0.0	3.0	3.0	0.0	4.5	4.5	0.0	0.0	4.5	4.5	27.0		
18	DOM	DOM-279-CV002	2025	3.0	0.0	3.0	3.0	0.0	4.5	4.5	0.0	0.0	4.5	4.5	27.0		
19	DOM	DOM-290-CV002	2024	3.0	0.0	3.0	3.0	0.0	4.5	4.5	0.0	0.0	4.5	4.5	27.0		
20	DOM	DOM-294-CV001	2024	3.0	0.0	3.0	3.0	0.0	4.5	4.5	0.0	0.0	4.5	4.5	27.0		
21	ELA	ELA-055-CV001	2022	4.0	7.5	2.0	5.0	5.0	6.0	7.5	0.0	0.0	7.5	7.5	52.0		
22	ELA	ELA-010-CV001	2022	2.0	1.5	2.0	2.0	3.0	3.0	1.5	2.0	0.0	1.5	1.5	20.0		
23	ELA	ELA-010-CV002	2022	2.0	1.5	2.0	2.0	3.0	3.0	1.5	2.0	0.0	1.5	1.5	20.0		
24	ELA	ELA-052-CV002	2022	4.0	7.5	2.0	5.0	5.0	6.0	7.5	0.0	0.0	4.5	6.0	47.5		
25	ELA	ELA-004-CV001	2023	3.0	1.5	2.0	2.0	3.0	3.0	1.5	2.0	0.0	1.5	1.5	21.0		
26	ELA	ELA-004-CV002	2025	3.0	1.5	2.0	2.0	3.0	3.0	1.5	2.0	0.0	1.5	1.5	21.0		
27	ELA	ELA-042-CV001	2023	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0		
28	ELA	ELA-052-CV001	2025	1.0	1.5	2.0	2.0	3.0	3.0	1.5	2.0	0.0	1.5	1.5	19.0		
29	HR	HR-009-CV001	2022	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0		
30	HR	HR-009-CV002	2022	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0		
31	HR	HR-009-CV008	2023	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0		
32	HR	HR-009-CV009	2025	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0		
33	HR	HR-027-CV002	2024	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0		
34	HR	HR-027-CV001	2024	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0		
35	KRV	ARD-000-STRUCT01	2022	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0		
36	KRV	ARD-000-STRUCT01	2022	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0		
37	KRV	ARD-000-STRUCT02	2022	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0		
38	KRV	ARD-000-STRUCT02	2022	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0		
39	KRV	LBOD-000-CV001	2023	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0		

Overhaul | Replacement

CHAPTER 8 Water Quality Analyzers

I. INTRODUCTION

Water quality analyzers are a critical part of a water systems' infrastructure. There are several different types of analyzers that each perform different tests. Some common analyzers measure pH, turbidity, and nitrate levels in the water. These analyzers are critical for maintaining water quality and ensure safe drinking water.

II. SUMMARY OF RECOMMENDATIONS

The Commission should approve a water quality analyzer budget of $216,196 in 2022, $251,007 in 2023 and $259,680 in 2024. Table 8-1 below shows each district's recommended budget for each year.

Table 8-1: Cal Advocates Recommendations for Each district

District Code	District	2022	2023	2024	Total
129	Antelope Valley	$ 32,953	$ -	$ -	$ 32,953
101	Bakersfield	$ 11,099	$ 4,468	$ 6,103	$ 21,670
152	Bayshore	$ -	$ -	$ -	$ -
102	Bear Gulch	$ -	$ -	$ 80,303	$ 80,303
104	Chico	$ -	$ 55,766	$ 20,635	$ 76,401
149	Coast Springs	$ -	$ -	$ -	$ -
105	Dixon	$ -	$ -	$ -	$ -
128	Dominguez	$ 6,174	$ 25,453	$ 26,089	$ 57,716
106	East Los Angeles	$ 19,574	$ 19,125	$ 13,781	$ 52,480
108	Hermosa Redondo	$ -	$ -	$ -	$ -
134	Kern River Valley	$ 19,883	$ 30,538	$ 10,434	$ 60,855
109	King City	$ -	$ -	$ -	$ -
110	Livermore	$ 27,203	$ 65,832	$ -	$ 93,035
111	Los Altos	$ 22,647	$ 5,720	$ 60,019	$ 88,386
147	Lucerne	$ -	$ -	$ -	$ -
112	Marysville	$ 15,681	$ -	$ -	$ 15,681
113	Oroville	$ -	$ -	$ 6,828	$ 6,828
122	Palos Verdes	$ -	$ -	$ -	$ -
146	Redwood Valley	$ 23,958	$ 16,222	$ 25,171	$ 65,352
114	Salinas	$ -	$ -	$ -	$ -
117	Selma	$ -	$ -	$ -	$ -
119	Stockton	$ 27,203	$ 27,883	$ 10,317	$ 65,404
157	Travis	$ -	$ -	$ -	$ -
650	Unified Area	$ -	$ -	$ -	$ -
120	Visalia	$ -	$ -	$ -	$ -
123	Westlake	$ -	$ -	$ -	$ -
121	Willows	$ 9,820	$ -	$ -	$ 9,820
330	Customer Support Services	$ -	$ -	$ -	$ -
151	Rancho Dominguez	$ -	$ -	$ -	$ -
		$ 216,196	$ 251,007	$ 259,680	

III. ANALYSIS

The Commission should approve a water quality analyzer budget of $216,196 in 2022, $251,007 in 2023 and $259,680 in 2024.

Contingency has been set to 0% for all water quality analyzer replacements and removed from Cal Water's proposed water quality analyzer replacement budget. See the

direct testimony of Mr. Suliman Ibrahim in Chapter 16 of this report for further discussion on contingency.

IV. CONCLUSION

The Commission should approve a water quality analyzer budget of $216,196 in 2022, $251,007 in 2023 and $259,680 in 2024 to replace water quality analyzers.

CHAPTER 9 Tank Retrofits

I. INTRODUCTION

This chapter addresses Cal Water's proposed tank retrofits program and budget for 2022-2024. Cal Water defines tanks as a vessel that is atmospherically vented through a roof, has a capacity of 5,000 gallons or greater and contains potable or non-potable water. The function of tanks varies greatly. They may provide storage, function as a forebay, maintain the hydraulic grade line of a pressure zone, or a variety of other functions. [243]

II. SUMMARY OF RECOMMENDATIONS

The Commission should approve a tank retrofit budget of $3,136,854 for 2022, $1,0454,788 for 2023 and $ 1,107,902 for 2024. Table 9-A below shows each district's recommended budget for each year.

[243] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-75.

Table 9-A: Public Advocates Office – Tank Retrofits (2022-2024)[244,245]

1 **<<BEGIN CONFIDENTIAL>>**

[redacted]

2

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[244] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-75-76 & Cal Water Response to DR ZS1-017, Attachment #1 - CONFIDENTIAL Tank Retrofit Data.

[245] **<<BEGIN CONFIDENTIAL>>** [redacted] **<<END CONFIDENTIAL>>**

[redacted]

[redacted]

[redacted]

1

[redacted]

. <<END CONFIDENTIAL>>

III. ANALYSIS

Cal Water requests $3,462,136 in 2022, $1,169,543 in 2023, and $1,237,884 in 2024 to retrofit 125 tanks.[246]

Cal Water's total budget for its Tank Retrofit program has been artificially increased by adding unnecessary contingency fees. Cal Advocates recommends removing the 10% Contingency from Tank retrofit projects in all districts. See Chapter 16 of this report, direct testimony of Mr. Suliman Ibrahim, on Contingency for further discussion.

IV. CONCLUSION

The Commission should approve a tank retrofit budget of $3,136,854 for 2022, $1,0454,788 for 2023 and $ 1,107,902 for 2024.

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[246] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-75-76.

CHAPTER 10 SB 1398 Service Line Replacements

I. INTRODUCTION

Service lines are the section of pipe that run from the water main up to the water meter of individual customers and residences.[247] Service lines and the connecting pipe between a water main and a service line (a "gooseneck") of older pipes can sometimes be made of lead. Lead pipes pose a public health risk, as they can increase lead exposure through drinking water. Lead pipes should be removed from service, as this lead exposure is dangerous to human health, especially children.[248]

California Senate Bill 1398 required that by July 1, 2018, public water utilities should create an inventory of known lead service lines in the utility's system. By July 1, 2020, public water utilities were required to provide the pipe material inventory or provide a timeline to replace pipes whose material was unknown to the State Water Resources Control Board.[249] The Division of Drinking Water (DDW) is responsible for reviewing and approving the service line inventory and replacement timeline of each utility.[250]

II. SUMMARY OF RECOMMENDATIONS

The Commission should approve a lead service line budget of $912,906 in 2022, $974,076 in 2023 and $585,670 in 2024 for the investigation and replacement of lead service lines. Table 10-1 below shows each district's recommended budget for each year.

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[247] California Code of Regulations, Title 22, Section 64551.60. Referenced at: https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/lead_service_line_inventory_pws.html.

[248] Webpage "Lead in Drinking Water" from the Centers for Disease Control and Prevention, available at: https://www.cdc.gov/nceh/lead/prevention/sources/water.htm.

[249] Senate Bill No. 1398, Chapter 731, Section 116885(a) and (b). Available at https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1398.

[250] Attachment 10-1: "Lead Service Line FAQ 2020" by the State Water Resources Control Board, pg 4.

Table 10-1: Cal Advocates' Recommendations for Each District

District Code	District	2022	2023	2024	Total
129	Antelope Valley	$ -	$ -	$ -	$ -
101	Bakersfield	$ -	$ -	$ -	$ -
152	Bayshore	$ 106,181	$ 108,835	$ 111,556	$ 326,572
102	Bear Gulch	$ -	$ -	$ -	$ -
104	Chico	$ 42,223	$ -	$ -	$ 42,223
149	Coast Springs	$ -	$ -	$ -	$ -
105	Dixon	$ -	$ -	$ -	$ -
128	Dominguez	$ -	$ -	$ -	$ -
106	East Los Angeles	$ -	$ -	$ -	$ -
108	Hermosa Redondo	$ -	$ -	$ -	$ -
134	Kern River Valley	$ -	$ -	$ -	$ -
109	King City	$ 345,088	$ 424,458	$ 474,114	$ 1,243,659
110	Livermore	$ 69,018	$ 81,626	$ -	$ 150,644
111	Los Altos	$ -	$ -	$ -	$ -
147	Lucerne	$ -	$ -	$ -	$ -
112	Marysville	$ 111,490	$ 114,277	$ -	$ 225,767
113	Oroville	$ -	$ -	$ -	$ -
122	Palos Verdes	$ -	$ -	$ -	$ -
146	Redwood Valley	$ -	$ -	$ -	$ -
114	Salinas	$ -	$ -	$ -	$ -
117	Selma	$ -	$ -	$ -	$ -
119	Stockton	$ 238,907	$ 244,879	$ -	$ 483,786
157	Travis	$ -	$ -	$ -	$ -
650	Unified Area	$ -	$ -	$ -	$ -
120	Visalia	$ -	$ -	$ -	$ -
123	Westlake	$ -	$ -	$ -	$ -
121	Willows	$ -	$ -	$ -	$ -
330	Customer Support Services	$ -	$ -	$ -	$ -
151	Rancho Dominguez	$ -	$ -	$ -	$ -
		$ 912,906	$ 974,076	$ 585,670	

III. ANALYSIS

The Commission should approve a lead service line budget of $912,906 in 2022, $974,076 in 2023 and $585,670 in 2024 for the investigation and replacement of lead service lines. This budget removes contingency and adjusts an incorrectly calculated cost estimate.

King City's 2022 capital project cost estimate deviated significantly from the cost estimate methodology established in Cal Water's application.[251] King City's 2022 capital project cost methodology should be changed to be consistent with the established cost estimate methodology. This correction reduces King City's 2022 cost estimate budget by $386,846 and prevents ratepayers from paying for an incorrectly calculated budget. A contingency factor of 0% was used to calculate this budget. See direct testimony of Mr. Suliman Ibrahim in Chapter 16 for further discussion on contingency.

IV. CONCLUSION

The Commission should approve a lead service line budget of $912,906 in 2022, $974,076 in 2023 and $585,670 in 2024 for the investigation and replacement of lead service lines.

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[251] A.21-07-002, file "Common Plant_2021_GRC_Justification Book", Section I. SB 1398 Service Replacement Program, p. Common Plant PJ – 83 establishes that the unit cost estimate is composed of a $2,335.30 contractor cost, a $1,261 paving cost, and 12 hours of labor. Attachment 10-1: Cal Water Response to DR NMH-014, Attachment #5, file "125004_Cost Estimate" shows King City's 2022 service line replacements as composed of labor costs, paving costs and an unexplained $8,000 per service replacement cost. This resulted in a King City 2022 estimated cost that is $386,846 higher than the established cost estimate methodology for the same amount of service replacements.

Attachment 10-1: Cal Water Response to DR NMH-014, Attachment 5, Excel file "125004_Cost Estimate"

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Niamh Murphy Utilities Engineer	Phone: Email:	(415) 703-2107 niamh.murphy@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **November 30, 2021**	Request Received from CPUC: **November 19, 2021**
Re: **NMH-014**	Requested Due Date: **November 30, 2021**
Subj: **Complete Cost Estimates**	

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**

- Attachment #1 – Specific Cost Estimates
- Attachment #2 – Pump and Motor Cost Estimates
- Attachment #3 – Sample Station Cost Estimates
- Attachment #4 – Cathodic Protection Cost Estimates
- Attachment #5 – Lead Service Lines Cost Estimates

Data Requests and Responses

For all following questions, please provide each project's complete cost estimate in separate excel spreadsheets where possible.

1. For each of the proposed projects listed in Excel file "NMH-014 Attachment 1", please provide the complete cost estimate breakdowns.
   Response: Please see Attachment #1 which includes specific cost estimates requested.

2. Please provide the complete cost estimate breakdowns for all proposed pump and motor replacement projects in all districts.
   Response: Please see Attachment #2. In Table 4 of the "Common Plant_2021_GRC_Justification Book", Section B.e – Pump & Motor Replacements, there is a typographical error in *Table 4. Pump & Motor Replacement Program Breakdown by District* on page COMMON PLANT PJ-49, erroneously reporting $572,981 for Bayshore District when the actual value is $603,981. The correct value of $603,981 for the pump and motor program in Bayshore District is consistent with *Table 1 - Capital Budget Summary – Bayshore District* presented in the district specific book on pages BAY PJ-v to BAY PJ-8.

3. Please provide the complete cost estimate breakdowns for all proposed water quality sample site installation and replacement projects in all districts.
   Response: Please see Attachment #3. In Table 1 of the "Common Plant_2021_GRC_Justification Book", Section B.n – Water Quality Sample Sites, the table erroneously listed the total cost for Livermore instead of the Direct Cost. Thus, the direct cost is actually $7,888, not $9,742 as currently presented. The correct value of $7,888 is presented in *Table 1. Capital Budget Summary – Livermore District* in the district specific book on page LIV PJ-iv.

4. Please provide the complete cost estimate breakdowns for all proposed cathodic protection system projects in all districts.
   Response: Please see Attachment #4. In Table 1 of the "Common Plant_2021_GRC_Justification Book", Section B.g – Cathodic Protection Systems and Components, the table erroneously listed the entire tank retrofit project cost in this table for Travis district schedule in 2022 for a direct cost of $100,976. In actuality, the cathodic protection is a very small part of this tank retrofit project and cathodic protection component cost is only $9,107.55 (see PID 126039 Cost Estimate on page TD PJ-30 of the Travis District

Project Justification Book for additional details). This response was also provided in Cal Water's response to NMH-006 (Cathodic Protection).

5. Please provide the complete cost estimate breakdowns for all proposed SB 1398 service line replacement projects in all districts.
   Response: Please see Attachment #5. In Table 1 of the "Common Plant_2021_GRC_Justification Book", Section B.I – SB 1398 Service Replacement Program, the table erroneously presented the District Direct Cost for Chico and King City. The proposed direct cost for Chico and King City was $46,446 and $1,793,555 respectively as presented in each of their respective district specific project justification books (see pages CH PJ-iv & CH PJ-5 for Chico and pages KC PJ-iv & KC PJ-v for King City). In addition, cost estimates for PIDs 125005, 125006, 125017, and 125018 had line items incorrectly labeled as "BLANK". The line item descriptions have since been updated to reflect the correct item in as part of this response.

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A1 Capital Project Cost Estimate

Capital Project Cost Estimate

Project No.:	120304
Description	KC 2022 SB 1368 Service Replacement
District / Department:	King City
Project Start Date:	01/15/2022
Project Completion Date:	12/18/2022
Prepared By:	rchamgchaoui
Date Initiated:	10/08/2020
Base Year:	2020
Sub-Total:	$788,331
Direct Cost:	$805,127

Cost Table:

Item	Description [units]	Qty	Unit Cost	Total	Cost Basis
ENGINEERING LABOR	CW-Civil Eng LABOR [HR]	260	$121.41	$31,566.60	Labor SKU
OPERATIONS LABOR	CW-Oper Eng LABOR [HR]	260	$121.41	$31,566.60	Labor SKU
PAVING (100 SQ FT)	[EA]	50	$1,261.00	$61,900.00	Engineer's Estimate
SERVICE REPLACEMENTS ($8,000/SERVICE)	[EA]	65	$8,000.00	$520,000.00	Engineer's Estimate
WO LABOR	CW-WO Proj MGR LABOR [HR]	260	$121.41	$31,566.60	Labor SKU
CONTINGENCY 10%	[EA]	1	$69,696.46	$69,696.46	Engineer's Estimate

Sub total = $766,331.26

Direct Cost = $805,128.80

Notes:

1. *Sub-Total is defined as the summation of all project estimated materials, labor, and markups costs*
2. *Direct Cost is the escalated Sub-Total from the base year of 2020 to the project completion year assuming a 2.5% inflation rate*
3. *See Common Plant Block for additional details on cost estimating methodology and justification*

Attachment 10-2: Lead Service Line FAQ 2020

Water Boards

Fact Sheet

Frequently Asked Questions:
Lead Service Lines and the Unknown Materials

**DISCLAIMER: This document is intended to provide answers to questions that may arise regarding lead service lines in public water systems. Nothing in this document supersedes any statutory or regulatory requirements or permit provisions for public water systems.*

What are the new general requirements in 116885?

Section 116885 of the California Health and Safety Code, Lead Service Lines in Public Water Systems, added to the Health and Safety Code by Senate Bill 1398 (2016) and amended by Senate Bill 427 (2017), requires all community water systems (CWSs) to compile an inventory of known partial or total lead user service lines in use in its distribution system by July 1, 2018. The inventory must include all user service lines that are active and those that are reasonably expected to become active in the future. Also, Section 116885 requires that a CWS identify areas that may have lead user service lines in use, and/or any areas within the CWS distribution system that the CWS cannot identify the material that is being used for the service line. CWSs that identified known lead user service lines and/or user service lines made of unknown materials are required to propose a schedule to replace all the known lead user service lines and user service lines constructed of unknown material by July 1, 2020. A portion of Section 116885 is below:

116885. (a) By July 1, 2018, a community water system shall compile an inventory of known lead user service lines in use in its distribution system and identify areas that may have lead user service lines in use in its distribution system.

(b) (1) By July 1, 2020, a community water system that has identified known lead user service lines in use in its distribution system as provided in subdivision (a) shall provide a timeline for replacement of known lead user service lines in use in its distribution system to the state board.

(2) By July 1, 2020, a community water system that has identified areas that may have lead user service lines in use in its distributions system as provided for in subdivision (a) shall do both of the following:

(A) Provide to the state board its determination as to whether there are any lead user service lines in use in those areas of its distribution system and provide a timeline to the state board for replacement of those lead user service lines that the community water system has identified.

(B) Provide its findings as to whether there are any areas for which it cannot determine the content of the user service lines and a timeline to the state board for replacement of the user service lines whose content cannot be determined.

What is a user service line?

Section 116885 adopts the definition of user service line found in Section 64551.60 of Title 22 of the California Code of Regulations which is "the pipe, tubing, and fittings connecting a water main to an individual water meter or service connection." Thus, the requirements of Section 116885 do not apply to water lines on the customer's side of the meter or the meter itself, but would include, for example, lead goose necks or pigtails associated with the user service line on the water system side of the meter. The State Water Resources Control Board's Division of Drinking Water (DDW) encourages water systems to notify their customers of the lead user service line.

However, if the water system determines that a lead service line is also on the customer side of the meter, DDW highly recommends that the water system notify the customer of the lead service line and if possible, assist in the replacement. If there is lead or galvanized pipe on the customer's side, and if the water system only replaces the lead user service line on the water system side of the meter, this is called a partial replacement. There can be an increase in the levels of lead in drinking water to the customer tap after partial replacement, and this increase can persist for weeks or months. DDW strongly discourages partial lead service line replacements. Also, if a customer is replacing their portion of a lead service line, the water system needs to prioritize the water system portion of the lead service line for replacement at the same time.

If the CWS inventory contains a material labeled "non-lead" user service lines, is this consistent with the legislation?

Section 116885(b)(2)(B) above states "...a timeline to the state board for replacement of the user service lines whose content cannot be determined." Non-lead does not provide the state board with the necessary information to say the content of the user service line has been determined. Labeling user service lines with non-lead is not acceptable.

If the CWS inventory contains a material labeled "copper or plastic" user service lines, is this consistent with the legislation?

As stated above, the content of the user service lines needs to be determined. If a water system has determined based on review of records and field reviews, that in one area of their system, one of two types of lines are present, but the water system is not sure of the exact numbers of each, labeling user service lines with two options is acceptable.

If the CWS inventory is complete and all User Service Line materials are identified, what should the CWS do?

1. The CWS needs to complete the Lead User Service Line Inventory Section (LSLR) of the electronic Annual Report (eAR) for 2019; *and*
2. If the CWS lists no lead user service lines or fixtures, no further action is necessary.
3. If the CWS identifies lead user service lines or fixtures, the CWS will need to provide a timeline to the Division of Drinking Water (DDW) by July 1, 2020 for the replacement of all lead material. Within the timeline, DDW asks the water system to prioritize replacement of any lead user service lines connected to a school or licensed child care facility.

If the CWS inventory is complete and the CWS has identified areas of user lines with unknown materials, what should the CWS do?

1. The CWS needs to complete the LSLR Section of the eAR for 2019.
2. The CWS will need to provide a timeline to the DDW by July 1, 2020 for the replacement of all unknown materials.

Where is the timeline submitted?

The timeline will be submitted using the eAR for 2019. An upload tab is available in the LSLR Section. The timeline which will include a spreadsheet and a letter or report will need to be uploaded by July 1, 2020 for review by DDW.

What needs to be included in the timeline?

The CWS will need to submit a timeline that includes a spreadsheet listing the address of all locations where user service lines will be replaced with the replacement date (month and year) and the type of line that is to be replaced. The type will be one of the following:

- lead user service line,
- lead fittings on user service lines not containing lead (pigtail or gooseneck),
- unknown material user service lines or fittings.

A blank spreadsheet template is located on our webpage, located at the below link. Please do not alter the columns of the spreadsheet. The timeline spreadsheet will be uploaded to the DDW Lead User Service Line webpage.
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/lead_service_line_inventory_pws.html

What needs to be included in the report or letter?

Along with the spreadsheet timeline, a letter or short report will need to be uploaded to the LSLR Section of the eAR for 2019. The letter or report will need to be signed by an authorized representative of the water system. The letter or report will need to contain the justification for the dates for replacement. The justification may include:

- The number of user service lines to be replaced per year,
- Prioritized replacements such as service lines located at schools or licensed child care centers (not including home day cares) identified on the spreadsheet;
- The annual cost estimate for user line replacement with percentage of total annual budget this amount represents;
- Anticipated rate adjustments necessary to fund user service line replacements, including details on the rate increase and effective date; and/or
- Relevant information regarding application(s) for funding from the State Board or another entity to replace user service lines.
- The State Board expects the identified user service lines to be replaced as soon as possible and depending on the number of lines to be replaced, should not take longer than 10 years.
- For proposed timelines exceeding 10 years, the State Water Board will also consider, among other factors listed above, the utility's demonstrated ability to minimize lead exposure, including customer-side lead sampling data (residential and school fixtures) and the utility's corrosion control program.

An equal number of user service lines should be replaced each year starting as soon as possible. Funding for replacements are available from the State Water Board Division of Financial Assistance.

What is the timeline review process?

DDW has 30 days to review the timeline, and will either

(a) approve the proposed timeline or
(b) deny the proposed timeline and propose a revised timeline to the CWS.

If the revised timeline is not accepted by the CWS, the CWS and DDW shall develop a compromised timeline within 30 days.

What occurs if the approved timeline cannot be followed by the CWS?

If the approved timeline for replacement is not achieved, DDW may take an enforcement action, such as issuing a compliance order or a citation, which may include a fine. .

If the CWS encounters a situation where the CWS cannot meet the approved timeline schedule, the CWS may request DDW extend the timeline, providing reasons that it needs the extension for the timeline.

(These FAQs were last updated on January 10, 2020)

CHAPTER 11 Pressure Vessels

I. INTRODUCTION

This chapter addresses Cal Water's proposed pressure vessel (aka. hydro-pneumatic tank) replacement program and budget for 2022-2024. Cal Water defines pressure vessels as a vessel that maintains a pressure greater than atmosphere, has a capacity of 500 gallons or greater, and contains potable or non-potable water. Pressure vessels function to regulate system pressure. [252]

II. SUMMARY OF RECOMMENDATIONS

The Commission should approve $817,874 in 2022, $526,573 in 2023 and $275,133 in 2024, to protect ratepayers from funding projects that are not required. Table 11-A below shows each district's recommended budget for each year.

Table 11-A: Public Advocates Office - Pressure Vessel Replacement (2022-2024)[253]

District	Project ID	Location	Year	Direct Cost
BK	00123936	BK 116-PT1 Pressure Vessel Replace	2023	$283,555
CH	00123683	CH 065-PT1 - Pressure Vessel Rplcmn	2022	$254,943
SLN	00123706	SLN 040-PT1 - Pressure Vessel Rplcm	2023	$263,019
SLN	00124774	SLN 060-PT1 - Pressure Vessel Rplcm	2024	$275,133
VIS	00123797	VIS 077-PT1 - Pressure Vessel Rplcm	2022	$262,699
VIS	00124689	VIS 201-PT1 - Pressure Vessel Rplcm	2022	$300,232

[252] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-84.

[253] Direct Cost has been calculated by removing 10% Contingency and 5% Construction Management and Special Inspection Cost. See direct testimony of Mr. Suliman Ibrahim in Chapter 16 for further discussion.

III. ANALYSIS

Cal Water requests $2,251,606 in 2022, $1,474,872 in 2023, and $714,896 in 2024 to replace 14 pressure vessels and rehabilitate 5 pressure vessels.[254] The Table 11-B below shows Cal Water's pressure vessel replacement projects and budget by district.

Table 11-B: Cal Water's proposed pressure vessel projects (2022-2024)[255]

District	Project ID	Location	Year	Direct Cost
AV	00123929	FMT 001-PT1 - Pressure Vessel Rplcm	2022	$294,487
BK	00123936	BK 116-PT1 Pressure Vessel Replace	2023	$283,555
CH	00123541	CH 064-PT1 - Pressure Vessel Rehab	2023	$82,957
CH	00123683	CH 065-PT1 - Pressure Vessel Rplcmn	2022	$254,943
CH	00123704	CH 066-PT1 - Pressure Vessel Rehab	2024	$85,031
LAS	00123528	LAS 118-PT1 - Pressure Vessel Rplcm	2022	$323,033
LIV	00123695	LIV028-PT2 Pressure Vessel Rplcmt	2023	$306,497
PV	00124959	PV 015-PT1 - Saddle Retrofit	2024	$12,101
SLN	00123681	SLN 036-PT1 - Pressure Vessel Rehab	2022	$81,788
SLN	00123699	SLN 072-PT1 - Pressure Vessel Rehab	2023	$83,833
SLN	00123706	SLN 040-PT1 - Pressure Vessel Rplcm	2023	$263,019
SLN	00123707	SLN 303-PT1 - Pressure Vessel Rplcm	2024	$314,932
SLN	00123708	SLN 304-PT1 - Pressure Vessel Rplcm	2023	$290,796
SLN	00124771	SLN 057-PT1 - Pressure Vessel Rplcm	2022	$287,318
SLN	00124774	SLN 060-PT1 - Pressure Vessel Rplcm	2024	$275,133
SLN	00124775	SLN 033-PT1 Pressure Vessel Rplcmnt	2022	$326,867
VIS	00123703	VIS 052-PT1 - Pressure Vessel Rehab	2023	$83,833
VIS	00123797	VIS 077-PT1 - Pressure Vessel Rplcm	2022	$262,699
VIS	00124689	VIS 201-PT1 - Pressure Vessel Rplcm	2022	$300,232

Cal Water states that it inspects each pressure vessel in its system every five years or less.[256] The inspection provides an evaluation of the vessel's structural integrity, condition of appurtenances, and effectiveness of coatings and linings.[257]

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[254] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-88-89.

[255] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-88-89 & Cal Water Response to DR ZS1-018, Attachment #1 - Pressure Vessel Data.

[256] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-85.

[257] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-85.

Using the evaluation, Cal Water assigns a likelihood of failure (LOF) score and consequence of failure (COF) score to each pressure vessel, both ranging from one to five. Cal Water's LOF score is based on the calculated remaining life of the pressure vessel. The COF score is based on Cal Water's assigned station critical emergency score. The product of these scores provides an overall risk score for the pressure vessel.[258] The maximum risk score is 25. Cal Water's target is to maintain a risk score below 20.[259] Cal Water further explained that "the COF score for all pressure vessels was assumed to be a 5, which effectively eliminates having a unique of consequence of failure scores."[260]

The Table 11-C below summarizes the calculated remaining life, LOF, COF, and risk score (LOF × COF) for pressure vessels Cal Water proposes to replace and rehabilitate.[261]

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[258] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-87.

[259] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-87.

[260] Cal Water Response to DR ZS1-018, Q. 1.a.

[261] Cal Water Response to DR ZS1-018, Q. 1, Attachment #1 - Pressure Vessel Data.

Table 11-C: Cal Water's remaining life calculation for existing pressure vessels.

District	Project ID	Station & Tank No.	Year	Remaining Life (Years)	LOF	COF	Risk Score
AV	00123929	FMT 001-PT1	2022	167.3435	1	5	5
BK	00123936	BK 116-PT1	2023	-58	5	5	25
CH	00123541	CH 064-PT1	2023	285.78	1	5	5
CH	00123683	CH 065-PT1	2022	0.29	5	5	25
CH	00123704	CH 066-PT1	2024	141.25	1	5	5
LAS	00123528	LAS 118-PT1	2022	36.46	2	5	10
LIV	00123695	LIV028-PT2	2023	19.21	3	5	15
PV	00124959	PV 015-PT1	2024	46	1	5	5
SLN	00123681	SLN 036-PT1	2022	27.93	2	5	10
SLN	00123699	SLN 072-PT1	2023	44.14	1	5	5
SLN	00123706	SLN 040-PT1	2023	4.25	5	5	25
SLN	00123707	SLN 303-PT1	2024	12.93	3	5	15
SLN	00123708	SLN 304-PT1	2023	16.25	3	5	15
SLN	00124771	SLN 057-PT1	2022	24.46	3	5	15
SLN	00124774	SLN 060-PT1	2024	8.89	4	5	20
SLN	00124775	SLN 033-PT1	2022	13.36	3	5	15
VIS	00123703	VIS 052-PT1	2023	76.39	1	5	5
VIS	00123797	VIS 077-PT1	2022	3.69	5	5	25
VIS	00124689	VIS 201-PT1	2022	7.61	4	5	20

As shown above, of the 19 pressure vessels, only six have a score 20 or more. Cal Advocates recommends replacing all pressure vessels with calculated remaining life of 10 years or less. This allows Cal Water to replace vessels with LOF scores of 4 and 5, according to Cal Water's own guideline, and provides ample cushion for unexpected deterioration and general errors in the inspection process. The Table 11-D below summarizes the calculated remaining life of the 19 pressure vessels. Thus, only those six pressure vessels need to be replaced based on Cal Water's own risk target of 20 or lower.

Table 11-D: Pressure vessels by calculated remaining life.

CWS Calculated Remaining Life	No. of Pressure Vessels
10 years of less	6
More than 10 years	13
Total	19

IV. CONCLUSION

Replacing pressure vessels with risk score of less than 20 is not consistent with Cal Water's own risk target and unreasonably increases the cost of service. The Commission should authorize a budget that allows Cal Water to replace pressure vessels with a risk score of 20 or more or a remaining life of 10 years or less. Cal Advocates recommends a total budget of $1,619,580[262] for six pressure vessel replacements in 2022-2024.

[262] $817,874 in 2022, $526,573 in 2023 and $275,133 in 2024.

CHAPTER 12 Water Quality Sample Sites

I. INTRODUCTION

Cal Water maintains dedicated sampling sites to sample water quality. These sample site installations include a secure station that is used to access the water in different pressure zones.[263] Cal Water proposes to replace existing water quality sample sites and install new sample sites at new developments.[264]

II. SUMMARY OF RECOMMENDATIONS

The Commission should approve a water quality sample site budget of $395,265 in 2022, $129,177 in 2023 and $48,148 in 2024. Table 12-1 below shows each district's recommended budget for each year.

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[263] A.21-07-002, "Common Plant_2021_GRC_Justification Book.pdf" Section n. Water Quality Sample Sites, p. Common Plant PJ-90.

[264] Attachment 12-1: Cal Water Response to DR NMH-008 Attachment 1, Column H.

Table 12-1: Cal Advocates Recommendations for Each District

District Code	District	2022	2023	2024	Total
129	Antelope Valley	$ -	$ -	$ -	$ -
101	Bakersfield	$ 5,183	$ -	$ -	$ 5,183
152	Bayshore	$ 166,126	$ 29,358	$ -	$ 195,484
102	Bear Gulch	$ 57,285	$ 52,845	$ -	$ 110,130
104	Chico	$ 5,456	$ -	$ -	$ 5,456
149	Coast Springs	$ -	$ -	$ -	$ -
105	Dixon	$ -	$ -	$ -	$ -
128	Dominguez	$ -	$ -	$ -	$ -
106	East Los Angeles	$ -	$ -	$ -	$ -
108	Hermosa Redondo	$ 5,183	$ -	$ -	$ 5,183
134	Kern River Valley	$ 77,744	$ -	$ -	$ 77,744
109	King City	$ 5,456	$ -	$ -	$ 5,456
110	Livermore	$ 5,456	$ -	$ -	$ 5,456
111	Los Altos	$ 45,828	$ 46,974	$ 48,148	$ 140,949
147	Lucerne	$ -	$ -	$ -	$ -
112	Marysville	$ -	$ -	$ -	$ -
113	Oroville	$ 5,456	$ -	$ -	$ 5,456
122	Palos Verdes	$ 5,183	$ -	$ -	$ 5,183
146	Redwood Valley	$ -	$ -	$ -	$ -
114	Salinas	$ 10,911	$ -	$ -	$ 10,911
117	Selma	$ -	$ -	$ -	$ -
119	Stockton	$ -	$ -	$ -	$ -
157	Travis	$ -	$ -	$ -	$ -
650	Unified Area	$ -	$ -	$ -	$ -
120	Visalia	$ -	$ -	$ -	$ -
123	Westlake	$ -	$ -	$ -	$ -
121	Willows	$ -	$ -	$ -	$ -
330	Customer Support Services	$ -	$ -	$ -	$ -
151	Rancho Dominguez	$ -	$ -	$ -	$ -
	Total	$ 395,265	$ 129,177	$ 48,148	

III. ANALYSIS

The Commission should approve a water quality sample site budget of $395,265 in 2022, $129,177 in 2023 and $48,148 in 2024 to install new sample sites and replace existing sample sites.

Cal Water did not provide detailed information about the ages of the sample sites proposed for replacement, just that they were all "about 20" years old.[265] Cal Water also did not provide any information about the condition of the sample sites that are proposed for replacement.[266] Replacing sample sites without being aware of the condition of the current sample sites could expose ratepayers to unreasonable financial burden through rates. As such, it is impossible to determine if the utility's proposed investments are prudent and necessary. Proposed replacements make up 82% of the total requested budget.[267] The remaining budget is to install new sample sites, to replace the current sample sites at hose bibs.

From 2015 to 2020, Cal Water only used 83% of its authorized budget to replace water quality sample sites. A more reasonable sample site budget would be to reduce Cal Water's proposed budget by 17%, to more accurately reflect Cal Water's actual sample site replacement history. A contingency factor of 0% was used to calculate this budget. See direct testimony of Mr. Suliman Ibrahim in Chapter 16 for further discussion on contingency.

The Commission should authorize a budget of $395,265 in 2022, $129,177 in 2023 and $48,148 in 2024 for water quality sample sites, to protect ratepayers from potentially unreasonable financial burden.

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[265] Attachment 12-1: Cal Water Response to DR NMH-008 Attachment 1, column G.

[266] Attachment 12-1: Cal Water Response to DR NMH-008_FINAL, Q.1.a.vii. states "Sampling stations have an assumed design life of 20 years, and most of the dedicated sampling stations recommended for replacement were originally installed in the early 2000's." Age appears to be a stand-in for assessing condition of the sample sites.

[267] Calculated from data provided in Attachment 12-1: Cal Water Response to DR NMH-008, Attachment 1.

IV. CONCLUSION

The Commission should authorize a budget of $395,265 in 2022, $129,177 in 2023 and $48,148 in 2024 to install new water quality sample sites and to replace existing sample sites.

Attachment 12-1: Cal Water Response to DR NMH-008_FINAL and Excerpt from Cal Water Response to DR NMH-008, Attachment 1

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Niamh Murphy Utilities Engineer	Phone: Email:	(415) 703-2107 niamh.murphy@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **Aug 17, 2021**	Request Received from CPUC: **August 4, 2021**
Re: **NMH-008**	Requested Due Date: **August 17, 2021**
Subj: **Common – Water Quality Sample Sites**	

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Does not contain confidential information.**
- **This response refers to the following attachment included separately:**
  "NMH-008 Attachment 1 - Water Quality Sample Sites.xls."

Data Requests and Responses

1. Refer to project justification book "Common Plant_2021_GRC_Justification Book", Section B.n – Water Quality Sample Sites.

   a. For each individual sample site project proposed in 2022, 2023, and 2024, use Excel file "DR NMH-008 Attachment 1" to provide the following information:

      i. Sample Site District

      ii. Sample Site Station ID (if applicable)

      iii. Sample Site ID

      iv. Sample Site pressure zone

      v. Individual Sample Site cost

      vi. Proposed Replacement or Installation year

      Response to i. through vi: Please see "NMH-008 Attachment 1 - Water Quality Sample Sites.xls."

      vii. Current sample site age (if applicable)

      Response: Please see "NMH-008 Attachment 1 - Water Quality Sample Sites.xls." Sampling stations have an assumed design life of 20 years, and most of the dedicated sampling stations recommended for replacement were originally installed in the early 2000's.

      viii. Brief proposed work description

      Response: Please see "NMH-008 Attachment 1 - Water Quality Sample Sites.xls." The California State Water Resources Control Board Division of Drinking Water (DDW) requires at least one dedicated sampling site in each pressure zone. In some cases multiple sites may be required based on the size and complexity of the pressure zone. In 2020, Cal Water conducted an evaluation of its water sampling sites and identified water systems that did not have a dedicated sample site installed within every pressure zone. As a result, Cal Water developed a plan to correct this deficiency and install new sample sites similar to Photo 1 in all pressure zones where missing.

Photo 1 - CWS Standard Dedicated Sample Station

ix. Whether the proposed sample site is a new installation or a replacement for an existing sample site

Response: Please see "NMH-008 Attachment 1 - Water Quality Sample Sites.xls."

x. Brief explanation of the reason for the new installation or replacement

Response: Please see "NMH-008 Attachment 1 - Water Quality Sample Sites.xls."

In addition, for several of the sites that are new installations, samples are being collected at customer hose bibs which can lead to false positive bacteriological samples. Sampling at a hose bib can also be dangerous for samplers because they have to go on to the customer's property where there can be dogs and other hazards. The Revised Total Coliform Rule (RTCR) State Implementation Guideline document lists sampling from a dedicated sample site a recommended sampling practice, and the American Water Works Association (AWWA) identifies establishing dedicated sample sites as a best management practice in the water industry.[1,2] Fire hydrants are not satisfactory sampling sites because the flow is erratic and they are not used often, which can cause samples to become contaminated from corrosion or sediment. Therefore, Cal Water is proposing to install new dedicated water quality sampling sites throughout its districts where necessary to monitor and protect public health and ensure customers continue to receive reliable high quality water.

xi. If the sample site is the sole sample site for a single pressure zone

Response: Please see "NMH-008 Attachment 1 - Water Quality Sample Sites.xls."

END RESPONSE

[1] https://www.awwa.org/Portals/0/Awwa/Publishing/Manuals/M12LookInside.pdf?ver=2020-05-27-131339-920
[2] https://www.epa.gov/sites/default/files/2015-10/documents/rtcrimplementation_guidance.pdf

AutoSave Off | NMH-008 Attachment 1 - Water Quality Sample Sites - Read-Only | Search (Alt+Q) | Murphy, Niamh MN

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G2 | About 20 Yrs

	A	B	C	D	E	F	G	H	I	
1	District	Station ID	Sample Site ID	Pressure Zone	Cost	ement/ Install ation Year	Current Sample Site Age	Proposed work description	Replacement or New Installation?	Reason for replacement or new in
2	Bakersfield	N/A	BK-D-002	LOW	$7,493.37	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
3	Bayshore	N/A	SC-D-001	545	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
4	Bayshore	N/A	SC-D-002	560	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
5	Bayshore	N/A	SC-D-003	200	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
6	Bayshore	N/A	SC-D-004	585	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
7	Bayshore	N/A	SC-D-005	755	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
8	Bayshore	N/A	SC-D-006	200	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
9	Bayshore	N/A	SC-D-007	685	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
10	Bayshore	N/A	SC-D-008	850	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
11	Bayshore	N/A	SC-D-009	550	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
12	Bayshore	N/A	SC-D-010	545	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
13	Bayshore	N/A	SC-D-011	200	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
14	Bayshore	N/A	SC-D-012	545	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
15	Bayshore	N/A	SC-D-013	525	$8,282.16	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
16	Bayshore	N/A	SM-D-001	145 (LOW)	$8,282.15	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
17	Bayshore	N/A	SM-D-002	290	$8,282.15	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
18	Bayshore	N/A	SM-D-003	590 (LINCOLN)	$8,282.15	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
19	Bayshore	N/A	SM-D-004	635 (BAYWOOD)	$8,282.15	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
20	Bayshore	N/A	SM-D-006	145 (LOW)	$8,282.15	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
21	Bayshore	N/A	SM-D-007	145 (LOW)	$8,282.15	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
22	Bayshore	N/A	SM-D-008	145 (LOW)	$8,282.15	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
23	Bayshore	N/A	SM-D-009	145 (LOW)	$8,282.15	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
24	Bayshore	N/A	SM-D-011	290 (290)	$8,282.15	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
25	Bayshore	N/A	SM-D-014	345 (STA 12)	$8,282.15	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
26	Bayshore	N/A	SSF-D-001	285	$8,282.15	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r
27	Bayshore	N/A	SSF-D-002	260	$8,282.15	2022	About 20 Yrs	Replacing available Station with a new one as described in Common Plants F	Replacement	They have only 20-yr lifetime and r

CHAPTER 13 Wildfire Hardening Program

I. INTRODUCTION

This chapter presents analysis and recommendations for California Water's Wildfire Hardening Program proposed in its General Rate Case Application (A.) 21-07-002.

II. SUMMARY OF RECOMMENDATIONS

- The Commission should approve $8,278,711 in 2022, $6,807,899 in 2023, and $12,184,546 in 2024 for Cal Water's proposed Wildfire Hardening Program projects.
- The Commission should deny Cal Water's budget request for partial projects that will not be completed until the next GRC.
- The Commission should deny all design-permit and investigation-only wildfire hardening program projects
- The Commission should deny all Contingency and Construction Management/Special Inspection amounts.

The Commission should require Cal Water to prepare and provide an action plan and timeline for all its planned wildfire hardening projects.

III. ANALYSIS

A. Projects

Cal Water proposes funding for multiple projects that either are in the design-permit process or under investigation. These projects are unjustified and should be denied because no physical work has been proposed for this GRC rate cycle. Refer to direct Testimony of Justin Medina's for further discussion concerning rejection of design-permit projects in this proceeding.

Further, investigation and research for all prospective projects should occur upfront to determine whether the project is viable prior to seeking funding therefore

funding for projects that are currently under investigation or in the research phase are not ripe for approval or funding at this time. The specific projects being denied are included below in **Table 13-1.**

Table 13-1: Wildfire Hardening Program Projects to be Denied

District Name	Project Name	Estimated Direct Cost 2022	Estimated Direct Cost 2023	Estimated Direct Cost 2024	Estimated Direct Cost Total	Reason for Denial
Bear Gulch	BG Wildfire Pmp Sta Kngs Mt-Design			$ 368,349.64	$368,349.64	Design-Build
Chico	CH 64 Wildfire Pmp Storage - Design			$ 352,219.50	$352,219.50	Design-Build
Los Altos	LAS STA 42 Wildfire Bstr Pmps-Dsgn			$ 313,835.65	$313,835.65	Design-Build
Salinas	SLN Las Lomas Intertie Design			$ 88,194.74	$88,194.74	Inspection
Salinas	SLN 039: As Treatmnt Plant - Design		$596,659.33		$596,659.33	Design-Build
Total		**$-**	**$596,659.33**	**$1,122,599.53**	**$1,719,258.86**	

The remaining projects should be authorized because Cal Water has successfully demonstrated the need for the wildfire safety of California's residents. The budget differences for 2022-2024 are provided below in **Tables 13-2 to 13-4**

Table 13-2: Cal Advocates Recommended 2022 Wildfire Hardening Program Budget

2022	Direct Project Cost		
District	**Cal Water**	**Cal Advocates**	**Difference**
Bakersfield	-	-	-
Bayshore	$5,755,667	$5,174,442	$(581,225)
Bear Gulch	$828,383	$705,921	$(122,463)
Chico	$424,135	$353,741	$(70,395)
Los Altos	$717,182	$625,190	$(91,992)
Livermore	$40,582	$36,706	$(3,876)
Palos Verdes	$1,693,308	$1,294,577	$(398,731)
Salinas	-	-	-
Westlake	$105,762	$88,135	$(17,627)
Total	**$9,565,018**	**$8,278,711**	**$(1,286,307)**

Table 13-3: Cal Advocates Recommended 2023 Wildfire Hardening Program Budget

2023	Direct Project Cost		
District	**Cal Water**	**Cal Advocates**	**Difference**
Bakersfield	-	-	-
Bayshore	$3,850,081	$3,500,092	$(349,990)
Bear Gulch	$1,518,517	$1,199,960	$(318,558)
Chico	-	-	-
Los Altos	$1,650,698	$1,388,732	$(261,966)
Livermore	-	-	-
Palos Verdes	$854,650	$719,116	$(135,534)
Salinas	$596,659	-	$(596,659)
Westlake	-	-	-
Total	**$8,470,605**	**$6,807,899**	**$(1,662,706)**

Table 13-4: Cal Advocates Recommended 2024 Wildfire Hardening Program Budget

2024	Direct Project Cost		
District	**Cal Water**	**Cal Advocates**	**Difference**
Bakersfield	$329,301	$285,109	$(44,192)
Bayshore	$3,806,227	$3,289,739	$(516,488)
Bear Gulch	$1,912,854	$1,318,150	$(594,704)
Chico	$352,220	-	$(352,220)
Los Altos	$1,736,292	$1,174,513	$(561,779)
Livermore	-	-	-
Palos Verdes	$1,894,225	$1,644,830	$(249,395)
Salinas	$5,634,600	$4,385,439	$(1,249,161)
Westlake	-	-	-
Total	**$15,665,719**	**$12,097,780**	**$(3,567,939)**

Contingency and Construction Management/Special Inspection has been set to 0% for all projects. See direct testimony of Mr. Suliman Ibrahim in the Report on Common Plant Issues for further discussion addressing Contingency and Construction Management/Special Inspection.

B. Program Plans

Cal Water presented the proposed list of Wildfire hardening projects in its 2021 Common Plant GRC Wildfire Hardening Project Capital Recommendations without providing any specific action plans or implementation timelines.[268] This makes it difficult to ascertain whether and when Cal Water intends to initiate and complete these projects. Cal Water should be required to provide additional clarification and information by including a new columns detailing an action plan and another column detailing a

[268] Capital Project Justifications – Common Plant Report COMMON PLANT Appendix PJ – 67 - 97

timeline, including a start and completion date, for implementation for each selected project to the Capital Project Recommendations.

IV. CONCLUSION

The Commission should exclude projects in the design and permit phase as well as those where Cal Water solely plans to conduct "investigations, research, etc." in this GRC rate cycle. The remaining projects should be authorized (with the Contingency and Construction Management/Special Inspection budgeted components removed) since Cal Water has successfully demonstrated the anticipated benefit and usefulness to California Ratepayers. The Commission should also require Cal Water to provide a detailed action plan and implementation timeline for each project.

The Commission should authorize the wildfire hardening program budget as specified below in **Table 13-5**.

Table 13-5: Cal Advocates Recommended Wildfire Hardening Program Budget

District Name	Estimated Direct Cost 2022	Estimated Direct Cost 2023	Estimated Direct Cost 2024	Estimated Direct Cost Total
Bakersfield	-	-	$285,109	$285,109
Bayshore	$5,174,442	$3,500,092	$3,289,739	$11,964,273
Bear Gulch	$705,921	$1,199,960	$1,318,150	$3,224,031
Chico	$353,741	-	-	$353,741
Los Altos	$625,190	$1,388,732	$1,174,513	$3,188,434
Livermore	$36,706	-	-	$36,706
Palos Verdes	$1,294,577	$719,116	$1,644,830	$3,658,523
Salinas	-	-	$4,385,439	$4,385,439
Westlake	$88,135	-	-	$88,135
Total	**$8,278,711**	**$6,807,899**	**$12,097,780**	**$27,184,390**

Attachment 13-1: Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY

OF

Isaac Gendler

Q.1 Please state your name and address.

A.1 My name is Isaac Gendler, and my business address is 505 Van Ness Avenue, San Francisco, California 94102.

Q.2 By whom are you employed and what is your job title?

A.2 I am employed by the California Public Utilities Commission Public Advocates Office as a Utilities Engineer.

Q.3 Please describe your educational and professional experience.

A.3 I received a Bachelor of Science Degree in Mechanical Engineering from San Jose State University in May 2019.

I have been with the Public Advocates Office – Water Branch since September 2020.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am responsible for analyzing and writing about the condition of plant infrastructure and equipment in the Bakersfield, Kern River Valley, Selma, and Visalia districts as well as rate base for all of California Water System's districts.

Q.5 Does that complete your prepared testimony?

A.5 Yes.

CHAPTER 14 Well Infrastructure Renewal Program

I. INTRODUCTION

This chapter addresses Cal Water's proposed Well Infrastructure Renewal Program (WIRP) and budget for 2022-2024. Cal Water owns and leases 747 groundwater production wells, of which 391 are active wells More than half of all Cal Water's wells were constructed before 1970. Cal Water established this program to better understand its aging infrastructure and plan appropriately. [269]

II. SUMMARY OF RECOMMENDATIONS

The Commission should approve a WIRP budget of $1,486,290 in 2022, $836,866 in 2023 and $510,457 in 2024. Table 14-1 below shows each district's recommended budget for each year.

Table 14-1: Cal Advocates – WIRP Recommendation (2022-2024)[270]

District	Project ID	Well No.	Year	Direct Cost
Bakersfield	124306	BK-W-042-02	2024	$225,986
Bakersfield	124302	BK-W-079-01	2023	$248,854
Bakersfield	124262	BK-W-081-01	2022	$250,850
East Los Angeles	124276	ELA-W-038-02	2022	$232,203
Livermore	124293	LIV-W-020-01	2022	$207,079
Los Altos	124283	LAS-W-039-01	2022	$109,943
Los Altos	124288	LAS-W-104-02	2024	$284,471
Marysville	124304	MRL-W-009-01	2023	$178,473
Oroville	124294	ORO-W-010-01	2022	$182,578
Selma	124296	SEL-W-011-01	2023	$165,989
Visalia	124298	VIS-W-012-01	2022	$216,593
Visalia	124299	VIS-W-014-01	2023	$243,350
Willows	124300	WIL-W-007-01	2022	$287,044
Total Direct Cost				$2,833,413

[269] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-94.

[270] Direct Cost has been calculated by removing 10% Contingency and 5% Construction Management and Special Inspection Cost. See direct testimony of Mr. Suliman Ibrahim in Chapter 16 for further

III. ANALYSIS

Cal Water requests $1,773,694 in 2022, $988,027 in 2023 and $568,784 in 2024 to replace liners in 13 wells.[271] The Table 14-2 below shows Cal Water's WIRP projects and budget by district.

Table 14-2: Cal Water's proposed WIRP projects (2022-2024)[272]

District	Project ID	Well No.	Year	Direct Cost
Bakersfield	124306	BK-W-042-02	2024	$248,584
Bakersfield	124302	BK-W-079-01	2023	$299,673
Bakersfield	124262	BK-W-081-01	2022	$302,076
East Los Angeles	124276	ELA-W-038-02	2022	$279,621
Livermore	124293	LIV-W-020-01	2022	$248,287
Los Altos	124283	LAS-W-039-01	2022	$120,937
Los Altos	124288	LAS-W-104-02	2024	$320,199
Marysville	124304	MRL-W-009-01	2023	$213,990
Oroville	124294	ORO-W-010-01	2022	$218,912
Selma	124296	SEL-W-011-01	2023	$182,588
Visalia	124298	VIS-W-012-01	2022	$259,695
Visalia	124299	VIS-W-014-01	2023	$291,776
Willows	124300	WIL-W-007-01	2022	$344,166
Total Direct Cost				$3,330,505

Cal Water's total budget for the Well Infrastructure Renewal Program has been artificially increased by adding unnecessary contingency fees and Construction Management/Special Inspection (CM/SI) costs. Cal Advocates recommends removing the Contingency and CM/SI from WIRP projects in all districts. See testimony of Mr. Suliman Ibrahim in Chapter 16 of this report for further discussion.

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discussion.

[271] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-101-102.

[272] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-88-89 & Cal Water Response to DR ZS1-018, Attachment #1 - Pressure Vessel Data.

1 **IV. CONCLUSION**

2 The Commission should approve a WIRP budget of $1,486,290 in 2022, $836,866
3 in 2023 and $510,457 in 2024.

CHAPTER 15 Non-Specific Capital Budgets

I. INTRODUCTION

This chapter presents analyses and recommendations on Cal Water's Non-Specific budget and Unscheduled budget request, for all districts.

According to Cal Water, Non-Specific capital projects are reactive in nature and develop during any given year to respond to facility or equipment failures, to maintain business operations, or to address work items that come up during the year that were not previously anticipated when proposed Advanced Capital Budgets were developed. These projects require a sense of urgency to complete and cannot wait until the next available capital budget or General Rate Case (GRC) cycle.[273]

II. SUMMARY OF RECOMMENDATIONS

The Commission should approve $35,755,956 for Cal Water's non-specific budget as outlined below in Table 15-A. This is a reduction of $8,938,989 (20%) in 2022-2024 (total company). The Commission should reduce Cal Water's Non-Specific budget to discourage Cal Water from escalating and misusing its Non-Specific funding and from circumventing the Commission's capital budget review process in GRCs.

The Commission should also deny Cal Water's full request for "Unscheduled Budgets" amounting to $91,114,632 for the year 2022-204 as Cal Water failed to identify the need for the Unscheduled budget-specific categories (mains, hydrants, services and meters) which have reached the end of their useful life. Projects in this category require advance consideration, planning and development. The replacement of these projects (items) should have been foreseen by Cal Water and presented in this GRC for Commission review under Advanced Capital Budget programs. By choosing to propose a completely new budget category, Cal Water circumvents the GRC review process, and

[273] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-105.

impairs the Commission's ability to proactively examine the need and cost for planned capital investment so that ratepayers are not burdened with increased rates in the absence of sufficient review of the need and cost of projects underlying those increased rates.

Table 15-A: Public Advocates Office – Non-Specific Budget (2022-2024)

District	Cal Water's Proposed Direct Costs (2022-2024)	Cal Advocates Recommendation
Antelope Valley	$ 108,478	$ 86,782
Bakersfield	$ 6,274,685	$ 5,019,748
Bayshore	$ 93,318	$ 74,654
Bear Gulch	$ 2,600,177	$ 2,080,142
Chico-Hamilton	$ 2,140,273	$ 1,712,218
Customer Support Services	$ 5,606,141	$ 4,484,913
Dixon	$ 470,907	$ 376,726
Dominguez	$ 2,086,400	$ 1,669,120
East Los Angeles	$ 2,457,633	$ 1,966,106
Hermosa Redondo	$ 1,761,868	$ 1,409,494
Kern River Valley	$ 630,811	$ 504,649
King City	$ 143,767	$ 115,014
Livermore	$ 871,806	$ 697,445
Los Altos - Suburban	$ 4,120,804	$ 3,296,643
Marysville	$ 235,210	$ 188,168
Mid-Peninsula	$ 2,898,874	$ 2,319,099
Oroville	$ 347,517	$ 278,014
Palos Verdes	$ 1,212,395	$ 969,916
Rancho Dominguez	$ 400,655	$ 320,524
Redwood Valley	$ 541,731	$ 433,385
Salinas	$ 3,126,585	$ 2,501,268
Selma	$ 447,517	$ 358,014
South San Francisco	$ 393,238	$ 314,590
Stockton	$ 2,350,623	$ 1,880,498
Travis	$ 933,420	$ 746,736
Visalia	$ 1,717,776	$ 1,374,221
Westlake	$ 460,802	$ 368,642
Willows	$ 261,534	$ 209,227
Total	$ 44,694,945	$ 35,755,956

III. ANALYSIS

Cal Water's capital budget request includes $44,694,945 in Non-Specific budget[274] items and $91,114,639 in Unscheduled Budget items.[275] The tables below show its Non-Specific (Table 15-B) and Unscheduled Budget (Table 15-C) requests by year and by district.

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[274] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-107. CH07_RO_RB_PLT, Tab Budget (ACB) Adjustments WS-2.1.

[275] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-113. CH07_RO_RB_PLT, Tab Budget (ACB) Adjustments WS-2.1.

Table 15-B: Cal Water Non-Specific Budget Forecast for 2022-2024[276, 277]

District	Direct Costs			District Direct Costs 2022-2024
	2022	2023	2024	
Antelope Valley	$ 35,290	$ 36,105	$ 37,083	$ 108,478
Bakersfield	$ 2,040,108	$ 2,091,127	$ 2,143,450	$ 6,274,685
Bayshore	$ 30,318	$ 31,052	$ 31,948	$ 93,318
Bear Gulch	$ 845,400	$ 866,508	$ 888,269	$ 2,600,177
Chico-Hamilton	$ 695,929	$ 713,207	$ 731,137	$ 2,140,273
Customer Support Services	$ 1,822,748	$ 1,868,306	$ 1,915,087	$ 5,606,141
Dixon	$ 153,057	$ 156,969	$ 160,881	$ 470,907
Dominguez	$ 678,406	$ 695,195	$ 712,799	$ 2,086,400
East Los Angeles	$ 799,026	$ 819,075	$ 839,532	$ 2,457,633
Hermosa Redondo	$ 572,864	$ 587,208	$ 601,796	$ 1,761,868
Kern River Valley	$ 205,136	$ 210,107	$ 215,568	$ 630,811
King City	$ 46,700	$ 47,841	$ 49,226	$ 143,767
Livermore	$ 283,457	$ 290,548	$ 297,801	$ 871,806
Los Altos - Suburban	$ 1,339,779	$ 1,373,275	$ 1,407,750	$ 4,120,804
Marysville	$ 76,284	$ 78,485	$ 80,441	$ 235,210
Mid-Peninsula	$ 942,548	$ 966,101	$ 990,225	$ 2,898,874
Oroville	$ 112,959	$ 115,812	$ 118,746	$ 347,517
Palos Verdes	$ 394,216	$ 404,077	$ 414,102	$ 1,212,395
Rancho Dominguez	$ 130,319	$ 133,497	$ 136,839	$ 400,655
Redwood Valley	$ 176,203	$ 180,523	$ 185,005	$ 541,731
Salinas	$ 1,016,468	$ 1,041,978	$ 1,068,139	$ 3,126,585
Selma	$ 145,559	$ 149,145	$ 152,813	$ 447,517
South San Francisco	$ 127,874	$ 131,052	$ 134,312	$ 393,238
Stockton	$ 776,695	$ 776,206	$ 797,722	$ 2,350,623
Travis	$ 303,506	$ 311,086	$ 318,828	$ 933,420
Visalia	$ 558,601	$ 572,375	$ 586,800	$ 1,717,776
Westlake	$ 149,797	$ 153,628	$ 157,377	$ 460,802
Willows	$ 84,923	$ 87,287	$ 89,324	$ 261,534
Total Company	$ 14,544,170	$ 14,887,775	$ 15,263,000	$ 44,694,945

[276] Cal Water presents its Total Company Non-Specific budget in Capital Project Justifications Common Plant with overhead applied at a standard rate per classification. The Public Advocates Office uses the Direct Cost per district as presented in Cal Waters RO Model CH07_RO_RB_PLT, Tab Budget (ACB) Adjustments WS-2.1.

[277] Hawthorne was included in the Non-Specific budget (Common Plant Issue Capital Project Justification, p. Common Plant PJ-107). After confirmation from Cal Water, it has been removed from the total budget.

Table 15-C: Cal Water Unscheduled Budget Forecast for 2022-2024[278]

District	Direct Costs			District Direct Costs 2022-2024
	2022	2023	2024	
Antelope Valley	$ 1,230	$ 1,261	$ 1,292	$ 3,783
Bakersfield	$ 5,298,558	$ 5,431,022	$ 5,566,798	$ 16,296,378
Bear Gulch	$ 2,485,129	$ 2,547,267	$ 2,610,949	$ 7,643,345
Chico-Hamilton	$ 1,654,810	$ 1,696,180	$ 1,738,584	$ 5,089,574
Dixon	$ 174,052	$ 178,403	$ 182,863	$ 535,318
Dominguez	$ 1,049,490	$ 1,075,728	$ 1,102,621	$ 3,227,839
East Los Angeles	$ 1,409,614	$ 1,444,854	$ 1,480,975	$ 4,335,443
Hermosa Redondo	$ 1,356,784	$ 1,390,704	$ 1,425,471	$ 4,172,959
Kern River Valley	$ 51,834	$ 53,130	$ 54,458	$ 159,422
King City	$ 295,492	$ 302,879	$ 310,451	$ 908,822
Livermore	$ 942,506	$ 966,068	$ 990,220	$ 2,898,794
Los Altos - Suburban	$ 1,531,203	$ 1,569,483	$ 1,608,720	$ 4,709,406
Lucerne	$ 48,570	$ 49,784	$ 51,029	$ 149,383
Marysville	$ 207,322	$ 212,505	$ 217,818	$ 637,645
Mid-Peninsula	$ 2,299,965	$ 2,357,464	$ 2,416,401	$ 7,073,830
Oroville	$ 473,590	$ 485,430	$ 497,566	$ 1,456,586
Palos Verdes	$ 1,138,455	$ 1,166,916	$ 1,196,089	$ 3,501,460
Redwood Valley	$ 165,929	$ 170,077	$ 174,329	$ 510,335
Salinas	$ 2,542,910	$ 2,606,483	$ 2,671,645	$ 7,821,038
Selma	$ 515,791	$ 528,685	$ 541,903	$ 1,586,379
South San Francisco	$ 647,240	$ 663,421	$ 680,006	$ 1,990,667
Stockton	$ 2,067,654	$ 2,119,345	$ 2,172,329	$ 6,359,328
Travis	$ 61,183	$ 62,713	$ 64,281	$ 188,177
Visalia	$ 2,373,934	$ 2,433,282	$ 2,494,114	$ 7,301,330
Westlake	$ 698,360	$ 715,819	$ 733,715	$ 2,147,894
Willows	$ 151,883	$ 155,680	$ 101,934	$ 409,497
Total Company	$ 29,643,488	$ 30,384,583	$ 31,086,561	$ 91,114,632

According to Cal Water, its Non-Specific budget funds any unanticipated projects during the GRC cycle. Cal Water contends that Non-Specific budget funds are needed to address "projects that cannot be anticipated in a GRC filing, but by nature must be

[278] Cal Water presents its Total Company Unscheduled Budget in Capital Project Justifications Common Plant with overhead applied at a standard rate per classification. The Public Advocates Office uses the Direct Cost per district as presented in Cal Waters RO Model CH07_RO_RB_PLT, Tab Budget (ACB) Adjustments WS-2.1.

completed due to unforeseen requirements."[279] Cal Water claims that "[It] routinely initiates reactive projects outside the general rate case process due to change in operations, changes in regulatory environments that result in unanticipated capital needs, and other unforeseeable reasons.".[280]

Cal Water states that it develops non-specific capital budgets based on 15 years of increasing, annual non-specific capital projects observed in district or department budgets over time.[281]

Cal Water justified its claims of increased spending in recent years due to aging infrastructure, deferred maintenance, replacement upon first reported leaks as opposed to repair, increasing agency requirements, drought conditions and project requests not approved in GRCs, yet Cal Water circumvents the Commission's rules and still proceeds with unapproved projects.[282]

Cal Water asserts that while there is a general increasing trend companywide in non-specifics, an analysis of 10 years of companywide non-specific budgets indicated that there are some key project categories that accounted for a significant portion of the Non-Specific budget: Mains, Hydrants, Services and Meters. To facilitate more transparency, Cal Water proposed to separate out the 4 categories identified in their analysis into a new category of projects referred to as Unscheduled (UNSCH) projects.[283]

For this GRC, Cal Water requests an annual average Non-Specific budget of $14.9 million and an annual average Unscheduled budget of $30.3 million. This budget level is unreasonable because Cal Water's use of escalating recorded spending to develop its Non-Specific budget overstates its needs. Cal Water's use of Non-Specific budget

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[279] Cal Water Report on the Results of Operations – Hermosa Redondo District, p. 20, lines 6-7.

[280] Cal Water Report on the Results of Operations – Hermosa Redondo District, p. 23, lines 19-21.

[281] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-105.

[282] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-105-106.

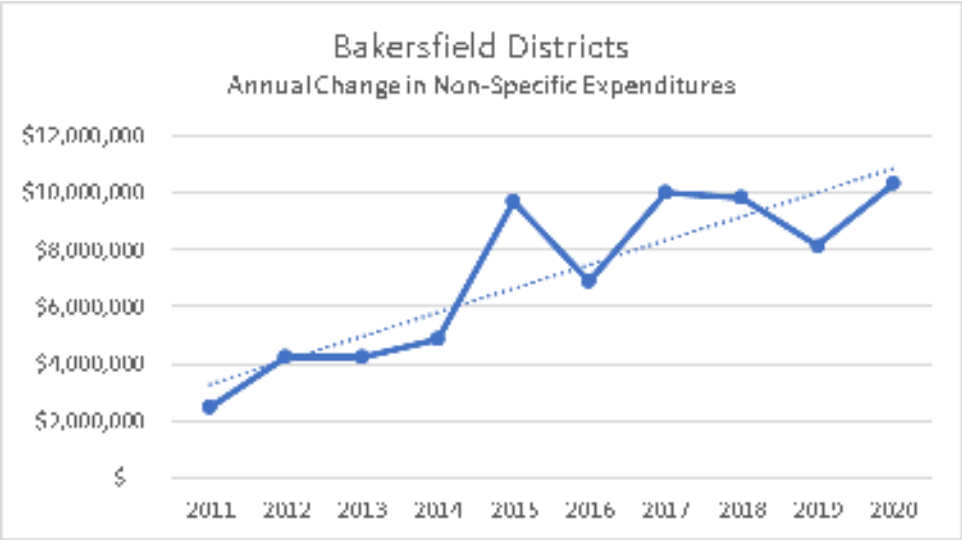
[283] A.21-07-002, Common Plant Issue Capital Project Justification, p. Common Plant PJ-106.

circumvents the Commission's oversight, and Cal Water has progressively increased and exceeded its authorized Non-Specific budget.

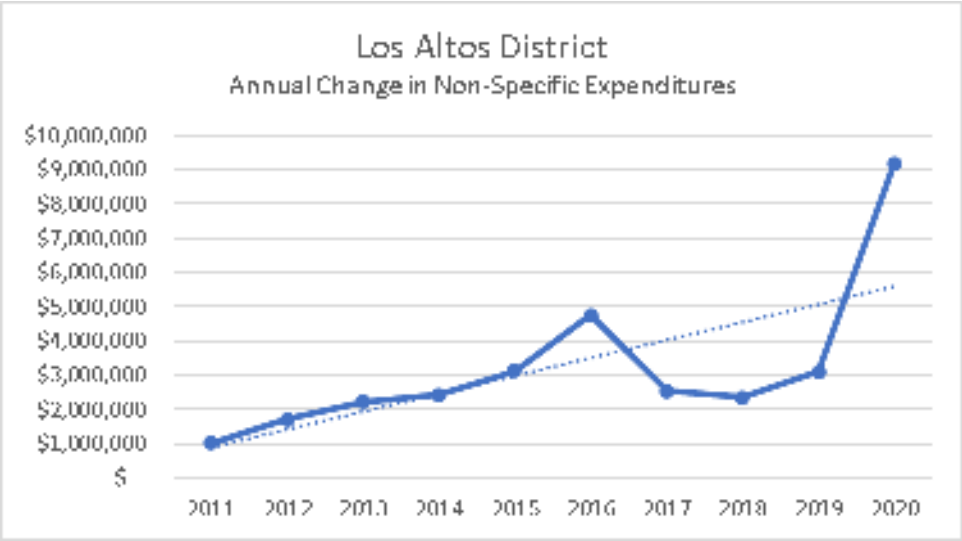
A. Cal Water's use of escalating recorded spending to develop its Non-Specific budget overstates its needs.

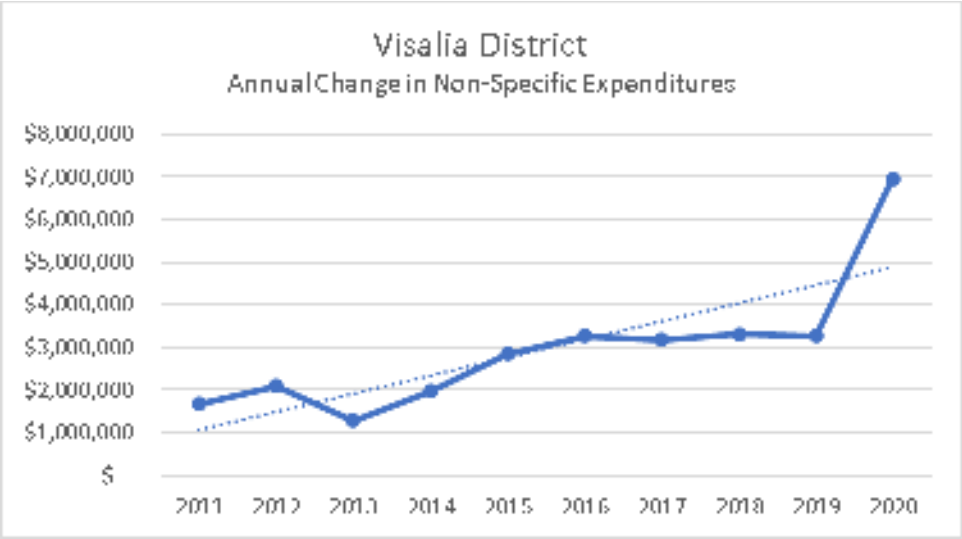
Cal Water's recorded Non-Specific expenditures varied significantly from year to year but consistently followed an upward trend. The following Figure 15-A illustrates how the Non-Specific expenditures fluctuated in the Bakersfield, Los Altos and Visalia District for the years 2011-2020. Other districts exhibit a similar pattern.[284]

Figure 15-A: Recorded Non-Specific Expenditures



[284] Cal Water Response to Public Advocates Office Data Request ZS1-021, Q. 1, *Attachment #1 - Non-Specific WO Info.xlsx* and Cal Water Report on the Results of Operations for ALL District, Figure 6A. The Public Office Advocates filtered the spreadsheet with district code to generate the recorded expenditure numbers per year.





B. Cal Water's use of Non-Specific budget circumvents Commission's oversight

By Cal Water's own definition, projects in the Non-Specific category should be limited to projects that are unforeseen or cannot be anticipated. However, this does not reflect Cal Water's practice. Between 2010-2020, Cal Water spent approximately $266 million in the "Non-Specific" project's categories: mains, hydrants, service and meters.[285] Cal Water claimed some of these replacements were due to unforeseeable

[285] Cal Water Response to Public Advocates Office Data Request ZS1-021, Q. 2, *Attachment #2 - Unscheduled WO Asset Info.* The Public Office Advocates summed the "Spend" column to generate the

emergencies or government requirements. It is difficult to believe the utility failed to anticipate ALL these replacements, even though the infrastructure has a foreseeable useful life, the stresses of cyclical droughts are known, new policies typically allow a ramping period, and repairs are a common practice across all utilities. Projects like these require advance consideration and planning and development. Cal Water should have been able to plan for its replacements and present justifications for replacements in its GRC applications. Yet, Cal Water repeatedly paid for these types of "non-specific" projects between GRCs using Non-Specific funds. In doing so, Cal Water circumvented the GRC review process, and impaired the Commission's ability to proactively examine the need and cost for planned capital investment so that ratepayers are not burdened with increased rates for imprudent projects.

C. Cal Water has progressively increased and exceeded its Non-Specific budget.

In D.16-12-042, the Commission adopted a settlement that reduced Cal Water's Non-Specific budget request by 20-25% depending on the operating district.[286] In the adopted settlement, Cal Water also agreed to "make additional efforts to control non-specific budget spending"[287] In the same settlement, the Commission reduced Cal Water's Non-Specific budget request by 20%[288] and obligated Cal Water to "provide justifications demonstrating the reasonableness of capital projects that exceed the non-specific capital budget" in the next GRC.[289]

Despite this agreement, Cal Water's Non-Specific spending has increased significantly over the recent three years (2018-2020), as illustrated in the Figure 15-B

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recorded expenditure numbers for the years 2010-2020.

[286] Settlement adopted in D.16-12-042, page 111, lines 10-12.

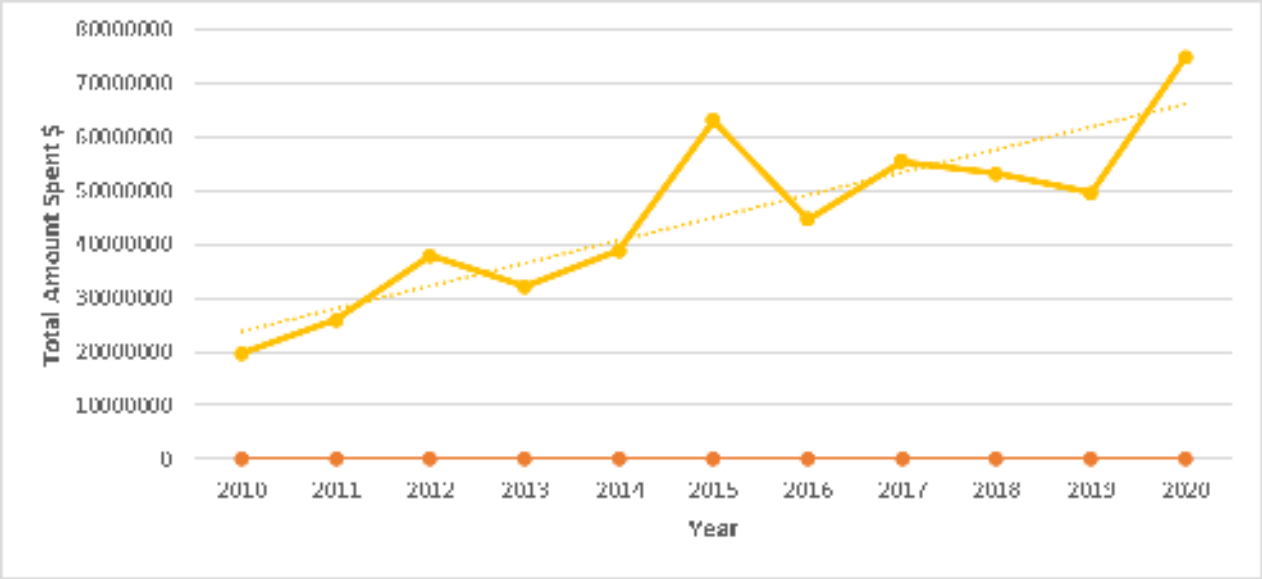
[287] Settlement adopted in D.16-12-042, page 111, lines 16-17.

[288] Settlement adopted in D.20-12-007, page 114, lines 23.

[289] Settlement adopted in D.20-12-007, page 114, lines 24-25.

below. These recorded spending levels suggest that Cal Water is not complying with its commitment to control Non-Specific spending. To the contrary, recorded spending levels show an acceleration of Non-Specific spending. Giving Cal Water its full Non-Specific budget and Unscheduled budget request in this GRC will signal to Cal Water that it need not make an effort to control its Non-Specific spending or seek prior authorization for costly projects.

Figure 15-B: Recorded Non-Specific Expenditure[290]



D. Cal Water consistently failed to stay within its authorized non-specific budgets.

In addition to Cal Water accelerating its Non-Specific spending, its consistent and significant spending in excess of the non-specific amounts authorized is also problematic. D.20-12-007 authorized Cal Water to spend approximately $82,716,196 in 2018-2020. Instead, Cal Water spent more than double this amount for a total of $177,483,028.[291]

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[290] Cal Water Response to Public Advocates Office Data Request ZS1-021, *Attachment #1 - Non-Specific WO Info.xlsx, Attachment #2 - Unscheduled WO Asset Info* and Cal Water Report on the Results of Operations for ALL District, Figure 6A. The Public Office Advocates filtered the spreadsheet with district code to generate the recorded expenditure numbers per year.

[291] Settlement adopted in D.20-12-007, Attachment 10 (Common Plant Projects): Table 11 - Non-Specific Budget; Cal Water Response to Public Advocates Office Data Request ZS1-021, *Attachment #1 -*

IV. CONCLUSION

Cal Water's practice of misusing and over-spending its Non-Specific budget is unreasonable and should not be rewarded.

The Commission should approve $35,755,956 for Cal Water's Non-Specific budget. This is a reduction of $8,938,989 (20%) in 2022-2024 (total company). The Commission should reduce Cal Water's Non-Specific budget to discourage Cal Water from escalating and misusing its Non-Specific funding and from circumventing the Commission's capital budget review process in GRCs.

The Commission should also deny Cal Water's request of "Unscheduled Budgets" amounting to $91,114,632 for the year 2022-24 since the utility failed to anticipate the need for the Unscheduled Budgets specific categories (Mains, Hydrants, Services and Meters). Projects in this category require advance consideration, planning and development. Cal Water should have foreseen its replacements and presented their replacement in this GRC application for Commission review under Advanced Capital Budget programs. By proposing a completely new budget category, Cal Water attempts to circumvent the GRC review process. The Commission should reject Cal Water's "Unscheduled Budgets" category, since adoption of the new category would impair the Commission's ability to proactively examine the need and cost for planned capital investment so that ratepayers are not burdened with unjustified rate increases.

Additionally, the Commission should require Cal Water to show in future GRC applications how the company has controlled its Non-Specific spending to avoid spending more than the authorized amount. Moreover, the Commission should require Cal Water to demonstrate that any recorded amount in excess of the authorized spending was necessary or risk exclusion from rate base. This proactive approach is necessary to send Cal Water a strong signal to improve its capital planning, budgeting, and spending, along with consequences for non-compliance.

Non-Specific WO Info.xlsx and *Attachment #2 - Unscheduled WO Asset.*

CHAPTER 16 Contingency, Previously Funded Incomplete Projects, and Construction Management and Special Inspections

I. INTRODUCTION

This chapter presents analyses and recommendations for the Contingency, Previously Funded Incomplete Projects, and Construction Management and Special Inspections common plant issues.

II. SUMMARY OF RECOMMENDATIONS

- The Commission should deny CWS' proposal to include a 10% to 20% contingency factor for most of its projects in rates.
- The Commission should deny CWS' proposal to include projects adopted in the previous rate case cycle that are not completed by the end of 2021 in 2023 revenue requirement.
- The Commission should deny CWS' request to add a 2.5% to 10% CM and SI factor to certain projects.

III. ANALYSIS

A. Contingency

CWS applies a contingency factor to its projects ranging from 10% to 20%. CWS applies a 10% contingency to Class 4 projects and a 20% contingency to Class 5 projects. CWS defines routine replacements and equipment purchase projects as Class 4 and all other projects as Class 5 unless significant design has already been completed.[292]

The Commission states, "in a normal general rate case, the utility must demonstrate the reasonableness of every dollar in its revenue requirement."[293] Contingency is by definition included to account for unknowns,[294] and as such

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[292] CWS Capital Project Justifications Book Common Plant p.122.

[293] D.96-12-066, p.5.

[294] CWS Capital Project Justifications Book Common Plant p.121.

contingency factors fail this requirement. Contingency amounts are unpredictable and therefore inappropriate for inclusion in revenue requirement.

CWS has substantial experience in conducting water system related projects. CWS should also have a considerable amount of historical data to help it budget accurately. Including a 10% or 20% contingency disincentivizes CWS from budgeting accurately and instead allows it to rely on ballpark estimates for projects. This has the overall effect of robbing the Commission of its ability to prudently assess a project's total costs.

For example, in the proposed ELA satellite lab project discussed elsewhere, CWS includes an additional $550,608 in contingency estimate.[295] The reasonableness of this project depends on a cost benefit analysis. CWS states the project will save on overall lab costs but that is not a benefit if the project costs more than it saves. Including such a large sum in contingency has a detrimental effect on any cost benefit analysis. Since the actual total cost of the project is unclear it is difficult to compare the cost of the project with its proposed financial benefits.

This issue applies to all projects with a requested contingency allowance. Cost benefit analysis is a key part of making sure utilities are spending funds wisely and fairly. Ratepayers should not be responsible for funding projects blindly. CWS should instead use its vast experience and historical knowledge to estimate total projects costs as best as possible. If a project goes over-budget, CWS always has the option of requesting additional funds in its next rate case. CWS could then justify the increased costs and they could be properly reviewed for reasonableness before they are included in revenue requirements. CWS currently already includes additional project justifications for its over-budget carryover projects, so the process is not new.

Ratepayers are a captive market. Unlike most other services and goods that a ratepayer purchases, a ratepayer does not have the option to switch to an alternative

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[295] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office p.253.

utility service if dissatisfied. As a result, the normal supply and demand forces of a free-market economy are not present, and ratepayers are left at the mercy of a monopoly. The Commission must therefore act as a surrogate for competition and in that way provide protection to ratepayers.

When analyzing requests for contingency funding, it is necessary to consider the way IOUs earn their profits. Regulated Investor-Owned Utilities ("IOUs") are not subject to the same drivers as regular businesses. While most businesses earn profit by reducing costs, when it comes to capital projects, IOUs have no incentive not to spend as much as possible. Utilities earn a profit based on their approved rate of return applied to their rate base. The higher the rate base the higher the rate of return.

Recognizing this fact, CWS rewards executives based on how much money they can add into rate base stating "investment in utility plant, property, and equipment is a driver of stockholder return."[296] CWS has no incentive to spend anything less than the total amount authorized by the CPUC. Even though a contingency is a theoretical number used to account for unforeseen circumstances, CWS has every reason to add the entire amount of contingency in rate base. In fact, not spending all its awarded capital budget would hurt the company as it would lower shareholder returns.

Another issue, specifically with what CWS calls Class 4 projects, is these projects are based on direct vendor quotes. CWS even escalates costs to future years to account for inflation. These projects represent purchases and other routine items and it makes little sense to tack on an additional 10%. If CWS has a vendor quote for a software for example for $1000 then it is reasonable to expect CWS to pay $1000 for the software.

In D.19-05-020 the Commission ruled against including contingency for software projects. The Commission states "we, however, do not agree that budgeting for contingencies for software projects is necessarily appropriate in a general rate case."[297]

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[296] CWS Application Attachment B Financial Reports 2020 Proxy Statement p.47.

[297] D.19-05-020 p.150.

The Commission explained that contingencies, since they are used to account for variables that are unknown, are unpredictable and therefore cannot be established as reasonable.[298]

The Commission further explains that the utility is required to forecast what it projects to be a reasonable expense. If the forecast is high, then the company will recover more than its capital expenditures and benefit its shareholders. If the forecast is low, the utility's recovery can be deferred for review in a subsequent rate case.[299]

D.21-08-036, further confirmed the Commission ruling in D.19-05-020 and went beyond software projects. In D.21-08-036, the Commission denied contingency allowances for seismic retrofitting. The Commission reiterated that,

> "…budgeting for contingencies is not necessarily appropriate in the context of a general rate case, where the utility must demonstrate the reasonableness of every dollar in its forecast revenue requirement."[300]

Since contingencies are unpredictable, they cannot be shown to be reasonable. The Commission further stated that "disallowing the 35 percent and 1.5 percent contingencies should motivate SCE to remain within its forecasted budgets."[301] Finally the Commission stated that if additional funds become necessary a utility can establish that necessity in the next GRC.[302]

In light of the aforementioned incentives and decisions, the Commission should deny CWS' proposal to include a 10% to 20% contingency factor for most of its projects in rates. Including contingency allowances in revenue requirements is inappropriate as it

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[298] D.19-05-020 p.150.

[299] D.19-05-020 p.151.

[300] D.21-08-036 p.331.

[301] D.21-08-036 p.331.

[302] D.21-08-036 p.331.

fails the Commission's requirement for a utility to demonstrate the reasonableness of every dollar included in its revenue requirement.

B. Previously Funded Incomplete Projects

CWS refers to projects for which it has incurred expenditures and expects to complete by the end of 2022 (the current GRC cycle) as "carryover" projects.[303] CWS identifies two categories of carryover projects: projects that were approved in the 2018 GRC and are still open and non-specific carryover.[304] Despite the fact CWS has not yet completed these projects, CWS includes these carryover projects in its proposed 2023 revenue requirement.[305] CWS presents post-2020 Carryover projects in RO plant table 3 in its various district result of operations reports.

In the tables, CWS identifies multiple projects that were adopted in the previous rate case and are still not completed. CWS should not be allowed to include projects that are significantly delayed in rates until it completes them. Projects that are not in service are not used and useful. Ratepayers should not be expected to fund a return on projects that are not used and useful, especially when ratepayers have already funded a shareholder return based on the assumption from the previous GRC that these projects would be complete.

CWS has already proven itself unable to complete these previously funded projects on time. CWS was supposed to complete these projects by the end of 2021. CWS now states these projects will be completed by 2022, 2023, or 2024 but the Commission has no way of verifying this. As such, including these projects in 2023 rates for a second time would be unreasonable. The Commission should instead require CWS propose their inclusion in rates in a subsequent rate case when it can be demonstrated that the projects have actually been completed.

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[303] CWS Report on the Results of Operation Customer Support Services p.15.

[304] CWS Report on the Results of Operation Customer Support Services p.16.

[305] CWS Report on the Results of Operation Customer Support Services p.15.

Normal market forces do not exist in the case of investor-owned utilities and regulated monopolies. Because of this, one of the Commission's main roles is to act as a surrogate for market forces. A normal business would not be rewarded for failing to complete projects on time and would not expect to earn a return on an investment that is not yet providing a service or benefit. While, during a rate case, proposed capital projects are used to project future rate base, these previously funded projects are different in that CWS has already received customer funds for these projects. CWS has therefore been earning a return on projects it never completed and are providing no benefit to ratepayers.

In its proposed capital budget, Cal Advocates removed any project that was adopted in the previous rate case cycle and not yet complete by the end of 2021. Cal Advocates also removed projects marked as canceled from the 2023 revenue requirement.

The Commission should deny CWS' proposal to include projects adopted in the previous rate case cycle that are not completed by the end of 2021 in 2023 revenue requirement. Ratepayers should not be asked to pay twice for projects that have yet to produce benefits one time. The Commission should require CWS to complete these previously funded projects and put them into service before allowing the projects to be included in rates again.

C. Construction Management and Special Inspections

CWS proposes to add a Construction Management ("CM") and Special Inspection ("SI") factor to certain projects. CWS states that its current project management practices have led to situations "where engineers are required to perform construction services that are not always suited to their qualifications and experience."[306] CWS further states "overall, this has resulted in variable construction quality."[307] CWS' solution is to hire a

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[306] CWS Capital Project Justifications Book Common Plant p.124.

[307] CWS Capital Project Justifications Book Common Plant p.124.

third-party inspector and add a CM and SI factor ranging from 2.5% to 10% of total construction costs depending on the project type.[308]

CWS has been operating its water system for decades. It is extremely troubling, therefore, that CWS now states that they have neither the skill nor ability to adequately manage water infrastructure construction projects. What is even more concerning is CWS' statement that their current management of projects has resulted in "variable construction quality". CWS' proposed solution of sub-contracting work and charging ratepayers is unacceptable. Existing CWS staff should be capable of handling the project management of water infrastructure projects.

Moreover, CWS' approach of simply adding 2.5% or 10% to project cost for "construction management and special inspection" is unreasonable and unfair to ratepayers. A basic tenet of ratemaking is "the utility must demonstrate the reasonableness of every dollar in its revenue requirement."[309] Similar to CWS' blanket contingency request, its request for a CM and SI factor fails to meet this requirement.

Instead of using a blanket multiplier, CWS could have proposed a CM and SI fee on a project-by-project basis. CWS could have obtained quotes for each project it believed required additional CM and SI and then its proposal could have been reviewed for reasonableness on a case-by-case basis. Such an approach would have at least allowed the Commission to assess the reasonableness and necessity of the proposed costs. Since CWS admits that its proposed CM and SI blanket factor method contains many unknowns, it is unreasonable to include the requested funds in rates.

The Commission should deny CWS' request to add a 2.5% to 10% a CM and SI factor to certain projects. CWS is requesting to add a total of $8,417,829 in rates for these

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[308] CWS Capital Project Justifications Book Common Plant p.125 and 126.

[309] D.96-12-066 p.5.

CM and SI factors.[310] CWS fails to justify the reasonableness of its request and even states the actual values may differ from the proposed percentages.

IV. CONCLUSION

The Commission should adopt the recommendations presented above which have been incorporated in the calculations for Cal Advocates' RO Table 7-1, Utility Plant in Service, included in Cal Advocates' Executive Summary and Results of Operations Report, Appendix RO Tables.

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[310] CWS Response to Public Advocates Office Data Request SIB-043 #1 Attachment #1 CM-SI Projects.

CHAPTER 17 Design and Permitting Only Projects

I. INTRODUCTION

This chapter presents the analyses and recommendations for proposed projects where CWS only requests funding in this rate case for design and permitting throughout its districts.

II. SUMMARY OF RECOMMENDATIONS

The Commission should not allow funding in this rate case for the projects shown in Table 17-1 for design and permitting. CWS may pursue the design and permitting phase of projects shown in Table 17-1 and present it in the next rate case where there is more clarity on the project scope and cost. CWS in the next rate case may request funding for the project, including all prudent design and permitting costs.

III. ANALYSIS

CWS requests certain projects that it anticipates spanning over multiple rate cases due to the complexity of projects.[311] In this rate case, CWS only requests funding for: 1) 100% design drawings and project documents; and 2) obtaining all necessary permits.[312] Table 17-1 lists the projects CWS proposes where funding for only design and permitting is being requested in this rate case.

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[311] Common Plant Issues Capital Project Justification, p. 159.

[312] Common Plant Issues Capital Project Justification, pp. 159-160.

Table 17-1: Design and Permitting Only Projects– 2021 GRC[313]

PID	District	Project Description	Project Year Start	Design/Permitting Completion Year	2021 GRC Direct Cost
124424	Bayshore	SC-117 Station Rebuild	2023	2023	$ 234,960
124427	Bayshore	SM-17 Station Rebuild	2023	2023	$ 99,043
124399	Bear Gulch	BG Wildfire New Pump Station King Mountain Road	2023	2024	$ 368,350
123185	Bakersfield	BK 87 Station Rebuild	2023	2024	$ 216,157
123979	Chico	CH 50 Partial Station Rebuild	2023	2023	$ 171,699
124797	Chico	CH 64 Wildfire Pump Storage Facility	2023	2024	$ 352,220
123411	Dominguez	DOM 279 Station Rebuild	2023	2023	$ 280,128
123415	Dominguez	DOM 298 Station Rebuild	2023	2023	$ 280,128
124079	East Los Angeles	ELA Main Replacement I-5 Crossing	2022	2024	$ 348,865
124092	Hermosa Redondo	HR 5 Station Rebuild	2023	2024	$ 244,276
124339	Hermosa Redondo	HR 26 Station Rebuild	2023	2024	$ 189,038
124429	Hermosa Redondo	HR 27 Station Rebuild	2023	2024	$ 218,219
124433	Kern River Valley	Arden 009 Station Rebuild	2023	2023	$ 120,199
124508	Kern River Valley	Split Mountain 005 Station Rebuild	2023	2023	$ 170,710
123896	Los Altos	LAS 34 Storage Tank	2023	2024	$ 209,641
123913	Los Altos	LAS Station 117 Rebuild	2023	2024	$ 230,462
124342	Los Altos	LAS Station 42 Wildfire Booster Pumps	2023	2024	$ 313,836
123506	Livermore	Station 8 New Booster Station	2023	2024	$ 277,381

[313] Common Plant Issues Capital Project Justification, pp. 160-161.

PID	District	Project Description	Project Year Start	Design/Permitting Completion Year	2021 GRC Direct Cost
124359	Oroville	ORO 17 – New Well Design and Permit	2023	2023	$ 474,496
123934	Palos Verdes	PV Station 37 – New Water Storage Tank	2022	2024	$ 1,338,054
124232	Palos Verdes	PV Station 14 Rebuild	2022	2024	$ 411,026
124233	Palos Verdes	PV Station 15 Rebuild	2022	2024	$ 890,490
124243	Palos Verdes	PV Station 23 Rebuild	2022	2024	$ 493,968
123623	Redwood Valley	HKN Station 1 Rebuild	2022	2023	$138,198
123811	Salinas	SLN Las Lomas Intertie	2024	2024	$88,195
123839	Salinas	SLN 71 Station Rebuild	2022	2024	$449,708
123881	Salinas	Wildfire SLN 039: Arsenic Treatment	2023	2024	$596,659
125060	Salinas	SLN 78 New Well	2022	2024	$1,164,284
124896	Salinas	STK Station 85 – Arsenic Treatment	2022	2023	$570,465
125459	Salinas	WLK 7 Driveway and Wall	2022	2022	$95,130

CWS plans to request funding for the construction portion of the projects in the 2024 rate case.[314]

One issue with CWS' approach is the uncertainty of the project scope and the large project cost discrepancy. CWS acknowledges the complexity of the projects shown in Table 17-1due to the number of unique project challenges and significant number of project unknowns at this stage of the project.[315] This is also demonstrated by the duration of project design and permitting phase of the projects shown in Table 17-1. The duration project design and permitting process for some of the projects spans across the entire current rate case cycle. The long design and permitting timeline suggest that the project

[314] Common Plant Issues Capital Project Justification, p. 160.

[315] Common Plant Issues Capital Project Justification, p. 159.

scope is underdeveloped, likely resulting in additional project costs not already incorporated in the original project scope. In addition, some of the projects are dependent on other proposed projects to be completed, such as acquiring land. CWS' ability to complete these projects or changes to the original project scope will affect the overall project cost and scope.

The uncertainty in the project scope is further emphasized by the project cost range. CWS provides a total project cost range for the projects shown in Table 17-1 above. CWS states that the estimated construction cost ranges were developed based on Association for the Advancement of Cost Engineers (AACE) International's accuracy range for Class 5 project cost estimate.[316] CWS adjusted the accuracy ranges as necessary depending on the magnitude of the project unknowns, CWS' current confidence in the cost estimate, and CWS' certainty in whether the current project accounts for the entire project scope.[317] The estimated constructed cost for these projects is shown in Table 17-2 below.

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[316] CWS Response to Public Advocates Office Data Request JMI-007 (Design and Permitting Only Projects), #1.

[317] CWS Response to Public Advocates Office Data Request JMI-007 (Design and Permitting Only Projects), #1.

Table 17-2: Estimated Construction Costs for 2024 GRC – Design Only Projects in 2021 GRC[318]

PID	District	Project Description	2021 GRC Direct Cost	2024 GRC Total Estimated Construction Cost
124424	Bayshore	SC-117 Station Rebuild	$ 234,960	$650,000 - $850,000
124427	Bayshore	SM-17 Station Rebuild	$ 99,043	$1,000,000 - $1,450,000
124399	Bear Gulch	BG Wildfire New Pump Station King Mountain Road	$ 368,350	$2,300,000 - $3,500,000
123185	Bakersfield	BK 87 Station Rebuild	$ 216,157	$700,000 -$1,100,000
123979	Chico	CH 50 Partial Station Rebuild	$ 171,699	$500,000 - $900,000
124797	Chico	CH 64 Wildfire Pump Storage Facility	$ 352,220	$2,300,000 - $3,500,000
123411	Dominguez	DOM 279 Station Rebuild	$ 280,128	$1,200,000 - $1,800,000
123415	Dominguez	DOM 298 Station Rebuild	$ 280,128	$1,200,000 - $1,800,000
124079	East Los Angeles	ELA Main Replacement I-5 Crossing	$ 348,865	$1,600,000 -$2,400,000
124092	Hermosa Redondo	HR 5 Station Rebuild	$ 244,276	$750,000 -$1,000,000
124339	Hermosa Redondo	HR 26 Station Rebuild	$ 189,038	$700,000 - $900,000
124429	Hermosa Redondo	HR 27 Station Rebuild	$ 218,219	$1,000,000 -$1,500,000
124433	Kern River Valley	Arden 009 Station Rebuild	$ 120,199	$150,000 - $250,000
124508	Kern River Valley	Split Mountain 005 Station Rebuild	$ 170,710	$300,000 - $500,000
123896	Los Altos	LAS 34 Storage Tank	$ 209,641	$1,200,000 - $1,800,000
123913	Los Altos	LAS Station 117 Rebuild	$ 230,462	$1,400,000 - $2,000,000
124342	Los Altos	LAS Station 42 Wildfire Booster Pumps	$ 313,836	$1,300,000 - $1,900,000
123506	Livermore	Station 8 New Booster Station	$ 277,381	$1,000,000 -$1,400,000
124359	Oroville	ORO 17 - New Well Design and Permit	$ 474,496	$2,000,000 -$2,500,000

[318] CWS Response to Public Advocates Office Data Request JMI-007 (Design and Permitting Only Projects), JMI-007 Attachment 1 – Individual Project Cost Estimates. Common Plant Issues Capital Project Justification, pp. 160-161.

PID	District	Project Description	2021 GRC Direct Cost	2024 GRC Total Estimated Construction Cost
123934	Palos Verdes	PV Station 37 - New Water Storage Tank	$ 1,338,054	$10,500,000 - $12,000,000
124232	Palos Verdes	PV Station 14 Rebuild	$ 411,026	$1,500,000 -$2,000,000
124233	Palos Verdes	PV Station 15 Rebuild	$ 890,490	$2,500,000 -$3,000,000
124243	Palos Verdes	PV Station 23 Rebuild	$ 493,968	$1,500,000 -$2,000,000
123623	Redwood Valley	HKN Station 1 Rebuild	$138,198	$300,000 - $400,000
123811	Salinas	SLN Las Lomas Intertie	$88,195	$500,000 - $750,000
123839	Salinas	SLN 71 Station Rebuild	$449,708	$2,200,000 -$3,300,000
123881	Salinas	Wildfire SLN 039: Arsenic Treatment	$596,659	$1,750,000 -$2,500,000
125060	Salinas	SLN 78 New Well	$1,164,284	$2,600,000 -$3,900,000
124896	Salinas	STK Station 85 - Arsenic Treatment	$570,465	$1,400,000 -$2,200,000
125459	Salinas	WLK 7 Driveway and Wall	$95,130	$400,000 - $600,000

In response to discovery, CWS provided the cost estimates for the projects shown in Table 17-2 above.[319] CWS states that the projects shown in Table 17-2 have a contingency cost of twenty percent,[320] which accounts for the unexpected costs that occur during project construction. Table 17-3 below shows the how much additional project cost uncertainty there is in the upper project cost range in comparison to the direct project cost.

[319] CWS Response to Public Advocates Office Data Request JMI-007 (Design and Permitting Only Projects), #1.

[320] CWS Response to Public Advocates Office Data Request JMI-007 (Design and Permitting Only Projects), #1.

Table 17-3: Upper Project Cost Range Exceeding Direct Project Cost[321]

PID	District	Project Description	Direct Cost - Project Cost Estimate	Total Estimated Construction Cost- Upper Range	Project Contingency	Percent Upper Cost Range Exceeding Direct Cost
124424	Bayshore	SC-117 Station Rebuild	$ 690,006	$ 850,000	20%	23.19%
124427	Bayshore	SM-17 Station Rebuild	$ 1,199,101	$ 1,450,000	20%	20.92%
124399	Bear Gulch	BG Wildfire New Pump Station King Mountain Road	$ 2,905,661	$ 3,500,000	20%	20.45%
123185	Bakersfiel d	BK 87 Station Rebuild	$ 916,243	$ 1,100,000	20%	20.06%
123979	Chico	CH 50 Partial Station Rebuild	$ 505,625	$ 900,000	20%	78.00%
124797	Chico	CH 64 Wildfire Pump Storage Facility	$ 2,904,349	$ 3,500,000	20%	20.51%
123411	Domingue z	DOM 279 Station Rebuild	$ 1,535,236	$ 1,800,000	20%	17.25%
123415	Domingue z	DOM 298 Station Rebuild	$ 1,561,045	$ 1,800,000	20%	15.31%
124079	East Los Angeles	ELA Main Replacement I-5 Crossing	$ 1,969,002	$ 2,400,000	20%	21.89%
124092	Hermosa Redondo	HR 5 Station Rebuild	$ 745,768	$ 1,000,000	20%	34.09%
124339	Hermosa Redondo	HR 26 Station Rebuild	$ 676,754	$ 900,000	20%	32.99%

[321] CWS Response to Public Advocates Office Data Request JMI-007 (Design and Permitting Only Projects), JMI-007 Attachment 1 – Individual Project Cost Estimates. Common Plant Issues Capital Project Justification, pp. 160-161. CWS states that the cost estimates for the Los Altos (LAS) Station 117 Rebuild (PID 123913), Palos Verdes (PV) Station 14 Rebuild (PID 124232), PV Station 15 Rebuild (PID 124233), PV Station 23 Rebuild (PID 124243), and Hermosa Redondo (HR) Station 27 Rebuild (PID 124429) projects were based on averages of similar projects available. For the Salinas Las Lomas Intertie project (PID 123811), CWS states that the project is an engineering study and that the final project scope has not yet been determined.

PID	District	Project Description	Direct Cost - Project Cost Estimate	Total Estimated Construction Cost- Upper Range	Project Contingency	Percent Upper Cost Range Exceeding Direct Cost
124429	Hermosa Redondo	HR 27 Station Rebuild	$ 1,500,000	$ 1,500,000	20%	0.00%
124433	Kern River Valley	Arden 009 Station Rebuild	$ 205,134	$ 250,000	20%	21.87%
124508	Kern River Valley	Split Mountain 005 Station Rebuild	$ 413,980	$ 500,000	20%	20.78%
123896	Los Altos	LAS 34 Storage Tank	$ 1,508,090	$ 1,800,000	20%	19.36%
123913	Los Altos	LAS Station 117 Rebuild	$ 1,750,000	$ 2,000,000	20%	14.29%
124342	Los Altos	LAS Station 42 Wildfire Booster Pumps	$ 1,615,896	$ 1,900,000	20%	17.58%
123506	Livermore	Station 8 New Booster Station	$ 1,223,161	$ 1,400,000	20%	14.46%
124359	Oroville	ORO 17 - New Well Design and Permit	$ 2,595,238	$ 2,500,000	20%	-3.67%
123934	Palos Verdes	PV Station 37 - New Water Storage Tank	$ 13,239,402	$12,000,000	20%	-9.36%
124232	Palos Verdes	PV Station 14 Rebuild	$ 1,500,000	$ 2,000,000	20%	33.33%
124233	Palos Verdes	PV Station 15 Rebuild	$ 2,800,000	$ 3,000,000	20%	7.14%
124243	Palos Verdes	PV Station 23 Rebuild	$ 1,750,000	$ 2,000,000	20%	14.29%
123623	Redwood Valley	HKN Station 1 Rebuild	$ 355,702	$ 400,000	20%	12.45%
123811	Salinas	SLN Las Lomas Intertie	$ 600,000	$ 750,000	20%	25.00%
123839	Salinas	SLN 71 Station Rebuild	$ 2,783,967	$ 3,300,000	20%	18.54%

PID	District	Project Description	Direct Cost - Project Cost Estimate	Total Estimated Construction Cost- Upper Range	Project Contingency	Percent Upper Cost Range Exceeding Direct Cost
123881	Salinas	Wildfire SLN 039: Arsenic Treatment	$ 1,784,002	$ 2,500,000	20%	40.13%
125060	Salinas	SLN 78 New Well	$ 3,243,762	$ 3,900,000	20%	20.23%
124896	Salinas	STK Station 85 - Arsenic Treatment	$ 1,838,804	$ 2,200,000	20%	19.64%
125459	Salinas	WLK 7 Driveway and Wall	$ 476,503	$ 600,000	20%	25.92%

AACE International Class 5 Cost Estimates is for projects where there is no level of design completed.[322] As shown in Table 17-3 above, the upper project cost range significantly adds to the contingency already incorporated in the direct project cost already designated at the preliminary design phase. This further demonstrates the uncertainty with the current direct project cost.

Due to the uncertainty of the project scope and cost, no funding should be allowed in this rate case for design and permitting. CWS may pursue the design and permitting phase of projects shown in Table 17-1 and present it the next rate case where is there is more clarity on the project scope and cost. CWS in the next rate case may request funding for the project, including all prudent design and permitting costs. This will provide more transparency on the project costs borne by the ratepayers. CWS in its Project Justification Book provides reports from consultants hired by CWS for developing the project scope for the proposed projects that have not been approved by the Commission.[323]

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[322] Common Plant Issues Capital Project Justification, p. 121.

[323] Some of the reports included in the Capital Project Justification Books include, but not limited to:

IV. CONCLUSION

The Commission should not allow funding in this rate case for the projects shown in Table 17-1 for design and permitting. CWS may pursue the design and permitting phase of projects shown in Table 17-1 and present it the next rate case where is there is more clarity on the project scope and cost. CWS in the next rate case may request funding for the project, including all prudent design and permitting costs.

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consultant cost estimates, consultant preliminary design work, groundwater supply studies, geotechnical investigation reports, consultant tank inspection report, consultant tank seismic assessment report.

CHAPTER 18 Special Request #5: Multi-GRC Projects

I. INTRODUCTION

CWS requests multiple projects in this rate case where CWS acknowledges would not be completed in this rate case.[324] CWS requests preapproval for water supply and storage projects that are uncertain at this time due to long project design and construction period.[325] CWS does not expect to include the project costs in rates until the 2024 rate case at the earliest.[326] This chapter presents recommendations for the handling of the projects being requested through Special Request 5.

II. SUMMARY OF RECOMMENDATIONS

The Commission should not grant preapproval for the projects, shown in Table 18-1 below, because the projects that have not been studied and it is not known at this time whether the projects are viable and cost-effective. CWS can choose to pursue and complete projects and seek cost recovery in a future rate case once the project has been completed. The Commission can then determine if the completed project is necessary, prudent, and used and useful before granting cost recovery. The project cost for current advice letter projects shown in Table 18-2 should not be included in rates proposed in the 2024 rate case. CWS should not be able to recover the project costs until the project is completed and providing a service to ratepayers.

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[324] Common Plant Issues Capital Project Justification, p. 162.

[325] Common Plant Issues Capital Project Justification, p. 162.

[326] Common Plant Issues Capital Project Justification, p. 162.

III. ANALYSIS

CWS requests project approval for projects that CWS acknowledges would not be completed until the 2024 rate case cycle.[327] CWS has separated projects that span over multiple rate cases into two separate categories: 1) projects where CWS only requests funding in this rate case for design and permitting;[328] and 2) projects CWS request pre-approval as "conditional" advice letters (under Special Request #5).[329] CWS states that it requests supply and storage projects under Special Request #5 where CWS acknowledges the project uncertainty at this time due to extended project design and construction project timeline.[330] The total direct project cost for the projects requested under Special Request #5 is approximately $17,785,684.[331] Table 18-1 below lists the projects CWS is requesting under Special Request #5.

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[327] Common Plant Issues Capital Project Justification, p. 162.

[328] Common Plant Issues Capital Project Justification, pp. 159-161.

[329] Common Plant Issues Capital Project Justification, pp. 162-163.

[330] Common Plant Issues Capital Project Justification, p. 162.

[331] Common Plant Issues Capital Project Justification, p. 163

Table 18-1: Multi-GRC Capital Projects Proposed in the 2021 GRC Capital Project Justification Books for Special Request #5[332]

PID	District	Description	Direct Cost (to be presented in the 2024 GRC)
126224	Bear Gulch	Brackish Aquifer Conductivity Test	$ 536,151
126230	Bayshore - MPS		$ 1,072,302
126241	Bayshore - SSF		$ 536,151
123434	Bakersfield	BK 2023 Well Replacement Program	$ 2,920,402
124507	Kern River Valley	Kernville New Storage Tank	$ 1,770,395
124239	Los Altos	LAS New Well for Zone 375	$ 3,826,614
123501	Livermore	LIV New Well	$ 3,632,816
123887	Salinas	SLN 76 - New Well	$ 3,397,745

CWS' testimony distinguishes the difference between the projects requested through Special Request #5 and the projects where CWS only requests funding for the project's design and permitting in this rate case.[333] For the projects in which CWS only requests funding for in this rate case for permitting and project design, CWS states that there is project delay due to the time between completing the project design (requested in the 2021 rate case) and waiting for approval of construction phase of the project (in the 2024 rate case).[334] CWS requests preapproval for the projects requested through Special Request #5 to avoid the project approval time associated with requesting approval in future rate cases.[335] However, the projects proposed under Special Request #5 face

[332] Common Plant Issues Capital Project Justification, p. 163, Table 1 (Summary of the Multi-GRC Capital Projects Presented in the 2021 GRC PJ Books for Special Request #5). The total project cost for the Brackish Aquifer Conductivity Test is $2,144,604. The project cost is distributed between Bayshore – Mid-Peninsula (MPS) (50%), Bayshore – South San Francisco (SSF) (25%), and Bear Gulch (25%).

[333] Common Plant Issues Capital Project Justification, p. 162.

[334] Common Plant Issues Capital Project Justification, p. 162.

[335] Common Plant Issues Capital Project Justification, p. 162.

similar challenges as the design and permitting only projects due to the project complexity and permitting requirements. CWS does not request funding in this rate case for the projects proposed under Special Request #5.[336]

CWS also requests to include previously approved advice letters as part of Special Request #5 as shown in Table 18-2 below.

Table 18-2: Previously Approved Advice Letters CWS Requests to Include in Special Request #5[337]

PID	District	Project Description	Project Budget	Revised Project Year
114684	Bear Gulch	BG- New Well, Treatment - Low Zone	$ 4,336,023	2025
99341	Dominguez	IX Treatment DOM 297	$ 5,097,130	2025
115845	Salinas	New Well at Salinas Oak Hills	$ 2,537,139	2025
115959	Salinas	New Well at Salinas - Las Lomas	$ 1,583,332	2025

CWS states that these advice letters created under Special Request #5 status would be accompanied with certain "conditions", such as:

1. CWS would be required to include the costs of the future conditional advice letters in the revenue requirement proposed in the 2024 GRC.
2. In its 2024 GRC Application, CWS would provide an update demonstrating the progress of each project and how the intended costs and benefits of the project are still in line with expectations.
3. Authorization would be for "future" advice letter status in that Cal Water would be precluded from seeking cost recovery through the advice letter process until after the projects are reviewed again in the 2024 GRC, which should be resolved by the end of 2025.[338]

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[336] Common Plant Issues Capital Project Justification, p. 162.

[337] CWS Additional Testimony, p. 35. CWS also requests to include land purchased for the land for the future well site for PID 114684 (PID 97750).

[338] CWS Additional Testimony, p. 36.

The problem with preapproving these projects and designating them for future advice letters is the lack of transparency of final project costs and uncertainty CWS of CWS' ability to complete these projects as scheduled.

Advice letters are informal request by the utility to the Commission to approve rate changes, terms of service (including changes in tariffs), or proposed utility actions that have not been approved in a previous proceeding.[339] Advice letters request to recover funding for completed plant addition projects that are separate from CWS' proposed rate increase in its rate case application. This presents a lack of transparency to ratepayers concerning the true project costs.[340] In addition, there is no evidentiary record of the actual project costs and the review for reasonableness and prudency that is required for these projects. This lack of transparency is detrimental to ratepayers and limits their ability to understand why their rates exceed the adopted rates.

CWS plans to include the project costs in the rates in the 2024 rate case.[341] CWS' request assumes that these projects will be completed by 2025 or by the end of the 2024 rate case. There have been a number of ongoing similar projects that have been previously approved by the Commission that have spanned over multiple rate cases as shown in Table 18-3 below.

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[339] General Order 96-B, p. 2.

[340] There is no transparency in the project cost discrepancy between projects presented in the 2024 rate case and the true project cost.

[341] CWS Testimony, p. 36.

Table 18-3: Current Advice Letter Project Spanning Multiple Rate Cases[342]

PID	District	Project Description	Estimated Completion Year				
			2009 GRC	2012 GRC	2015 GRC	2018 GRC	2021 GRC
61972	Bayshore	Land - San Mateo Well	n/a	2015	2015	2021	2025
20775	Dominguez	Drill, Develop, and Equip New Well - Central Basin	2011	2013	2016	2018	2023

In addition, CWS also states that it has recently completed similar projects that have expanded over multiple rate case as shown in Table 18-4 below.

Table 18-4: Recently Completed Projects Spanning Multiple Rate Cases[343]

PID	District	Project Description	Estimated Completion Year				
			2009 GRC	2012 GRC	2015 GRC	2018 GRC	2021 GRC
59413	Bayshore	MPS Station 119 - Tank 2	2012	2013	2016	2018	2020
63772	Bayshore	Station 6 Tank Replacement	n/a	2015	2015	2018	2021
59393	Bayshore	MPS Station 120 - Tank 2	2012	2013	2016	2018	2020

[342] CWS 2012 GRC D.12-07-007, Exhibit A, pp. 168-169. CWS Report on the Results of Operations, Bayshore District) (A.15-07-007) ("2015 GRC CWS Bay Area RO Report"), p. 51. CWS Report on the Results of Operations, Bay Area Region (Bayshore /Redwood Valley) (A.18-07-001) ("2018 GRC CWS Bay Area RO Report"), Attachment A, p. 159. CWS 2009 GRC D.10-12-017, Attachment C, p. 158. CWS Report on the Results of Operations, Dominguez District (A.12-07-007) ("2012 GRC CWS Dominguez RO Report"), p. 26. CWS Report on the Results of Operations, Dominguez District (A.15-07-015) ("2015 GRC CWS Dominguez RO Report"), p. 50. CWS Report on the Results of Operations, Dominguez District (A.18-07-001) ("2018 GRC CWS Dominguez RO Report"), Attachment A, p. 112. CWS Report on the Results of Operations, Dominguez District (GRC CWS Dominguez RO Report"), Attachment C, p. 1.

[343] CWS 2012 GRC D.12-07-007, Exhibit A, pp. 170-171. 2015 GRC CWS Bay Area RO Report, p. 51. 2018 GRC CWS Bay Area RO Report, Attachment A, p. 160. CWS Bay Area RO Report, Attachment A, p. 185. CWS 2009 GRC D.10-12-017, Attachment C, p. 283. CWS Report on the Results of Operations, Bayshore District (A.12-07-007) ("2012 GRC CWS Bayshore RO Report"), p. 25. 2015 GRC CWS Bayshore RO Report, Attachment C, p. 56. 2018 GRC CWS Bay Area Region RO Report, Attachment A, p. 159. CWS GRC CWS Bay Area RO Report, Attachment A, p. 185. PID 59413 and PID 59393 was originally adopted as PID 20533 in the 2009 rate case. In the 2012 rate case, CWS split PID 20533 into two projects: PID 59413 and PID 59393.

If a proposed project were to span beyond 2025, then ratepayers would be responsible for funding a project in which ratepayers receive no benefit. Given similar projects have expanded over multiple rate cases, it is possible that the projects listed in Table 18-1 would not be completed by 2025. Therefore, the Commission should not preapprove these projects.

CWS may pursue to complete these projects, but they should not be able to recover the project cost until these projects are complete and providing service to ratepayers. CWS may request to recover the cost of these projects after the projects are completed and the actual costs can be reviewed for reasonableness and prudency. Similarly, the project cost of the current advice letter projects shown in Table 18-2 above should not be included in the proposed rates in the 2024 rate case. The current advice letter projects in Table 18-2 were already approved and were expected to be completed. Given these projects are not yet complete, CWS should not be able to recover the project costs until they are complete and providing a service to ratepayers.

CWS has demonstrated that it is willing to pursue capital plant projects prior to receiving approval from the Commission if CWS deems they are important. For example, CWS purchased land intended for a future well site in the Bear Gulch District (PID 97750).[344] CWS originally requested funding in the 2015 rate case to purchase land for a future well site. However, in settlement, the Parties agreed not to include PID 97750.[345] CWS deemed it important to purchase land for a potential well site and purchased a land site in 2017, without receiving prior approval from the Commission.[346]

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[344] The proposed well site was intended to install under PID 114684 (formerly PID 99102 in the 2015 rate case).

[345] CWS 2015 GRC D.16-12-042, Exhibit A, pp. 210-211.

[346] CWS Report on the Results of Operations, Bear Gulch District (A.18-07-001) ("2018 GRC CWS Bear Gulch RO Report"), Attachment B, p. 34.

IV. CONCLUSION

The Commission should not grant preapproval for projects shown in Table 18-1 due to the project complexity and the uncertainty regarding when the project will be completed. In addition, CWS should not be able to recover any prudent costs related to the advice letter projects shown in Table 18-2 until the projects are completed and providing a benefit to ratepayers. Moreover, the Commission should not treat these projects as conditional advice letters due to the lack of transparency and evidentiary record of the actual project costs for reasonableness and prudency.

CHAPTER 19 Special Request #6 – Subsequent Rate Change

I. INTRODUCTION

This chapter addresses CWS's request to include rate changes to base rates after filing its General Rate Case Application 21-07-001, and before the start of the new test year of January 1, 2023.[347]

II. SUMMARY OF RECOMMENDATIONS

The Commission should allow CWS to include the results of proceedings and subsequent cost offsets approved by the Commission in base rates before the start of the new test year of January 1, 2023. After the Commission issues a rate case decision, CWS should be required to notify customers of the resulting rate increase and explain the reasons for the increase.

III. ANALYSIS

CWS requests Commission approval to incorporate subsequent rate changes into a final rate in this GRC. These subsequent rate changes are offsets and proceeding items that are authorized by the Commission through the advice letter (AL) process and proceeding filings (e.g. offsets for purchase water price increases, offsets for rate base, and proceedings such as cost of capital).[348] CWS proposes to reflect rate change calculations into final rates for the offsets and proceedings that could be potentially approved by Commission before the test year rate goes into effect on January 1, 2023.

During the filing of its July 2021 application,[349] CWS notified its customers regarding the requested revenue requirement increase and its impact on customers'

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[347] CWS Additional Testimony Book (Final for July), Chapter 6. Subsequent Rate Changes, page 38.

[348] CWS Response to Cal Advocates Data Request SN2-002, Q.1

[349] CPUC Rules of Practice and Procedure (May 1, 2021), California Code of Regulations, Title 20, Division 1, Chapter 1. (Rule 3.2) Authority to Increase Rates. (d) page 29.

average monthly bills.[350] By including other rate changes, it gives the perception that CWS was granted a higher revenue requirement than the amount requested in its 2023 test year GRC filing. However, including the subsequent rate changes into this proceeding would streamline the regulatory process and likely reduce customer confusion, messaging fatigue, and the Commission's and CWS's staff's workload.[351]

The Commission should authorize the subsequent rate changes in the revenue requirement and final rates adopted for the 2023 test year. As a condition of approval, after the Commission issues a 2021 rate case decision, CWS should notify its customers explaining the resulting rate increase of the GRC and the reasons for the increase. These notices will help alleviate customer confusion regarding why the adopted rates exceed the rates noticed to customers in the initial application filing in July 2021.

IV. CONCLUSION

The Commission should authorize CWS's special request #6 if CWS provides customer notice and explanation about the rate increase, in order to mitigate the risk of customer confusion about final adopted rates.

(https://www.cpuc.ca.gov/proceedings-and-rulemaking/rules-of-practice-and-procedure).

[350] CWS Response to Cal Advocates Data Request SN2-006, Response C.1.a.

[351] The Cal Advocates Report on Special Requests (SRs), Danilo Sanchez, page 88.

CHAPTER 20 Water Quality

I. INTRODUCTION

This chapter presents analysis and recommendations on water quality for CWS's water systems in 21 regions and districts. CWS operates 50 individual water systems,[352] under permits from the State Water Resources Control Board's Division (SWRCB or State Board) of Drinking Water (DDW). CWS's water supply generally comes from groundwater wells, purchased treated water, and treated surface water (Bakersfield and Kern River Valley).

Investor-owned water utilities are required to submit information about water quality as part of each utility's general rate case (GRC) application. In accordance with these requirements, CWS submitted water quality information in its response to the Minimum Data Requirements (MDR). The following recommendations for water quality are based on review of CWS's testimony, its application, and the most recent DDW inspection reports available for CWS' water systems. Cal Advocates also contacted DDW representatives to obtain updates on the agency's appraisal of CWS's water systems.[353]

II. ANALYSIS

Table 20-1 lists water systems in each district with corresponding information on the most recent available inspection reports. DDW citations and systems with water quality issues are also included in the subsequent discussion where appropriate.

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[352] CWS Response to Cal Advocates Data Request SN2-004, Q.1.

[353] Cal Advocates contacted DDW representatives between September 2021 and January 2022 by email.

Table 20-1 CWS's Water System – Inspection Report/Letters

Region/District	Water Systems	Most Recent DDW Inspection Report
Bakersfield	Bakersfield	2019
Bakersfield	North Garden	2021
Bay Area Region - RDV	Armstrong Valley	2013
Bay Area Region - RDV	Coast Springs	2020
Bay Area Region - RDV	Hawkins	2018
Bay Area Region - RDV	Lucerne	2019
Bay Area Region - RDV	Noel Heights	2019
Bay Area Region - RDV	Rancho del Paradiso	2013
Bayshore	San Carlos (Mid Peninsula)	2017
Bayshore	San Mateo (Mid Peninsula)	2017
Bayshore	South San Francisco	2020
Bear Gulch	Bear Gulch	2019
Chico	Chico	2019
Chico	Hamilton City	2020
Dixon	Dixon	DDW will update on 1/2022
Dominguez	Dominguez	2017
East Los Angeles	East Los Angeles	DDW will update on 1/2022
Hermosa Redondo	Hermosa Redondo	2015
Kern River Valley	Kernville****	DDW will update on 12/2021

Kern River Valley	Lakeland	2020
Kern River Valley	Lower Bodfish	2019
Kern River Valley	Onyx	2019
Kern River Valley	Riverkern Mutual (operate)	2019
Kern River Valley	Southlake Squirrel Valley	2020
Kern River Valley	Split Mountain	DDW will update on 12/2021
Kern River Valley	Upper Bodfish	2019
Livermore	Livermore	DDW will update on 1/2022
Los Altos	Los Altos	2020
Los Angeles Region - Antelope Valley	Fremont Valley	2019
Los Angeles Region - Antelope Valley	Grand Oaks	2021
Los Angeles Region - Antelope Valley	Lake Hughes	DDW will update on 1/2022
Los Angeles Region - Antelope Valley	Lancaster	DDW will update on 1/2022
Los Angeles Region - Antelope Valley	Leona Valley	DDW will update on 1/2022
Los Angeles Region - Antelope Valley	Palos Verdes	DDW will update on 1/2022
Marysville	Marysville	2018
Oroville	Oroville	2021
Salinas Valley Region	Country Meadows	2016
Salinas Valley Region	King City	2021
Salinas Valley Region	Las Lomas	2017
Salinas Valley Region	Oak Hills	2017
Salinas Valley Region	Salinas Hills*	2018
Salinas Valley Region	Salinas**	2018
Selma	Selma	2020
Stockton	Stockton	2020
Travis	Travis	2019
Visalia	Mullen	2019
Visalia	Tulco	2019
Visalia	Visalia	2019
Westlake	Westlake	2018
Willows	Willows	2020

A. DDW Citations

DDW issued four notices of violation to CWS's water systems during the years 2018 to 2021.[354] CWS's water systems, Bear Gulch, Dominguez, Lower Bodfish and Hawthorne, were cited for failing to collect water samples for analysis of a particular

[354] CWS 2021 Minimum Data Request (MDR) Book, page 125, Section II.G.6. These are fewer citations issued by DDW to CWS's water systems that occurred between 2013 and 2017.

parameter on the designated locations and schedules. The violations are summarized in Table 20-2 below.

Table 20-2: Summary of DDW Citations/Notices[355]

Region/District	Water System	DDW Citation/Notice
Rancho Dominguez	Hawthorne	2019 - Citation No. 04-22-19C-002: CWS failed to submit required analysis results of Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5) of a sampling station.
Bear Gulch	Bear Gulch	2018 - Notice of Violation: CWS failed to collect one sample and failed to submit the required report.
Kern River Valley	Lower Bodfish	2018 – Enforcement Letter: CWS received a compliance order for bacteriological monitoring and reporting violation.
Dominguez	Dominguez	2018 - Notice of Violation: CWS failed to comply with the monitoring requirements of the Disinfection By Product (DBP).

For the systems not meeting monitoring and reporting requirements, CWS is required to provide public notification (via newspaper and/or consumer confidence report (CCR) and submit a corrective action plan to DDW. In cases where CWS employees neglected to collect the necessary samples as scheduled, CWS provided the affected district a report of the sampling schedule, assigning a superintendent to ensure samples and necessary data are collected on schedule at the designated locations, and providing training to district staff on sampling schedule.[356]

B. Capital Projects Related to Water Quality

The quality of water that CWS provides to its customers must meet primary and secondary federal and state drinking water standards. Sources of water that do not meet drinking water standards are taken off-line and placed on inactive or standby status until treatment can be provided. The need to treat contaminated water and costs of treatment

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[355] CWS Additional Testimony, page 243, Chapter 25. Water Quality, Section 5. DDW Citation Issued to CWS.

[356] Cal Advocates February 2019 Report on Plant – Common Issues for CWS A.18-07-001, pages 6 to 7.

systems must be evaluated comprehensively in conjunction with the available source of supplies and demand in a water system. Therefore, recommendations regarding CWS's proposed capital projects to address water quality issues are provided in the specific district reports.[357]

C. Future Water Quality Regulations

In its response to MDR Item G.8, CWS discussed several regulations that were set or revised by the states and the federal government within the next five years and their potential impact on CWS's operations. The regulations include perchlorate, chromium 6, PFASs, algal toxins, and the Revised Total Coliform Rule.

The following analysis is based on review of several new California or Environmental Protection Agency regulations enacted between 2023 and 2025 that impact CWS's operations. CWS will install several additional treatment systems to maintain compliance with the potential new regulations. However, certain maximum contaminant levels (MCLs) such as chromium-6, perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) are still unknown at this time.

1. Perchlorate

Currently, perchlorate has a California MCL of 6 µg/L. In 2015, the Office of Environmental Health Hazard Assessment (OEHHA) of the California Environmental Protection Agency revised Public Health Goal (PHG) for perchlorate from 6 µg/L to 1 µg/L. DDW, at a July 5, 2017, public hearing, presented findings and recommendations related to DDW's review of the perchlorate MCL to the State Water Board. DDW's recommendations were to first establish a lower detection limit for purposes of reporting (DLR) to gather additional occurrence data, and then revise the MCL, if the new data supports development of a new standard.[358] State Water Board Resolution 2018-0008,

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[357] For detailed projects and recommendations, see the specific district reports on plant by Cal Advocates.

[358] Perchlorate in Drinking Water| California State Water Quality Control Board (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Perchlorate.html, Date accessed: October 2, 2021).

adopted revised Detection Limits for Purposes of Reporting (DLR) for Perchlorate of 2 µg/L and 1 µg/L.[359] The Perchlorate DLR regulation was approved and effective as of July 1, 2021.[360] CWS is currently treating one well in East LA district for the perchlorate contaminant.

2. Chromium-6

The Superior Court of Sacramento County ordered the SWRCB to remove the hexavalent chromium (chromium-6) MCL from the California Code of Regulations.[361] The MCL for chromium-6 was eliminated due to insufficient documentation on the economic feasibility of compliance. As of September 2017, the maximum contaminant level for chromium-6 is no longer in effect. However, the MCL for total chromium of 50 µg/L remains in place. [362] It is not clear when the SWRCB will establish a new MCL for hexavalent chromium. However, the SWRCB continues to believe that chromium-6 is a threat to public health and is working to establish a new MCL, which could be the same as the previous MCL.[363]

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[359] Perchlorate Final Rulemaking | California State Water Resources Control Board (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/perchlorate_final_rulemaking.html Date accessed: October 2, 2021).

[360] Perchlorate | California State Water Resources Control Board (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/perchlorate2.html Date accessed: October 2, 2021).

[361] Chromium-6 Drinking Water MCL | California State Water Resources Control Board (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chromium6.html Date accessed October 9, 2021). "On May 31, 2017, the Superior Court of Sacramento County issued a judgment invalidating the hexavalent chromium maximum contaminant level (MCL) for drinking water. The court ordered the State Water Resources Control Board (State Water Board or Board) to take the necessary actions to delete the hexavalent chromium MCL from the California Code of Regulations and to file with the court by August 15 proof that it has done so."

[362] Chromium-6 Drinking Water MCL | California State Water Quality Control Board (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chromium6.html Date accessed October 9, 2021).

[363] Frequently Asked Questions about Hexavalent Chromium in Public Water Systems. Q.3 (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/chromium6/chrome_6_faqs.pdf Date Access: 10/10/2021).
Hexavalent chromium is still present in the water supply of many public water systems at levels that may be a threat to public health. Because of this, the Board will establish a new MCL for hexavalent

CWS received grants from the Department of Water Resources and the Water Research Foundation.[364] CWS currently continues treating wells for chromium-6 contaminant in Dixon, Willow, Las Lomas, and Oak Hills systems.[365]

3. Algal Toxins

Algal toxins are toxic substances released by some types of algae when they are present in large quantities (blooms) and decay or degrade. High nutrient levels and warm temperatures often result in favorable conditions for algae blooms to form. These blooms can be identified as floating mats of decaying, bad-smelling and gelatinous scum. One type of algae, cyanobacteria (also referred to as blue-green algae), naturally occurs in all freshwater ecosystems. When algae blooms form and cyanobacteria degrade, algal toxins are released that can be harmful to aquatic and human life.[366]

Cyanotoxins are toxins that produce cyanobacteria. The Division of Drinking Water (DDW) has initiated the process of developing notification and response levels for four cyanotoxins: microcystins, cylindrospermopsin, anatoxin-a, and saxitoxin. On February 4, 2021, DDW made a formal request for recommendations to the Office of Environmental Health Hazard Assessment (OEHHA).[367] On May 3, 2021, OEHHA

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chromium as close to the public health goal set by the Office of Environmental Health Hazard Assessment as is technologically and economically feasible. The new standard could be at the same level as the invalidated one.

[364] Chromium-6 Research and Treatment in Willows - Cal Water (https://www.calwater.com/latest-news/2015-0206-chromium-6-research-and-treatment-in-willows/#:~:text=A%20%245%20million%20grant%20awarded%20by%20the%20Department,anion-exchange%20resin%20to%20remove%20chromium-6%20from%20the%20water, Date Access: 10/10/2021). CWS received the grant in 2015.

[365] CWS Additional Testimony, pages 230-231, Chapter 25. Water Quality, Section 5. Updated on Chromium-6 Treatment.

[366] Indicators: Algal Toxins (microcystin) | US EPA, (https://www.epa.gov/national-aquatic-resource-surveys/indicators-algal-toxins-microcystin, Date accessed 10/10/2021).

[367] Drinking Water Notification Levels | California State Water Resources Control Board (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/NotificationLevels.html, Date accessed: 10/10/2021).

submitted to the SWRCB notification level (NL) recommendations for four cyanotoxins.[368] CWS has developed an Algal Toxin procedure that requires sampling and provides directions for appropriate actions that should be taken depending on values detected during seasonal algal bloom periods for the Bear Gulch, Lucerne, Bakersfield, Oroville and Kern River Valley Districts.

4. Perfluorooctanoic acid (PFOA) and Perfluorooctaniesulfonic acid (PFOS)

PFOS and PFOA are part of a larger group of chemicals called PFAS. PFOS and PFOA are persistent in the environment and resistant to typical environmental degradation processes. As a result, they are widely distributed across all trophic levels and are found in soil, air, and groundwater at sites across the United States. The toxicity, mobility, and bioaccumulation potential of PFOS and PFOA result in potential adverse effects on the environment and human health.[369]

On August 23, 2019, the SWRCB released revised guidance revising Notification Levels (NLs) for PFOA to 5.1 ppt, and PFOS to 6.5 ppt, with the Response Level (RL) for both remaining at 70 ppt. On February 6, 2020, the RL was lowered to 10 ppt for PFOA and 40 ppt for PFOS.

California has not yet established an MCL for PFOA or PFOS. The SWRCB has begun issuing monitoring requirements to potentially vulnerable water systems. The SWRCB estimates that an MCL for PFOA and PFOS will become effective in the fall of 2023 at the earliest (Figure 20-1).

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[368] https://oehha.ca.gov/water/crnr/notice-availability-notification-level-recommendations-four-cyanotoxins-drinking-water.

[369] Technical Fact Sheet – Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA) (epa.gov), (https://www.epa.gov/sites/default/files/2017-12/documents/ffrrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf).

Figure 20-1: Estimated timeline for PFOA and PFOS MCL development

In addition, the OEHHA has not yet established a Public Health Goal ("PHG") for PFOA and PFOS. A PHG is the level of a chemical contaminant in drinking water that does not pose a significant risk to health. State law requires SWRCB to set drinking water standards for contaminants as close to the PHG as technologically and economically possible.[370]

DDW issues orders for CWS to continue monitoring for PFAS until further notice at select sites in specific districts (Chico, Visalia, East LA, Oroville, Bakersfield, Bakersfield North Garden, Marysville, Stockton, Livermore, Kernville, Lakeland, Willows). In 2020 and 2021, CWS established PFAS treatments using Granular Active Carbon (GAC) vessels in the Visalia district.[371]

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[370] https://oehha.ca.gov/water/public-health-goals-phgs.

[371] CWS Additional Testimony Book (Final for July), Chapter 25. Water Quality, pages 225 and 252.

CHAPTER 21 America's Water Infrastructure Act (AWIA) Report and Emergency Response Plan (ERP) Submission

I. INTRODUCTION

This chapter presents review, analysis, and recommendations regarding CWS's America's Water Infrastructure Act (AWIA) report submissions to address whether CWS complies and is on track to continue meeting AWIA requirements.[372] This chapter also presents an evaluation of CWS's Emergency Response Plan ("ERP") to determine whether CWS's ERP complies with the Rate Case Plan's requirement through its certifications with the United States Environmental Protection Agency ("EPA") and Division of Drinking Water ("DDW") of the California State Water Resources Control Board.[373]

II. SUMMARY OF RECOMMENDATIONS

The Commission should find that CWS submitted its certifications to the EPA in compliance with the certification requirements of the newly enacted America's Water Infrastructure Act ("AWIA") in a timely manner.[374] Also, CWS's ERP complies with the Rate Case Plan's requirement that CWS provide "confirmation of compliance with EPA Vulnerability Assessment and Office of Emergency Services Response Plan."[375]

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[372] America's Water Infrastructure Act of 2018 (Pub.L No. 115-270 (Oct. 23, 2018) 132 Stat. 3765).

[373] Cal Advocates contacted DDW representatives in September 2021 by email.

[374] America's Water Infrastructure Act: Risk Assessments and Emergency Response Plans. (https://www.epa.gov/waterresilience/awia-section-2013).

[375] CPUC D.07-05-062 ("CPUC Rate Case Plan"), Appendix A, at p. A-28.

III. ANALYSIS

AWIA is a risk assessment and mitigation process required by the Federal Government.[376] On October 23, 2018, America's Water Infrastructure Act (AWIA) was signed into law. AWIA Section 2013 requires community (drinking) water systems serving more than 3,300 people to develop or update risk assessments and emergency response plans (ERPs). The law specifies the components that the risk assessments and ERPs must address and establishes deadlines by which water systems must certify to EPA completion of the risk assessment and the ERP.[377]

CPUC General Order 103-A Section VII.3 states that ERPs must follow DDW's requirements.[378] DDW's Emergency Response Plan Guidance published in 2015 states that several federal and state statutes and regulations form the legal requirements of ERPs.[379] United States Public Law 107-188 ("Pub.L. 107-188"), also known as the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, requires ERPs to include plans, procedures, and identification of equipment that can be used in the event of an attack on the public water system. Section 8607.2 of the California Government Code requires public water systems with 10,000 or more connections to review and revise disaster preparedness plans in conjunction with related agencies, including fire departments.[380] California Health and Safety Code Sections

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[376] CWS Additional Testimony, page 96, Q. What is the America Water Infrastructure Act of 2018 (AWIA) and how does it apply to Cal Water?

[377] America's Water Infrastructure Act: Risk Assessments and Emergency Response Plans | US EPA, https://www.epa.gov/waterresilience/awia-section-2013.

[378] CPUC General Order 103-A Section VII.3 – Emergency/Disaster Response Plan, p. 29.

[379] DDW Emergency Response Plan Guidance for Public Water Drinking Systems Serving Population 3,300 or more (approximately 1,000 SC or more). (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/security/ddw_emergency_guidelines_0215.pdf).

[380] Cal. Gov. Code §8607.2. *See also,* State Water Resources Control Board Division of Drinking Water Emergency Response Plan Guidance for Public Drinking Water Systems Serving a population of 3,300 or more (approximately 1,000 SC or more). https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/security/ddw_emergenc

116460, 116555 and 116750 specify that the public must be notified of significant rises in bacterial count or other imminent dangers to health,[381] that water treatment operators be certified by the SWRCB,[382] and that tampering with a public water system is a felony.[383] California Waterworks Standards Section 64560 requires that well site control zones be established to protect sources against contamination.[384] CWS's ERP complies with each of these requirements.[385]

Pursuant to the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, CWS certified to the EPA that it conducted vulnerability assessments for each of its water systems with more than 3,300 customers. CWS provided a copy of its vulnerability assessment certificate for its water systems as part of the response to Minimum Data Requirement.[386]

CWS is complying with AWIA of 2018 and is on track to continue meeting AWIA requirements.[387] The AWIA requires the utilities to conduct risk and resilience

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y_guidelines_0215.pdf.

[381] California Legislative Information website, Health and Safety Code Section 116460, January 1, 1996. (https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=116460. Date accessed: October 2, 2021).

[382] California Legislative Information website, Health and Safety Code Section 116555, January 1, 2018. (https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=116555. Date accessed: October 2, 2021).

[383] California Legislative Information website, Health and Safety Code Section 116555, October 1, 2011. (https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=116750. Date accessed: October 2, 2021).

[384] State Water Resources Control Board Division of Drinking Water Emergency Response Plan Guidance for Public Drinking Water Systems Serving a population of 3,300 or more (approximately 1,000 SC or more). https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/security/ddw_emergency_guidelines_0215.pdf

[385] CWS Response to Cal Advocates Data Request SN2-005, Q.1.i, Q.2.i and Q.3.i.

[386] CWS 2021 MDR Book, Response to Minimum Data Requirement II.E-17, p.91. and CWS Response to Cal Advocates Data Request SN2-005, Q.1.i, Q.2.i and Q.3.i.

[387] America's Water Infrastructure Act of 2018 (Pub.L No. 115-270 (Oct. 23, 2018) 132 Stat. 3765).

1 assessment, develop and update an emergency response plan and submit certification of
2 its completion by the following due dates as shown in Tables 21-1 and 21-2.

Table 21-A Risk and Resilience Assessment Deadline

System Size	Deadline
≥100,000 people	3/31/2020
50,000-99,999	12/31/2020
3,301-49,999	6/31/2021

Table 21-B Emergency Response Plan Deadline

System Size	Deadline
≥100,000 people	9/30/2020
50,000-99,999	6/30/2021
3,301-49,999	12/30/2021

3 CWS splits AWIA compliance into 3 category priorities, with population size
4 being the driver of these classifications. Systems serving over 100,000 people have the
5 highest AWIA priority and are considered Priority 1. The risk assessment for these
6 systems was required to be completed by March 31, 2020. Priority 2 systems are those
7 serving a population between 50,000 and 99,999 people. The risk assessment for these
8 systems was required to be completed by December 31, 2020. Finally, Priority 3 systems
9 service between 3,301 and 49,999 people, and required completion was June 30, 2021.[388]
10 CWS provided proof of submitting certification to EPA for its compliance with
11 RRA and ERP for most of water systems and their due dates[389] as shown in Table 21-3:

[388] CWS Additional Testimony p. 97, lines 14-20.

[389] CWS Response to Cal Advocates Data Request SN2-005, Q.1.g and i, Q.2.g and i, Q.3.g and i.

Table 21-C CWS's RRA and ERP Submission Dates

Water Systems	RRA Submission	ERP Submission	Population
Priority 1			
Bakersfield	3/30/2020	9/27/20	258,035
Stockton	3/30/2020	9/27/20	172,748
East Los Angeles	3/30/2020	9/27/20	151,300
Dominguez	3/30/2020	9/27/20	142,914
Visalia	3/30/2020	9/27/20	139,924
Salinas-main system	3/30/2020	9/27/20	109,276
San Mateo	3/30/2020	9/27/20	106,058
Chico	3/30/2020	9/27/20	103,841
Priority 2			
Hermosa-Redondo	12/18/2020	6/30/2021	96,187
Palos Verdes	12/18/2020	6/30/2021	70,127
Los Altos	12/18/2020	6/30/2021	70,100
South San Francisco	12/18/2020	6/30/2021	62,628
Bear Gulch	12/18/2020	6/30/2021	60,864
Livermore	12/18/2020	6/30/2021	59,256
Priority 3			
San Carlos	12/18/2020	12/31/2021	29,554
North Garden[390]	6/30/2021	12/31/2021	24,208

[390] CWS Response to Cal Advocates Data Request SN2-005, Attachment 2. North Garden is a system in CWS's Bakersfield District. ERP Certification for the Bakersfield District includes the North Garden system.

Westlake	6/30/2021	12/31/2021	19,464
King City	6/30/2021	12/31/2021	14,441
Marysville	6/30/2021	12/31/2021	12,210
Oroville	6/30/2021	12/31/2021	10,600
Dixon	6/30/2021	12/31/2021	10,054
Willows	6/30/2021	12/31/2021	7,140
Salinas Hills	6/30/2021	12/31/2021	8,213
Oak Hills	6/30/2021	12/31/2021	3,904
Los Lomas	6/30/2021	12/31/2021	3,312

1 CWS submitted ERP certification for its remaining systems (priority 3) before the
2 EPA's deadlines.[391]

[391] CWS Response to Cal Advocates Data Request SN2-008, Attachment 1.

Attachment 21-1: Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY

OF

J SUSANA NASSERIE

Q.1 Please state your name and address.

A.1 My name is J Susana Nasserie, and my business address is 320 West 4th Street, Suite 500, Los Angeles, California 90013.

Q.2 By whom are you employed and what is your job title?

A.2 I am a Utilities Engineer in the Water Branch of the Public Advocates Office.

Q.3 Please describe your educational and professional experience.

A.3 I received a Master of Science Degree in Environmental Engineering from California State University of Fullerton in 2014.

I have been employed by the Public Advocates Office – Water Branch since September 2010 and participated in several GRCs. My previous professional experience includes Air Resources Engineer at the Air Resources Board where I worked from 2009 to 2010 in Mobile Source Control Division. From 2000 to 2009, I served as the Staff Programmer Analyst positions at the Los Angeles Regional Water Quality Control Board.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am responsible for Vehicle Budget in the Utility Plant in Service, Special Request #6, Water Quality, America's Water Infrastructure Act, and Result of Operations Model.

Q.5 Does that complete your prepared testimony?

A.5 Yes, it does.

Docket	:	A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie L. Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	Suliman Ibrahim
Witness(es)	:	

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

PUBLIC

REPORT ON ALLOCATIONS AND PLANT FOR CSS & RDOM DISTRICT, PIPELINE REPLACEMENT, AND PHYSICAL SECURITY

California Water Service Company

Test Year 2023 General Rate Case

A.21-07-002

San Francisco, California
February 04, 2022

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MEMORANDUM

The Public Advocates Office at the California Public Utilities Commission ("Cal Advocates") examined application material, data request responses, and other information presented by California Water Service Company ("CWS") in Application A.21-07-002 to provide the California Public Utilities Commission ("Commission" or "CPUC") with recommendations in the interests of ratepayers for safe and reliable service at the lowest cost. Mr. Suliman Ibrahim prepared this report under the general supervision of Program Manager Richard Rauschmeier, and Program & Project Supervisor Syreeta Gibbs, and Project Lead Brian Yu. Marybelle Ang and Caryn Mandelbaum are Cal Advocates legal counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any issue connotes neither agreement nor disagreement with the underlying request, methodology, or policy position related to that issue.

CHAPTER 1 EXECUTIVE SUMMARY

I. INTRODUCTION

This report presents analysis and recommendations on allocations, Customer Support Services ("CSS") and Rancho Dominguez ("RDOM") Plant in Service, Pipeline Replacement, and Physical Security Capital Projects in General Rate Case Application (A.) 21-07-002 filed by California Water Service Company (Cal Water or CWS). The recommendations herein also reflect recommendations in Cal Advocates' Report on Common Plant which address issues affecting plant estimates for CWS' districts.

II. SUMMARY OF RECOMMENDATIONS

Chapter 2 discusses allocations. Chapters 3 through 5 present plant analysis and recommendations for CSS and RDOM district, pipeline replacement, and physical security capital budgets respectively. Attachment 1-3 is a compilation of all CWS data responses to Cal Advocates' data requests referenced in this report.

CHAPTER 2 ALLOCATIONS

I. INTRODUCTION

This chapter presents analyses and recommendations for Allocations.

II. SUMMARY OF RECOMMENDATIONS

The Commission should require CWS to increase its base year 2020 revenue sharing on foreseeable revenue increases. The Commission should also require CWS to incorporate all available information into its forecasts to ensure the fairest possible rates.

The Commission should require CWS to remove 5.7% of total Customer Support Services ("CSS") expenses and 0.71% of CSS rate base to account for affiliate activity. These assets are used by all CWS affiliates and each company should pay its fair share.

III. ANALYSIS

A. Unregulated Revenue Allocations

CWS uses the "excess capacity" of its regulated assets to provide services to various entities. These services include water operations, billing, customer service contracts, and water quality testing. These services are also known as non-tariffed products and services ("NTPS"), unregulated, or non-regulated revenues.[1]

Commission Rule X of Appendix A in D.10-10-019 specify the rules for NTPS revenue sharing. The rules classify these unregulated revenues as active or passive. The Commission requires the utility to share revenues from active projects at a 90/10 split between shareholders and ratepayers. The Commission requires the utility to share revenues from passive activities at a 70/30 split between shareholders and ratepayers.[2]

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[1] CWS General Report July 2021, p.131, lines 3 to 7.

[2] Standard Practice U-21-W Non-Tariffed Service Offerings and Information on Affiliate Transactions, p.7.

CWS forecasts its revenue sharing using 2020 recorded amounts escalated to test year 2023.[3] In most cases, CWS' forecast method, is reasonable but using 2020 revenue sharing amounts does not account for expected increases in revenues from two nonregulated revenue sources.

CWS leases and operates water systems for the City of Commerce, and the City of Hawthorne.[4] The 2020 revenues from both sources were understated as discussed in greater detail below. The Commission should require CWS to update the 2020 recorded revenues used to forecast revenue sharing for both sources to more accurately reflect the revenue increases projected for the coming years.

1. City of Commerce Lease

CWS leases and operates the City of Commerce water system. This lease is classified as an active source of unregulated revenue and as such the Commission requires a 90/10 revenue sharing between shareholders and ratepayers. Commission rules also allow for the removal of certain costs known as passthrough costs. Standard Practice U-21-W states "costs for purchased water, purchased power, pump taxes, and postage are removed from the revenues to be shared."[5] Removal of these costs can result in revenue sharing below the 90/10 of total revenue threshold.

The table below shows revenue sharing in total dollars and as a percentage of total revenue for the Commerce lease between the years 2016 and 2020. As the table clearly shows, revenue sharing from the lease decreased considerably in 2020. CWS stated that this reduction in revenue was a result of PFOS detections in the city's wells which

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[3] CWS Response to Public Advocates Office Data Request SIB-002, #2.a.

[4] CWS Application Attachment B Financial Reports 2020 Annual Report, p.6.

[5] Standard Practice U-21-W Non-Tariffed Service Offerings and Information on Affiliate Transactions, p.8.

required CWS to shift to more purchased water which in turn nearly doubled the passthrough costs from previous years.[6]

Table 2-A City of Commerce Lease Revenue Sharing 2016 to 2020[7]

Year	2016	2017	2018	2019	2020
Total Revenues	$2,541,712.95	$3,436,867.14	$2,997,488	$2,886,637	$2,908,923
Revenue Sharing	$158,818.43	$236,452.43	$193,750	$169,941	$79,240
Revenue Sharing as % of Total Revenue	6.25%	6.88%	6.46%	5.89%	2.72%

As the table above clearly shows, revenue sharing as a percentage of total revenue remained stable at between 6% and 7% for the years 2016 through 2019. Total revenues also remained relatively stable for all five years. Revenue sharing dropped sharply in 2020 because of increased passthrough costs that resulted in lower sharable revenue for the year.

CWS states in its 2020 annual report that its agreement with the City of Commerce allows CWS to request a rate change annually to recover costs.[8] CWS further states, in response to discovery, that it is in discussions with the City about recovery resulting from increased costs due to PFOS contamination.[9] Based on this information it is only fair to account for these cost increases in future revenue sharing projections.

The Commission should require CWS to use 6.37% of the total 2020 revenue as a basis for future revenue sharing as opposed to the current 2.72%. This change would result in a $106,053 increase in the 2020 base revenue sharing value. The average annual revenue sharing as percentage of revenues for the years 2016 to 2019 is 6.37%. The 2.72% value for 2020 represents an outlier due to the increased passthrough costs

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[6] CWS Response to Public Advocates Office Data Request SIB-002, #2.c.

[7] CWS Report on Unregulated and Affiliate Operations, pp.41 to 45

[8] CWS Application Attachment B Financial Reports 2020 Annual Report, p.6.

[9] CWS Response to Public Advocates Office Data Request SIB-002, #2.e.

resulting from PFOS contamination. Given these costs will be mitigated when CWS receives its rate change, the 2016 to 2019 average represents a more accurate revenue sharing percentage.

2. City of Hawthorne Lease

CWS also leases and operates the City of Hawthorne water system. This lease is classified as an active source of unregulated revenue and as such the Commission requires a 90/10 revenue sharing between shareholders and ratepayers. Similar to the City of Commerce lease, the City of Hawthorne lease revenues include passthrough costs that lower revenue sharing below the 90/10 threshold.

The table below shows the total revenue and the revenue sharing for the Hawthorne lease between the years 2016 and 2020.[10] CWS is using the 2020 revenue sharing value as a basis for its projects for this rate case. The 2020 City of Hawthorne lease number does not account for two previously approved increases for the years 2021 and 2022.[11]

Table 2-B City of Hawthorne Lease Revenue Sharing 2016 to 2020[12]

Year	2016	2017	2018	2019	2020
Total Revenues	$8,545,694.06	$10,001,514.61	$10,122,598	$9,509,261	$10,458,289
Revenue Sharing	$509,744.43	$613,602.99	$591,559	$441,946	$515,946

In its annual report, CWS states it requested a rate increase of 11.6% in 2021 and 11.6% in 2022. CWS further states these rate increases were approved via City of Hawthorne resolution 8123.[13] CWS did not account for these rate increases in its

[10] CWS Report on Unregulated and Affiliate Operations p.41 to 45.

[11] CWS Response to Public Advocates Office Data Request SIB-002, #2.d.

[12] CWS Report on Unregulated and Affiliate Operations p.41 to 45

[13] CWS Application Attachment B Financial Reports 2020 Annual Report p.13.

1 forecasting because CWS considers the impact of revenue sharing on revenue
2 requirements to be relatively small.[14]
3 These revenue increases are known and already approved and should be included
4 in CWS' revenue sharing projections. CWS may consider a $100,000 reduction a
5 relatively small change to revenue requirement, but ratepayers are entitled to their fair
6 share of revenue sharing. There is no reason to deprive ratepayers of any revenue
7 requirement reductions that they are entitled to.
8 The Commission should require CWS to add both 11.6% increases to the 2020
9 base City of Hawthorne revenue sharing. This would increase the revenue sharing
10 amount used for projections from $515,946 to $642,588 which is a more appropriate
11 amount to base projections as it considers both 11.6% increases scheduled for 2021 and
12 2022.

13 **B. Affiliate Allocations**

14 CWS has five regulated affiliates in addition to its parent company. Those
15 affiliates are Washington Water Service Company ("WWSCO"), Hawaii Water Service
16 Company ("HWSCO"), New Mexico Water Service Company ("NMWSCO"), Texas
17 Water Service Company ("TWSCO"), and BVRT Holding Utility Company ("BVRT").
18 There are shared costs that are applicable to all these operations.[15] To ensure these costs
19 are distributed among the affiliates accurately and fairly, the Commission uses a four-
20 factor approach to distribute the shared expenses. CWS initially proposed to remove
21 1.92% of expenses and 0.70% of rate base from California customers' rates to account for
22 usage by its affiliates.[16] CWS later updated its calculations and proposed an affiliate
23 allocation of 1.86% for expenses and 0.71% for rate base.[17] After Cal Advocates pointed

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[14] CWS Response to Public Advocates Office Data Request SIB-002, #2.d.

[15] CWS General Report July 2021, p.128, lines 3 to 7.

[16] CWS General Report July 202,1 p.128, lines 19 to 21.

[17] CWS Response to Public Advocates Office Data Request SIB-033, #1.d. Attachment 1 Affiliate

1 out a significant mistake in CWS' calculation, CWS increased its proposed affiliate
2 allocation of shared expenses to 2.45%.[18]
3 Standard Practice U-6-W ("SP U-6-W") "Allocation of Administrative and
4 General Expenses and Common Utility Plant and the Four-Factor Method" describes the
5 standard procedures for the allocation of administrative and general expenses and
6 common utility plant among departments, districts, and states.[19] CWS uses a slightly
7 modified four-factor calculation from the one set forth in SP U-6-W to calculate its
8 allocations.[20]
9 There are several issues with CWS' affiliate allocation calculations. CWS bases
10 its forecast on 2019 and 2020 recorded numbers; however, these were based on the 2018
11 modified four factor and not the 2021 modified four-factor. In 2018 the modified four
12 factor calculated portion for CWS was 94.5%. In 2021 the modified four factor
13 calculated portion for CWS reduced to 93.2%. Tables 2-C and 2-D below show the 2018
14 and 2021 four factor calculations.

Allocation_2021 GRC v2 (003).

[18] CWS Affiliate Allocation_2021 GRC v3 provided in an email from Patrick Alexander dated 11/1/2021.

[19] Standard Practice U-6-W Allocation of Administrative and General Expenses and Common Utility Plant and the Four-Factor Method, p.2

[20] CWS General Report July 2021, p.128, lines 11 to 14.

1 **Table 2-C CWS 2018 Modified Four Factor Calculation**[21]

Modified Four Factor Calculation used in expense pool allocation					
		CWSCO	WWSCO	NMWSCO	HWSCO
Active Meter Size Equivalence	100%	**95.90%**	**2.02%**	**0.98%**	**1.10%**
Per Business Unit count					
2018 Budget Op Revenues	725,271	**683,446**	**11,770**	**4,491**	**25,563**
Per 2018 Budget	100%	**94.23%**	**1.62%**	**0.62%**	**3.52%**
Net Utility Plant Per 11/30/2017	2,010,093	1,869,896	31,263	16,471	92,463
Balance Sheet	100%	**93.03%**	**1.56%**	**0.82%**	**4.60%**
2018 Budgeted Direct Operating Expenses	502,259	**476,466**	**7,148**	**2,649**	**15,996**
Per 2018 Budget	100%	**94.86%**	**1.42%**	**0.53%**	**3.18%**
Modified Four Factor %	100%	**94.50%**	**1.66%**	**0.74%**	**3.10%**

2

3 **Table 2-D CWS 2021 Modified Four Factor Calculation**[22]

		CWSCO	WWSCO	NMWSCO	HWSCO
Active Meter Size Equivalence	100%	93.40%	4.30%	0.99%	1.31%
Per Business Unit count	912,441.0	852,235	39,224	9,071	11,911
2021 Operating Revenues	100%	92.86%	2.83%	0.59%	3.72%
Per 2021 Budget	800,400,415	743,287,848	22,625,258	4,737,310	29,750,000
Net Utilit Plant Per 11/30/2020	100%	92.93%	2.69%	0.66%	3.72%
Balance Sheet	2,623,093,119	2,437,549,101	70,586,844	17,349,950	97,607,223
2021 Direct Operating Expenses	100%	93.59%	2.66%	0.50%	3.26%
Per 2021 Budget	538,403,387	503,890,524	14,295,556	2,691,398	17,525,908
		93.20%	3.12%	0.69%	3.00%

4

5 Additionally, CWS does not include TWSCO and BVRT in its calculations.[23]

6 These companies became affiliates in May 2021.[24] CWS states that there is no historical

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[21] CWS Response to Public Advocates Office Data Request SIB-033, #3.d. Attachment 3 Modified Four Factor Calc_2021 (with TSWC).xls.

[22] CWS Response to Public Advocates Office Data Request SIB-033, #3.d. Attachment 3 Modified Four Factor Calc_2021 (with TSWC).xls.

[23] CWS General Report July 2021, p.128, line 22.

[24] CWS General Report July 2021, p.128, lines 22 to 23.

data to base additional allocations and that CWS anticipates any costs attributable to TWSC and BVRT to be de minimis.[25]

Since CWS has estimates of all the inputs necessary for a modified four factor calculation[26], Cal Advocates requested that CWS recalculate its four-factor analysis while including the new companies. CWS initially refused the request stating it believed the addition was improper.[27] Cal Advocates again requested that CWS provide the calculation and CWS provided an update calculation including TWSC, which owns 55% of BVRT. The updated modified four factor percentage is 92.98%. Table 2-E below shows the updated calculation.

Table 2-E CWS 2021 Four Factor Calculation including TWSCO[28]

		CWSCO	WWSCO	NMWSCO	HWSCO	TWSCO (Only 55% of BVRT)
Active Meter Size Equivalence	100%	93.15%	4.29%	0.99%	1.30%	0.27%
Per Business Unit count	914,941	852,235	39,224	9,071	11,911	2,500
2021 Operating Revenues	100%	92.79%	2.82%	0.59%	3.71%	0.08%
Per 2021 Budget	801,073,473	743,287,848	22,625,258	4,737,310	29,750,000	673,058
Net Utilit Plant Per 11/30/2020	100%	92.79%	2.69%	0.66%	3.72%	0.15%
Balance Sheet	2,626,983,259	2,437,549,101	70,586,844	17,349,950	97,607,223	3,890,141
2021 Direct Operating Expenses	100%	93.19%	2.64%	0.50%	3.24%	0.43%
Per 2021 Budget	540,727,548	503,890,524	14,295,556	2,691,398	17,525,908	2,324,160
		92.98%	3.11%	0.69%	2.99%	0.23%

CWS should forecast its affiliate sharing based on the most current information available. To do so, CWS must forecast using the latest four factor calculations that include the recently acquired companies. CWS cannot simply state it anticipates costs to be negligible and remove affiliates from the calculation. Moreover, the Commission's SP-U-6W provides clear instructions on the parameters that are to be used to calculate the

[25] CWS General Report July 2021, p.129, lines 1 to 3.

[26] CWS Response to Public Advocates Office Data Request SIB-033, #3.c.

[27] CWS Response to Public Advocates Office Data Request SIB-033, #3.d.

[28] CWS Response to Public Advocates Office Data Request SIB-033, #3.d. Attachment 3 Modified Four Factor Calc_2021 (with TSWC).xls.

four factor allocations. CWS deviation from SP-U-6W results in additional expenses being unfairly applied to California ratepayers.

SP-U-6W states "the purpose of this Standard Practice is to set forth procedures for the allocation of administrative and general expenses and common utility plant among departments, districts and states."[29] The Standard Practice also states that indirect expenses can be prorated based on an arithmetic average of four factors. The four factors are direct operating expenses, gross plant, number of employees and number of customers.[30]

Following SP-U-6W results in a CWS four factor of 89.28% as shown in Table 2-F. As the calculation shows, applying the methods described in SP-U-6W results in significantly different four factor allocations. Based on the Commission adopted Standard Practice, CWS ratepayers should be responsible for 5.22%,[31] less in expenses than CWS is proposing. CWS unfairly increases ratepayer burden by using its proposed modified four factor approach. The Commission should require CWS to follow the standards established in SP-U-6W and reject CWS' modified four factor calculation.

Table 2-F Four Factor Allocation According to SP-U-6W

		CWSCO	HWSCO	NMWSC	TWSCO	WWSCO
Direct Expenses	309,857,832	289,137,968	12,709,646	1,276,999	335,482	6,397,736
	100.00%	93.31%	4.10%	0.41%	0.11%	2.06%
Gross Plant	3,904,087,657	3,612,935,679	128,124,913	30,344,601	14,235,378	118,447,086
	100.00%	92.54%	3.28%	0.78%	0.36%	3.03%
Number of Employees	755	612	55	14	0	74
	100.00%	81.06%	7.28%	1.85%	0.00%	9.80%
Number of Customers	548,203	494,442	6,194	8,621	2,500	36,446
	100.00%	90.19%	1.13%	1.57%	0.46%	6.65%
	100.00%	89.28%	3.95%	1.15%	0.23%	5.39%

[29] Standard Practice U-6-W Allocation of Administrative and General Expenses and Common Utility Plant and the Four-Factor Method p.2

[30] Standard Practice U-6-W Allocation of Administrative and General Expenses and Common Utility Plant and the Four-Factor Method p.2

[31] 94.5% - 89.28% = 5.22%

1 CWS also has made a significant error in its overall calculation method. CWS
2 estimates the portion of each of four different expenses paid by CWS and by its affiliates.
3 The four expenses are payroll and benefits, ad valorem taxes, payroll taxes, and other.[32]
4 CWS then takes the calculated portions and divides them by the total CSS expenses.
5 Since CWS divides these portions by the total expenses, the addition of all four expense
6 percentages should equal the total percentage of total CSS expenses paid by the affiliates.
7 What is especially concerning is that CWS then takes the portion paid by affiliates
8 and multiplies that number by the total allocable expense ratio. This additional step does
9 not make sense. The percentage of the shared CSS expenses paid by the affiliates is
10 already calculated before the division step. The amounts paid are divided by the total
11 expenses and not just the shared expenses and as such, the percent is based on the total
12 expense amount and not only the shared amount. Multiplying the percent of total
13 expenses paid by affiliates by the total allocable expense ratio serves no purpose other
14 than to unfairly increase the burden of shared expenses placed on CWS customers. This
15 additional incorrect step reduces the portion of expenses paid by affiliates by half. CWS
16 has included this step in its calculations since at least the last rate case. In discussions
17 with Cal Advocates, CWS agreed that this step was not appropriate and submitted
18 updated calculations removing the step.[33] CWS' updated calculations result in an
19 affiliate allocation factor of 2.45%.[34]
20 CWS' proposed 2.45% calculation however still includes several mistakes. It
21 underestimates the portion of the shared expense by not including construction overhead
22 in the allocated expenses.[35] It also uses an out-of-date 2018 four factor of 94.5%. The

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[32] CWS Response to Public Advocates Office Data Request SIB-033, #1.d. Attachment 1 Affiliate Allocation_2021 GRC v2.

[33] CWS Affiliate Allocation_2021 GRC v3 provided in an email from Patrick Alexander dated 11/1/2021.

[34] CWS Affiliate Allocation_2021 GRC v3 provided in an email from Patrick Alexander dated 11/1/2021.

[35] Email from Patrick Alexander RE: [EXTERNAL] Re: Affiliate Allocations Calculation Follow-up

proposed calculation below corrects these mistakes by calculating the correct percentage of allocable expenses and using the SP-U-6W derived four factor of 89.28%.

Based on the calculations CWS provided, approximately 53.19% of total expenses are allocable.[36] That would mean that the allocable portion of the total CSS expense would be approximately $58,010,120,[37] and the non-allocable portion would be $51,046,680.[38] According to the four-factor allocation calculation, CWS should be allocated 89.28% of the allocable amount. CWS' portion would then be $51,791,435.[39] Based on these updated numbers, the affiliate allocation should be 5.7%.[40]

The Commission should require CSS to remove 5.70% of total CSS expenses and 0.71% of CSS rate base from its California rates. These percentages are based on the latest available four-factor calculations.

IV. CONCLUSION

The Commission should require CWS to calculate future revenue sharing using the most accurate means possible. Information that would result in more accurate estimates should not be ignored, regardless of the magnitude of the impact on overall revenue requirement. The Commission has a duty to ensure ratepayers are paying the

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Questions dated Monday 11/1/2021 at 12:33 PM.

[36] CWS Response to Public Advocates Office Data Request SIB-033, #1.d. Attachment 1 Affiliate Allocation_2021 GRC v2 (003). Allocable expenses for 2019 are sum of K6, L6, M6, and C57. Allocable expenses for 2020 are sum of P6, Q6, R6, and D57. Dividing the 2019 and 2020 allocable expenses by the total expenses in cells C58 and D58 respectively and averaging the two amounts results in an average allocable expense percentage of 53.19%.

[37] ($109,056,800 x 53.19)/100 = $58,010,120. CWS proposes $109,056,800 as the 2023 total CSS expenses on p.130 of its General Report.

[38] $109,056,800 - $58,010,120= $51,046,680.

[39] $58,010,120 x 89.28/100 = $51,791,435.

[40] 1 - (Allocable Expense+ Non-Allocable Expense) / Total CSS Expense which is (1 - (53,936,263 + $51,046,680) / $109,056,800) x 100 = 5.70%.

fairest prices possible. Accurately forecasting revenues and expenses using all available information is the best way to ensure fair and equitable rates.

The Commission should require that the CWS remove 5.70% of total CSS expenses and 0.71% of CSS rate base to account for affiliate usage. These assets are used by all CWS affiliates; therefore, each company should pay its fair share of the costs associated. CWS' failure to use current factors in its calculation results in ratepayers paying more than their fair share under CWS' proposed affiliate allocations. The recommended affiliate allocations take the most recent information into account. Forecasting affiliate allocations using the most current information is necessary to ensure just and equitable rates.

CHAPTER 3 Customer Support Services

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for CWS' Customer Support Services and Rancho Dominguez District. This district includes departments that support all operating districts.[41]

II. SUMMARY OF RECOMMENDATIONS

- The Commission should include $241,462 in 2022, $992,770 in 2023, and $485,450 in 2024 in rates for technological device replacement.
- The Commission should deny CWS' proposal to include $543,332 in rates for SAN controller replacement.
- The Commission should include $251,000 in rates for handheld meter replacements.
- The Commission should deny CWS' proposal to include $1,232,121 in direct costs in rates to raise the height of perimeter fencing at its Customer Support Services Campus by one to three feet.
- The Commission should deny CWS' proposal to include $616,107 in direct costs in rates for the PeopleSoft FS and PeopleTools upgrades.
- The Commission should deny CWS' proposal to include $917,525 in direct costs in rates for PeopleSoft procurement process improvements.
- The Commission should deny CWS' proposal to include $603,784 in direct costs in rates to implement an inventory management system.
- The Commission should deny CWS' proposal to include $710,892 in direct costs rates to install IDAM.
- The Commission should deny CWS' proposal to include $592,410 in direct costs in rates for a new DLP system.
- The Commission should deny CWS' proposal to include $612,511 in direct costs in rates for the installation of Zoom Rooms.
- The Commission should include $7,055,381 in rates for the proposed customer care and billing cloud upgrade project.

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[41] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.9.

- The Commission should deny CWS' proposal to include $750,308 in direct cost rates to establish omni-channel solutions.
- The Commission should deny CWS' proposal to include $427,284 in direct costs in rates to update its Climate Change Water Resources Monitoring and Adaption Plan.
- The Commission should deny CWS' proposal to include $756,046 in direct costs in rates for HVAC optimization.
- The Commission should deny CWS' proposal to include $582,937 in direct costs in rates to fund improvements to the RDOM building.
- The Commission should deny CWS' proposal to include $3,668,420 in direct costs in rates to build a satellite lab in its East Los Angeles district.
- The Commission should deny CWS' proposal for $432,503 in carryover budget for UPS and SAN array replacements.
- The Commission should include $641,772 for database encryption software.
- The Commission should include $149,877 in direct costs in rates for CSS GPS base stations.
- The Commission should include $63,037 and $42,025 in direct costs in rates for the install cover over spoils/dump area and car port/cover for vehicle maintenance projects respectively.
- The Commission should increase CWS' depreciation reserve by $6,220,891 to account for early retired projects.

These recommendations form the basis of the capital budget summary recommendations presented in Attachment 1-2 Capital Budget Summaries. Cal Advocates' estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding vehicle replacements and non-specific projects.

III. ANALYSIS

A. CSS PC Refresh

In response to discovery, CWS provided a list of devices it intends to replace, the year it intends to replace them, and the original purchase price.[42] The devices being

[42] CWS Response to Public Advocates Office Data Request SIB-004, #1.a.

replaced according to this updated list differ from those proposed in CWS' original testimony. Table 3-A below shows the updated device replacement list.

Table 3-A Updated Device Replacement List

Device	2022	2023	2024	Total
Workstation	4	2	3	9
Desktop	109	543	14	666
Laptop	73	212	18	303
Toughbook	0	0	45	45
iPad	30	185	141	356
iPhone	55	46	72	173
Sonim	0	0	246	246

CWS' vendor quotes for the different devices vary greatly from the recorded costs provided in discovery.[43] It is reasonable to expect replacement devices to cost roughly the same as the devices they are replacing. A slight increase to account for inflation is reasonable but there should not be significant increases in prices.

In discovery, CWS stated it receives bulk purchase discounts from suppliers but did not indicate if these discounts were reflected in the quotes.[44] Further, for items such as iPads, CWS' recorded costs vary greatly. For example, CWS provided cost information for 482 iPads purchased between 2014 and 2021. The cost of these iPads vary between $580 and $1,100.[45] It is important to note that these price variations are not based on the year the iPads were purchased, but on the specifications of each device.[46]

In the quotes CWS only provided costs for one iPad specification and one cost ($1,221.12) for all its replacement iPads. Including the cost of the most expensive iPad

[43] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office ,pp.20 to 27.

[44] CWS Response to Public Advocates Office Data Request SIB-004, #9.d.

[45] CWS Response to Public Advocates Office Data Request SIB-004, #1.a. Attachment Q1 – GRC Inventory.

[46] CWS Response to Public Advocates Office Data Request SIB-004, #1.a. Attachment Q1 – GRC Inventory.

easily inflates overall costs especially when CWS estimates it will replace 213 iPads over three years.

This discrepancy is not isolated to iPads. Between 2011 and 2021, CWS purchased 821 iPhones from Verizon and 12 iPhones from AT&T.[47] The average price for these iPhones was $110.85. Out of the 788 iPhones for which CWS provided cost data, 774 cost $100. 14 Phones purchased between 2003 and 2019 each had a cost greater than $100. In the last two decades, the price CWS pays for iPhones has not changed much, remaining relatively steady at roughly $100. It is unreasonable to estimate the cost of new iPhones at $436.99.[48]

Table 3-B below shows the recommended device costs based on recorded averages compared to CWS' proposed costs.[49]

Table 3-B Proposed Unit Cost Vs Recommended Unit Cost

Device	Proposed Unit Cost	Recommended Unit Cost	Difference
Desktop	$ 1,082.57	$ 805.64	$ 276.93
Laptop	$ 1,643.18	$ 1,367.55	$ 275.63
Toughbook	$ 4,358.81	$ 4,195.49	$ 163.32
iPad	$ 1,221.12	$ 1,008.00	$ 213.12
iPhone	$ 436.99	$ 110.84	$ 326.15

Table 3-C shows recommend replacement estimates based on the updated replacement schedule and the average escalated costs. These estimates do not include contingency allowances which is discussed in greater detail elsewhere.

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[47] CWS Response to Public Advocates Office Data Request SIB-004, #1.a. Attachment Q1 – GRC Inventory.

[48] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.19.

[49] The table does not include a comparison for workstations or Sonim phones as these two items were not included in CWS' original estimate.

Table 3-C Recommended Technological Devices Annual Budgets

	2022	Unit Cost	2023	Unit Cost	2024	Unit Cost
Laptop	73	$ 1,436.78	212	$ 1,472.70	18	$ 1,509.52
Desktop	109	$ 846.43	543	$ 867.59	14	$ 889.28
Toughbook	0	$ 4,407.88	0	$ 4,518.08	45	$ 4,631.03
iPhone	55	$ 116.45	46	$ 119.36	73	$ 122.35
iPad	30	$ 1,059.03	185	$ 1,085.51	141	$ 1,112.64
Sonim	0	$ 258.38	0	$ 264.84	246	$ 271.46
WorkStation	4	$ 1,535.16	2	$ 1,573.54	3	$ 1,612.88
Total		$241,462.16		$992,770.12		$485,449.78

The Commission should adopt $241,462 in 2022, $992,770 in 2023, and $485,450 in 2024 for technological device replacement. These costs are more accurate as they are based on an actual replacement schedule and the average recorded equipment costs escalated to current years.

B. Uninterruptable Power Supplies ("UPS") and Storage Replacement

In response to discovery, CWS indicted that the End of Life ("EOL") of a SAN controller is at six to seven years.[50] The SAN controllers in question were installed in June 2018 making the end of life between June 2024 and June 2025. Given the standard life of SAN controllers and the considerable costs involved in replacing them, it is reasonable to expect CWS to maximize use before replacement.

CWS should wait until 2025 to replace its current SAN controllers, as they are still within the estimated life expectancy. In response to a data request asking that CWS provide documents demonstrating why the SAN controller use cannot be extended, CWS did not provide support and instead responded that "from past experience with NetApp (OEM), it will be more beneficial if Cal Water purchases new controllers rather than keeping the old ones."[51] CWS also failed to provide any documentation or calculations

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[50] CWS Response to Public Advocates Office Data Request SIB-005, #1.a.

[51] CWS Response to Public Advocates Office Data Request SIB-005, #1.a.i.

to substantiate that assertion despite the request for documentation to show the SAN life could not be extended.

CWS' proposal is premature based on the information it provided. The Commission should deny CWS' proposal to include $543,332.42 in rates for SAN controller replacement. The current controllers are still within their six-to-seven-year life expectancy. The Commission should require CWS to maximize the use of these expensive assets.

C. Meter Reading Handheld Replacement

. The cost of an iOS device is approximately half the cost of a CN80 handheld devices.[52] CWS states that iOS devices are the "preferred meter reading alternative based on cost, ease of use and manageability by support staff."[53] Despite this fact, a data request response revealed that almost half of CWS' proposed replacement devices are CN80 handheld devices.[54]

Purchasing additional CN80 devices does not make sense. CN80 handhelds cost more, are specialized devices that have limited alternative uses, and provide little if any meter reading benefits over the iOS devices. CWS itself states that iOS devices are its preferred meter reading alternative. It is unclear why CWS chose to propose a budget based on replacing 44% of the current meters with a more expensive and less-preferred option.

Moreover, CWS states that implementing AMI in its system would negate the need for handheld devices and that these devices would be phased out as AMI meters are installed and put into service.[55] In its general report, CWS states it is in the process of

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[52] CWS Response to Public Advocates Office Data Request SIB-006, #2.c.

[53] CWS Response to Public Advocates Office Data Request SIB-006, #2.c.

[54] CWS Response to Public Advocates Office Data Request SIB-006, #5.a.

[55] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.33.

refining a proposal for a more comprehensive, company-wide AMI program that is currently scheduled for filing in the fourth quarter of 2021.[56] Considering this, it makes even less sense to invest in expensive limited use meters as opposed to iOS devices that can be used for alternative purposes.

To maximize the life of current assets and accomplish meter reading at the lowest reasonable cost, it would be more reasonable for CWS to purchase the 75 iOS devices requested and use those to begin replacing the FC300 meters. The FC300 meters will no longer be supported starting December 2021 but that does not mean the meters will no longer be functional. CWS can continue using the FC300 meters to supplement the new iOS devices it will acquire.

CWS can also use its current inventory of iOS devices to read meters. CWS states that ITRON provides an application that is supported on its currently owned devices that allow it to be used as a valid replacement for the FC300s.[57] CWS further states that the application requires the use of ITRON's mobile radios which are included in the project proposal.[58]

Removing the CN80 Handhelds and their related accessories reduces the estimated cost by $239,520. The estimated cost of the iPads and accessories are $94,125, the mobile radios are $124,800, and the labor cost for installation is $20,000.[59] This results in a total 2020 direct cost of $238,925. CWS is requesting a 10% contingency for this project that should not be included as further discussed in greater detail in the contingency section of the Report on Common Plant. Escalating the updated 2020 direct cost to 2022 using CWS' factors results in a total of approximately $251,000.

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[56] CWS General Report July 2021, p.12.

[57] CWS Response to Public Advocates Office Data Request SIB-006, #2.a.

[58] CWS Response to Public Advocates Office Data Request SIB-006, #2.a.

[59] CWS Response to Public Advocates Office Data Request SIB-006, #5.a.

The Commission should include $251,000 in rates for handheld meter replacements. This amount will allow CWS to purchase new iOS devices and mobile radios. The new devices can be supplemented with CWS' existing inventory of meters as well as its current inventory of iOS devices. The Commission should not add any costs related to ITRON CN80 handheld meter readers into rates. These devices are more expensive than iOS devices and do not provide any added benefits. The CN80 meters will also be rendered obsolete if CWS moves to AMR/AMI meters whereas the iOS devices can be repurposed.

D. Campus Security Fencing

The main issue with CWS' proposal to increase the San Jose Customer Support Service Campus fence height between 1 to 3 feet, is that it is unlikely to fully deter or prevent trespassing issues. No matter how high a fence is, it can always be easily bypassed. Fences can be climbed over, or cut, a determined intruder could even find other points to enter like vehicle gates for example. **<< BEGIN CONFIDENTIAL >>** [redacted] **<< END CONFIDENTIAL >>.**[60] While security is very important, it is equally critical that any funds ratepayers are asked to pay a return on be spent in a way that maximizes effectiveness.

During recent field visits in 2021, Cal Advocates discovered CWS uses camera monitoring to prevent trespassing at several sites. CWS monitors these closed caption TV ("CCTV") cameras using CWS Staff.[61] In some cases, CWS also uses third party providers to monitor the cameras.[62] The employees monitoring the cameras do so as part of their current duties and there are no employees whose sole job is to monitor CCTV.[63]

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[60] CWS Response to Public Advocates Office Data Request SIB-038, #1.c.

[61] CWS Response to Public Advocates Office Data Request SIB-031, #6.a.

[62] CWS Response to Public Advocates Office Data Request SIB-031, #6.a.

[63] CWS Response to Public Advocates Office Data Request SIB-031, #6.c.

This means additional employees are not needed to monitor cameras. Each camera system costs approximately $4,060.[64] CWS could install approximately 303 cameras with the funds it proposes to spend on perimeter fencing.

Cameras provide a viable solution to dealing with trespassers and are less prone to many of the issues a hard barrier like a fence suffers. Cameras can be easily hidden and placed out of reach to prevent tampering. CCTV monitoring would enable CWS employees to contact police directly whenever a trespassing incident occurs ensuring the safety of CWS employees and customers at a much lower price point than the cost of extending the fence by a few feet.

CWS provided four examples of trespassing incidents at the campus. In one incident, an intruder being chased by police, passed through the property, entering through the North fence and exited through the South.[65] For reference the current northside fence is between five to seven feet and the southside fence is between 5.5 to 6 feet.[66] In two incidents, facility staff were able to get the intruder to leave. In the last incident police were called and the intruder fled.[67] All of these incidents could have easily been solved through camera monitoring. Camera monitoring technology is less expensive and accessible as anyone familiar with a Ring Doorbell can attest. Cameras can even be setup to detect motion and alert only once they do so.

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[64] CWS Capital Project Justifications, Physical Security Justifications and Other Matters Public Version, p.20

[65] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.50.

[66] CWS Response to Public Advocates Office Data Request SIB-008, #1.b.

[67] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.50.

<< BEGIN CONFIDENTIAL >> [redacted] **<< END CONFIDENTIAL >>**

The Commission should deny CWS' proposal to include $1,232,120 in direct costs in rates to raise the height of perimeter fencing at its Customer Support Services Campus by one to three feet. Instead, CWS can monitor its existing CCTV cameras at the facility. CCTV cameras are cost effective, less prone to tampering, and can be monitored using existing resources.

E. PeopleSoft FS & PeopleTools Upgrade

CWS proposes $616,106 in 2024 to upgrade its PeopleSoft Financials ("PeopleSoft FS") and PeopleTools program. CWS estimates 2000 hours of consulting services and 2000 hours of internal labor effort annually for the years 2022 through 2024 to accomplish the upgrades. The upgrades will add new functionalities to the system.

CWS states Oracle has committed to supporting its version of PeopleSoft until 2027.[72] CWS also states the proposed upgrades will help extend the life of PeopleSoft FS for at least one more rate cycle.[73] The proposed upgrades are therefore a stop-gap

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[68] CWS Response to Public Advocates Office Data Request SIB-038, #1.d.

[69] CWS Response to Public Advocates Office Data Request SIB-038, #1.a.

[70] CWS Response to Public Advocates Office Data Request SIB-038, #1.c.

[71] CWS Response to Public Advocates Office Data Request SIB-031, #6.a.

[72] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.71.

[73] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.70.

measure intended to only serve ratepayers for a few years. CWS estimates the project completion date as December 31, 2024,[74] meaning best case scenario, CWS will be able to utilize the full upgrades for a maximum of three years.

Spending funds on a software that will be obsolete in a few years is not an efficient use of resources. In discovery, CWS was asked to provide a cost benefit analysis comparing replacement of PeopleSoft with alternative software. CWS was also asked to consider the projected lack of support after 2027. CWS responded "the Company plans to perform the evaluation of financial ERP[75] systems, including PeopleSoft before the next rate case."[76]

CWS should have evaluated other systems before deciding to spend money on upgrades. The issue is magnified by the fact CWS is asking for additional funds to upgrade other aspects of PeopleSoft (Procurement Process Improvements and Inventory Management System). These projects are discussed in greater detail in their respective sections. Both projects are scheduled to be completed on December 31, 2024,[77] [78] and cost a combined $1,521,309. This would bring the total investment in PeopleSoft upgrades from these three projects to $2,137,415 in direct costs.

If CWS decides to use an alternative software after its evaluation or Oracle decides to discontinue support of CWS' version after 2027, ratepayers would have spent over two million dollars on projects with a maximum life expectancy of three years.

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[74] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.72.

[75] Enterprise Resource Planning

[76] CWS Response to Public Advocates Office Data Request SIB-009, #1.b.

[77] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.72.

[78] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.86.

CWS should evaluate its other software options and decide on an appropriate cost-effective solution instead of investing in a software it knows has limited remaining life.

The Commission should deny CWS' proposal to include $616,106 in direct costs into rates for the PeopleSoft FS and PeopleTools upgrades. CWS' PeopleSoft software has limited remaining life with Oracle, the software provider, only committing to support the program till 2027. CWS should instead evaluate its other software options and invest in a software that will not need to be replaced in three years.

F. Procurement Process Improvements

CWS proposes an upgrade to its PeopleSoft system. PeopleSoft will no longer be supported after 2027 and will need to be replaced. CWS proposes a total direct cost of $2,137,415. The proposed upgrades are due to be completed in 2024 and will only serve till 2027. Spending over two million dollars on software improvements to a program we already know has limited remaining life expectancy makes no sense.

CWS states it is likely to replace the system at some point once PeopleSoft is no longer supported.[79] CWS also states this is a decision that has to be made in coordination with other departments using PeopleSoft financials.[80] CWS further states its current PeopleSoft ERP system is aging and there is a need to replace the system in the future.[81] Given the need to replace PeopleSoft in the near future, it does not make sense for CWS to heavily invest in a system that has limited remaining life.

CWS states the magnitude and effort to replace PeopleSoft P2P system including eProcurement, Purchasing, Inventory, Expense Report and Accounts Payable is like replacing a human resources management system. CWS also states it recently completed a replacement of its human resources management system for a total cost of $5.6

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[79] CWS Response to Public Advocates Office Data Request SIB-011, #4.e.

[80] CWS Response to Public Advocates Office Data Request SIB-011, #4.e.

[81] CWS Response to Public Advocates Office Data Request SIB-011, #4.a.

million.[82] Based on this information, the money CWS is proposing to spend on just improving three facets of its PeopleSoft system could have covered almost half of the cost to replace the entire system with a new more efficient system that will serve CWS and ratepayers much longer than the limited time PeopleSoft will still be in service.

It is unclear why CWS chose to delay the PeopleSoft system changeout and instead focused on spending funds on improvements that will soon be obsolete and, therefore, provide limited benefits. These PeopleSoft projects will not be complete until December 2024 and the program may no longer be supported starting in 2027. CWS should investigate its system replacement options and present its findings in its next rate case. In the meantime, CWS should continue to use its current systems and not invest funds in something that will need to be replaced in the immediate future.

The Commission should deny CWS' proposal to include $917,524 in direct costs in rates for PeopleSoft procurement process improvements. PeopleSoft has limited remaining life and it does not make sense to continue to invest into the program only to replace it next rate case.

G. Inventory Management System

CWS' proposed inventory management system is an enhancement to its current PeopleSoft inventory system. CWS proposes to implement PeopleSoft Mobile Inventory Management.[83] The issue with this approach, as mentioned in previous sections, is PeopleSoft as an application will no longer be supported after 2027. In response to discovery regarding the likelihood of replacing the PeopleSoft system after it is no longer supported in 2027, CWS states "we are likely to replace the system at some point."[84]

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[82] CWS Response to Public Advocates Office Data Request SIB-011, #4.a.

[83] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.90.

[84] CWS Response to Public Advocates Office Data Request SIB-012, #2.d.

This project is scheduled for completion on December 31, 2024.[85] That would mean the system will only be operational for approximately three years. It does not make sense for ratepayers to fund a system that will soon be non-functional. CWS states the decision to replace PeopleSoft needs to be made in coordination with other departments using PeopleSoft Financials.[86] CWS also states that it will evaluate alternative systems before the next rate case.[87] CWS should have evaluated its options before deciding to invest in its current limited life PeopleSoft software.

In the case of inventory management, CWS has a viable alternative to the proposed PeopleSoft upgrade. CWS could use a material-supplier based inventory system. A material-supplier based inventory system would directly cost CWS little if anything. The main issue with a material-supplier based system, according to CWS, is that it would limit future negotiation power as the company could be locked to a single supplier.[88]

While this may be an issue, CWS always has the option to purchase from other suppliers and record certain items using its current inventory management system if the cost savings justify switching suppliers. It is unclear how many suppliers CWS uses. A substantial portion of the projects reviewed had only one vendor quote attached. For example, CWS states they obtained quotes from one vendor because the vendor provided the best pricing compared to other projects CWS has done,[89] or that they only obtained verbal quotes from other vendors because CWS has found a certain vendor is consistently

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[85] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.92.

[86] CWS Response to Public Advocates Office Data Request SIB-012, #2.d.

[87] CWS Response to Public Advocates Office Data Request SIB-009, #1.b.

[88] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, 89.

[89] Public Advocates Data Request SIB-019, #4.c.

lower in cost than other vendors.[90] Based on this, it is logical to expect CWS to choose a material-supplier it knows by experience is generally more cost effective to use.

Conversely, CWS could always continue to use its current system if it believes this is the more cost-effective option. Either solution would only have to last until CWS' next rate case. By then, CWS will have investigated alternative software programs that can replace PeopleSoft and can invest in upgrades that will serve the Company and ratepayers for many years to come.

The Commission should deny CWS' proposal to include $603,784 in rates to implement an inventory management system. The PeopleSoft program on which the proposed system is based will no longer be supported after 2027. Ratepayers should not have to pay for the return CWS would make on a capital investment with a limited remaining life only to pay again for the return CWS would make on a capital investment to install an alternative, replacement solution one rate case later.

H. Identity Management Access System

CWS proposes $710,892 in 2024 to install a centralized Identity and Access Management System ("IDAM"). IDAM software would allow employees to log in using a central portal and be "authenticated to all other internal systems and applications automatically."[91]

Because a substantial portion of this request rests on the increased efficiency resulting from IDAM software, Cal Advocates requested that CWS provide a cost benefit analysis "comparing the cost of IDAM software to the cost of increased work Cal Water anticipates in its absence."[92] CWS responded by stating on average, the helpdesk

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[90] Public Advocates Data Request SIB-004, #9.f.

[91] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.93.

[92] Public Advocates Data Request SIB-013, #2.a.

processes 670 password reset requests each month manually.[93] CWA further stated the cost of these password resets is approximately $11,166 or $134,000 per year.[94] CWS provided no other costs associated with not installing the IDAM software.

CWS only has approximately 1250 employees. For there to be 670 password reset requests a month, about half of CWS' employees would have to lose their password every month. Combining each employee's accounts into one may lessen the number of password reset requests but with half of CWS' employees losing a password each month, the number of password reset requests is likely to still be substantial and likely points to a greater problem amongst CWS staff.

Instead of spending money on software and increasing rates, CWS should focus on providing training to its employees to retain their passwords. It does not make sense for a company with 1250 employees to have 670 password reset requests a month. Ratepayers should not see their rates go up due to what can only be described as negligence.

CWS is currently in compliance with all federal, state, and local laws, regulations, and requirements related to its employee network access.[95] As an added redundancy, as part of this rate case, CWS is proposing to install database encryption.[96] Cal Advocates agrees that installing database encryption is a key part of safeguarding any sensitive customer or employee information in CWS' possession. Database encryption would render any information obtained by gaining unauthorized access to the system meaningless. CWS states "for example if a hacker is able to download the entire database of our customer billing system, database encryption will obfuscate the data and

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[93] CWS Response to Public Advocates Office Data Request SIB-013, #2.a.

[94] CWS Response to Public Advocates Office Data Request SIB-013, #2.b.

[95] CWS Response to Public Advocates Office Data Request SIB-013, #1.a.

[96] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.45.

make it meaningless and useless to the hackers."[97] The Commission should include $641,772 in rates for database encryption software.

However, the Commission should deny CWS' proposal to include $710,892 in rates to install IDAM. CWS failed to justify the need for this software. CWS is compliant with laws and regulations related to data base access. Instead of increasing customer rates to install IDAM, CWS should focus on providing proper password management training to its employees.

I. Next Generation Data Loss Prevention

CWS proposes to spend $592,410 in 2024 for a next generation data loss prevention system ("DLP"). CWS installed its current DLP system three years ago. CWS claims the current system generating too many "false positives" which refers to the DLP incorrectly reporting sharing of confidential data with unauthorized parties.[98]

To understand the magnitude of the false positives issue, CWS was asked via data request to provide the monthly number of false positives generated by the system since it came into service. CWS stated it only had data for 2021 and did not share any data from 2018 to 2020.[99] The 2021 data included the months of January through August and showed a total 33 cases of false positives from 48 overall cases.[100]

Because CWS does not have data for the first three years the system was in service, it is difficult to verify CWS' claim that the system is generating increased false positives. Based on the information available, the system is not exhibiting a trend of increasing false positives as shown in figure 3-A below. More importantly, the system

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[97] CWS Response to Public Advocates Office Data Request SIB-013, #3.

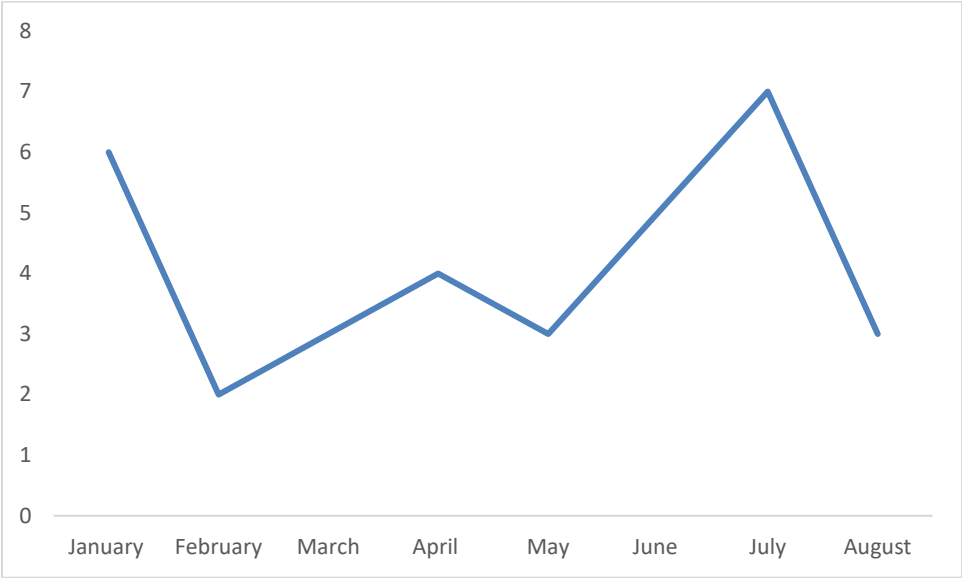
[98] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.98.

[99] CWS Response to Public Advocates Office Data Request SIB-018, #1.b.

[100] CWS Response to Public Advocates Office Data Request SIB-018, #1.b.

does not fail to detect true positives meaning the system is doing its job protecting sensitive information.[101]

Figure 3-A Monthly DLP False Positives 2021



CWS did not track the labor hours associated with dealing with the above incidents.[102] CWS did estimate the cost of dealing with false positives at $45,000.[103] CWS arrived at this cost using estimates of the time it takes employees to deal with a false positive (three employees spending two hours each).[104] Since CWS did not track the actual amount of time spent dealing with false positives, CWS' assumptions cannot be verified. Even if these costs were accurate, the savings benefits do not justify the costs associated with the increased revenue requirement resulting from this project.

CWS states it expects the number of false positives to decrease with the new system but did not provide the number of false positives it anticipates in a month.[105]

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[101] CWS Response to Public Advocates Office Data Request SIB-018, #2.d.

[102] CWS Response to Public Advocates Office Data Request SIB-018, #2.g.

[103] CWS Response to Public Advocates Office Data Request SIB-018, #3.a.

[104] CWS Response to Public Advocates Office Data Request SIB-018, #3.b.

[105] CWS Response to Public Advocates Office Data Request SIB-018, #2.c.

Even if false positives were reduced by half, there would still be a cost associated with false positives under the new system. Further, CWS estimates the yearly revenue requirement from this project as $84,104.[106] That means to save the $45,000 cost of dealing with false positives, ratepayers would have to pay $84,104. In other words, ratepayers would pay an extra $39,104 for no demonstrated incremental benefit. This is assuming the new system will eliminate false positives, which cannot be verified. CWS did not state the new DLP will eliminate false positives, stating, instead, that it expects the number of false positives to "reduce" with the new system.[107]

The current DLP system is doing its job correctly. It accurately detects true positives,[108] thereby helping reduce unauthorized access to sensitive information. CWS has the added protection of data encryption, as previously discussed, to help additionally safeguard valuable information. The possible savings resulting from an upgraded DLP system do not justify the corresponding revenue requirement increase.

The Commission should deny CWS' proposal to include $592,410 in rates for a new DLP system. The current system is only a few years old and does its job correctly. CWS further protects its valuable information using encryption which renders any stolen data useless. The added revenue requirement resulting from the new DLP system would not justify the possible savings projected.

J. Zoom Video Conference

CWS proposes $612,511 in 2024 to install Zoom Rooms in 30 small/medium conference Rooms and six large conference Rooms.[109] Zoom Room consists of equipping an existing Room of any size, large television screen and mount, video camera,

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[106] CWS Response to Public Advocates Office Data Request SIB-038, #3.a.

[107] CWS Response to Public Advocates Office Data Request SIB-018, #2.c.

[108] CWS Response to Public Advocates Office Data Request SIB-018, #2.e.

[109] CWS Response to Public Advocates Office Data Request SIB-019, #4.a.

wireless set up, iPad, laptop and Zoom software.[110] CWS states Zoom Room allows multiple employees to join, participate, and collaborate.[111]

Zoom Room differs from a Zoom meeting. Zoom Room refers specifically to the hardware and software necessary to setup a conference Room for Zoom meetings. CWS currently has Zoom installed on employee work devices.[112] According to CWS "any Windows computer and Apple iOS device can be installed with Zoom software."[113] Employees can and are currently using Zoom to meet remotely regardless of this project.

Given that CWS employees currently have Zoom capabilities on their work devices, it does not make sense to ask ratepayers to fund over $600,000 in expenditures to install Zoom Rooms. Besides with the ongoing pandemic, it is unclear when CWS would even be able to take advantage of the proposed Zoom Rooms given social distancing requirements.

There is no reason CWS employees cannot continue to meet on Zoom using their current company devices.

If CWS employees need to be in the same Room when they meet, they always have the option to connect a laptop to a computer screen in the meeting Room and meet from there. They could also meet using a conference call instead of Zoom. Customer rates should not include unnecessary expenditures. CWS has simple options to achieve the same function as the proposed Zoom rooms at no additional cost to ratepayers.

In testimony, CWS states "the Zoom Room will help contain travel costs and increase productivity by reducing drive and flight time."[114] During discovery, CWS was

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[110] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.103.

[111] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.103.

[112] CWS Response to Public Advocates Office Data Request SIB-019, #1.a.

[113] CWS Response to Public Advocates Office Data Request SIB-019, #1.b.

[114] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office,

asked to quantify the expected savings. CWS responded "it's difficult to quantify the impact to travel costs since the number of in person/Zoom videos varies."[115] Since CWS did not quantify these savings, it also means they are not reflected in the current revenue requirement. Again, most anything that can be accomplished by a Zoom Room can also be accomplished through a phone call, and CWS employees already have access to Zoom on their devices without the proposed Zoom Room project. Any theoretical travel cost savings are not dependent on Zoom Room as CWS currently has the technology to meet remotely without the requested Zoom Rooms.

The Commission should deny CWS' proposal to include $612,511 in rates for the installation of Zoom Rooms. CWS already possesses the technology necessary for its employees to meet remotely. Most of the benefits Zoom Rooms provide can be replicated using Zoom on current company devices or even a conference phone. It is unreasonable to require ratepayers to fund projects that are not necessary to CWS' core mission of providing safe, reliable water to customers.

K. Customer Care and Billing Cloud Upgrade

CWS proposes $14,119,325 in 2024 to implement a customer care and billing ("CCB") cloud upgrade. CWS' current CCB was installed in 2016.[116] CWS spent a total of $23.3M on its current CCB.[117] The net book value of the CCB at the end of 2023 (the total cost remaining in rates) will be $5,780,370.[118] Despite the significant sums of money CWS spent on the current CCB, ratepayers only received a limited benefit. Ratepayers should have benefited from CWS' use of the CCB for much longer than seven

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p.103.

[115] CWS Response to Public Advocates Office Data Request SIB-019, #3.a.

[116] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.132.

[117] CWS Response to Public Advocates Office Data Request SIB-023, #1.d.

[118] CWS Response to Public Advocates Office Data Request SIB-040, #1.a. attachment #1 – NBV CC&B Tab modified for end of 2023 net book value.

years (2016 to 2023) as indicated by the 2023 net book value of the current CCB. The fact that there is so much remaining value in the asset shows that it did not reach its projected service life.

Now CWS proposes to retire the asset early and pass the considerable cost of a new CCB onto ratepayers. Regulated monopolies are not subject to normal market forces. One of the main roles of the Commission is to act as a substitute for competition. In normal circumstances, a company would not be able to simply pass on the costs of a poor investment onto customers. The Commission should not reward CWS for its failure to properly plan and maximize the service life of its investments.

The Commission should include $7,055,381 in rates for the proposed CCB project. This value is calculated by subtracting the net book value of current CCB from the proposed CCB cost (excluding contingency). By doing so the Commission will prevent CWS from unfairly charging ratepayers for its failure to fully utilize its assets. The Commission would also incentivize CWS to maximize the service life of its assets moving forward.

L. Customer Service Omni-Channel Solutions

Omni-channel capabilities allow customers the option to start a transaction on one channel, for example a website, and continue or complete the transaction on another channel, for example a phone.[119] CWS states that there is an "insatiable" demand from customers for this service.[120]

During discovery, CWS was asked to present data to demonstrate that customers had an "insatiable" demand for the ability to start a transaction on one platform and finish it on another. CWS stated it conducts customer focus groups and feedback programs and uses the information to identify technologies to improve customer experience and

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[119] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.158.

[120] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.158.

satisfaction.[121] CWS also provided a copy of its current "voice of the customer" survey research findings. These findings did not mention omni-channel transaction capabilities.

CWS was also asked if it informed customers about the cost increase that would result from this capability when they surveyed them. CWS responded that any attempt to quantify the cost increase would be very difficult and they did not inform customers.[122]

CWS states the expectation of the proposed technology is that any transaction a customer initiates in one medium could be completed in another.[123] CWS did not provide any support showing customers are demanding this feature. CWS also stated that any customers had not been informed of the increase in price associated with this limited use capability. The lack of complete information would make it difficult for a consumer to make an informed decision.

The purported benefits of this project simply do not justify the costs. CWS is asking ratepayers to fund $750,308 in additional rate base to provide a capability that CWS has failed to provide sufficient evidence is necessary or even wanted by customers.

The Commission should deny CWS' proposal to include $750,308 in rate base to establish omni-channel solutions. The limited proposed benefits related to this project do not justify the costs.

M. Water Resources Monitoring and Adaptation Plan

CWS proposes $427,283 in direct costs in 2023 to update its currently "in development" Climate Change Water Resources Monitoring and Adaption Plan ("Plan") in response to the CPUC's rulemaking on climate adaptation. CWS proposes to use the funds to hire outside consultants to provide technical support to implement any requirements mandated as a result of the CPUC rulemaking.[124]

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[121] CWS Response to Public Advocates Office Data Request SIB-025, #1.b.

[122] CWS Response to Public Advocates Office Data Request SIB-025, #1.c.

[123] CWS Response to Public Advocates Office Data Request SIB-025, #1.d.

[124] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office,

Phase 1 of CPUC's Order Instituting Rulemaking (R18-04-019) is currently underway.[125] Phase 1 focuses on energy utilities and is expected to contain detailed requirements for conducting climate vulnerability assessments and designing adaptation plans.[126] CWS did not participate directly in this phase of the rulemaking.[127]

Phase 2, which addresses Water utilities, is scheduled to be completed by December 31, 2022.[128] As such, it is impossible to know what if any updates will be necessary to CWS' Plan. CWS' detailed project scope for this proposed project includes two items: review final CPUC rulemaking on Climate Adaptation and Revise CWS' Plan to meet any CPUC requirements.[129]

Because the requirements resulting from R.18-04-019 will not be released until the end of next year at the earliest, it is impossible to know what kind of changes to CWS' Plan will be required or the amount of work that will be necessary to accomplish them. Regarding its proposed budget for this project CWS states, "given current unknowns (e.g., final recommendations resulting from the Climate Change Water Resources Monitoring and Adaptation Plan, Phase 2 of R.18-04-019)"[130] CWS based its projected costs on the costs of the current Plan.

CWS has not obtained any vendor quotes for this work because CWS states it "will fully scope this work upon completion of the Climate Change Water Resources and

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p.175.

[125] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.174.

[126] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.175.

[127] CWS Response to Public Advocates Office Data Request SIB-028, #1.a.

[128] CWS Response to Public Advocates Office Data Request SIB-028, #2.a.

[129] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.175.

[130] CWS Response to Public Advocates Office Data Request SIB-028, #4.b.

Monitoring Plan with additional input from the status of R.18-04-019 at that time."[131] Given that CWS cannot support its estimates since it does not yet know what work will be necessary, proposing this project is premature.

The Commission requires utilities to justify every dollar to be included in revenue requirements.[132] Given the lack of information on the specific requirements, CWS cannot possibly do that for this request. Without knowing what, if any, changes are necessary it is impossible for CWS to accurately estimate, and the Commission to accurately review CWS' proposed costs.

The Commission should deny CWS' proposal to include $427,283 in rates to update its Plan. This request is premature as the precise requirements of CPUC's rulemaking have not been developed. CWS should wait until the requirements are in place and then present a project based on complete information.

N. Energy Efficiency Improvement – Heating Ventilation Air Conditioning ("HVAC") Optimization

CWS proposes $756,045 in 2022 to improve the efficiency of existing HVAC units in its San Jose CSS facility. CWS states the proposed efficiency upgrades would result in a savings of $74,035 in the first year and a cumulative savings of $417,342 over five years.[133] CWS also states "the vendor will guarantee the savings within a maximum return on investment period of eight (8) years."[134]

While an annual savings of $76,900[135] is a substantial amount, it is important to consider44 all the cost aspects of a project when doing a cost benefit analysis. CWS

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[131] CWS Response to Public Advocates Office Data Request SIB-028, #4.e.

[132] D.96-12-066, p.5.

[133] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.208.

[134] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.208.

[135] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office,

1 presents this project as risk-free since the vendor is "guaranteeing the savings", however,
2 the vendors' guarantee does not include CWS' substantial contingency. The eight-year
3 return on investment period is based on the vendor cost of $592,276, not on CWS' total
4 direct cost of $756,045.84.[136] Once construction overhead and Allowance for Funds
5 Used During Construction ("AFUDC") costs are added, the total proposed project
6 estimate increases to $867,043.[137] Using CWS' proposed total cost would increase the
7 return-on-investment period to over 11 years.[138]
8 Even this 11-year return on investment period is not accurate. CWS, like other
9 regulated investor-owned utilities, earns a rate of return based on its rate base. In other
10 words, the more money a utility puts into rate base the greater its profit. This is very
11 different from how most other businesses operate. While a traditional business has every
12 incentive to reduce capital costs to increase its profits, in the case of CWS a reduction in
13 capital costs would mean a reduction in profit. It is important to take this fact into
14 account when analyzing the financial benefits of any proposed project.
15 The revenue requirement resulting from each project is based on several factors.
16 Revenue requirement for the project can be approximated by multiplying the cost of the
17 project by the adopted rate of return (7.48%) and the adopted Net-to-Gross Multiplier
18 (1.207). Depreciation expense should also be included. The total annual revenue
19 requirement for this project is approximately $113,193.[139] Taking this annual revenue
20 requirement into account, it is clear this project is not justified.

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p.214.

[136] CWS Response to Public Advocates Office Data Request SIB-030, #1.b.

[137] CWS Response to Public Advocates Office Data Request SIB-030, #1.c.

[138] $867,043 divided by $76900 per year equals 11.27 years.

[139] CWS Response to Public Advocates Office Data Request SIB-030, #1.c.

Ratepayers would lose approximately $36,293 a year by funding this project.[140] While the project is projected to save approximately $76,900 a year, the annual cost of those savings would be $113,193. The math simply does not support moving forward. CWS would have to substantially reduce the proposed costs of this project for it to make financial sense for ratepayers.

It is important to note that CWS did not include the estimated savings in its Results of Operations ("RO") model. While CWS is scheduled to complete the project in 2022, CWS did not include the annual savings in 2023 and beyond.[141] Therefore, if the proposed project is rejected, there will be no need to adjust CWS' proposed electrical costs.

The Commission should deny CWS' proposal to include its HVAC optimization project in rates. The numbers simply do not add up. It does not make sense to spend $113,193 a year to save $76,900. CWS should investigate the possibility of reducing the upgrade costs and request the project in its next rate case if it still considers it necessary.

O. RDOM Second Floor Improvements

CWS proposes $582,937 in 2023 to complete second floor improvements in its RDOM building. CWS wants to create an Human Resources ("HR") suite for improved communications within the HR group and more confidential meetings with employees and applicants.[142] CWS also proposes to pre-plan the space for an anticipated future HVAC update and to establish a secondary emergency operations center.[143]

The two figures below show the current layout of the HR offices and the proposed new layout. The green line in Figure 3-B shows the current location of the HR offices.

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[140] $113,193 - $76,900 = $36,293.

[141] CWS Response to Public Advocates Office Data Request SIB-030, #1.h.

[142] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.220.

[143] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.221.

The marked area in Figure 3-C shows the proposed new location of the HR offices. Essentially CWS is requesting ratepayers fund an additional $582,937 in rate base to move three offices from one end of the building to another.

Figure 3-B Current Office Layout[144]

Figure 3-C Proposed Office Layout[145]

CWS could simply move the current HR offices to the other side of the building without making any changes to the existing office layout and without burdening

[144] CWS Response to Public Advocates Office Data Request SIB-031, #5.b. Attachment #2 RDOM Second Floor HR Offices.

[145] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office,

ratepayers with additional unnecessary costs. CWS could also hold private meetings in one of the many available spaces in the building. CWS has multiple vacant offices that are currently used by employees for individual meeting spaces and break/lunch areas.[146] Any of these offices could be used to have confidential meetings with current or prospective employees without requiring any additional funds.

CWS is also proposing to create a secondary Emergency Operations Center ("EOC") in the space. CWS already has a companywide EOC in San Jose.[147] CWS also has district level EOC including a district EOC in RDOM.[148] A secondary companywide EOC would be redundant and would not justify the expenditures CWS is proposing. If CWS believes a secondary EOC is necessary, it should explore installing one at a property that requires minimum construction or modification and present its recommendations for review in the next rate case.

The Commission should deny CWS' proposal to include $582,937 in rates to fund improvements to the RDOM building. These improvements are not necessary as the same goals can be accomplished using little to no additional funding.

P. Water Quality Satellite Drinking Water Lab – ELA

CWS proposes $3,668,420 in 2023 to reconfigure space at an existing property in the East Los Angeles district into a satellite laboratory. The proposed cost includes the construction and laboratory equipment costs necessary to build the lab.[149] The proposed

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p.221.

[146] CWS Response to Public Advocates Office Data Request SIB-031, #5.d.

[147] CWS Response to Public Advocates Office Data Request SIB-031, #2.b.

[148] CWS Response to Public Advocates Office Data Request SIB-031, #2.a.

[149] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.253.

cost does not include the estimated $574,200 in additional expenses needed to staff and supply the proposed lab.[150]

CWS states the proposed lab would offset some of CWS' annual contract lab costs.[151] CWS estimates that Phase I will result in cost savings of $658,410 and Phase II in cost savings of $136,125.[152] While these savings are substantial, they are significantly less than the overall increased revenue requirement resulting from building the lab. Given this fact, the project is not cost-effective and should not be funded by customer rates.

According to CWS, Phase I of the project (currently proposed) would add $510,606 to the annual revenue requirement.[153] This increase considers the revenue requirement as a result of the return on capital cost of the project as well as depreciation. The $510,606 number does not factor in the added expenses resulting from staffing the lab and providing consumables. CWS states the estimated annual internal operating cost will be $574,200.[154]

Combined, these costs result in an annual revenue requirement increase of $1,084,806.[155] [156] This would be offset by an estimated savings of $658,410 from the completion of Phase I. In layman terms, ratepayers would have to pay an extra $1,084,806 a year to save $658,410. Instead of reducing the burden on ratepayers, this

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[150] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.251.

[151] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.250.

[152] CWS Response to Public Advocates Office Data Request SIB-032, #2.c.

[153] CWS Response to Public Advocates Office Data Request SIB-032, #4.

[154] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.251.

[155] $510,606 + $574,200 = $1,084,806.

[156] CWS Response to Public Advocates Office Data Request SIB-036, #1.a.

project would add $426,396 to the annual revenue requirement without corresponding benefit.[157] The math does not justify implementing this project.

These calculations also assume CWS can complete this lab at its estimated costs. CWS is adding $550,608.50[158] (16%)[159] in contingency to this project. 16% is a significant amount of leeway and would seem to indicate CWS is not very confident in its estimates. If the costs of Phase I exceed the projected $3,668,420.04, the math would be even worse, which, given the amount of money involved, should also be taken into consideration.

The Commission should deny CWS' proposal to include $3,668,420 in rates to build a satellite lab in its East Los Angeles district. The savings from the proposed lab pale in comparison to the added costs. It does not make sense for ratepayers to pay a million dollars to save six hundred thousand.

Q. UPS and SAN Array Replacements (PID#00116250) Previously Funded but Not Complete Project

CWS revised its cost for its 2021 UPS and San Array Replacements PID#00116250 project. CWS increased the cost from the adopted budget of $360,882 to $432,503.[160] Cal Advocates requested additional information regarding the increase in budget and CWS responded that "upon further evaluation, Cal Water believes the original authorized estimate of $360,882 is achievable."[161] Since the original authorized budget is achievable, the increased budget is not necessary. The Commission should deny CWS'

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[157] $1,084,806 - $658,410 = $426,396.

[158] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.253.

[159] ($550,608.50/$3,448,547.98) x 100 = 15.966%.

[160] CWS Report on the Results of Operation Customer Services Attachment A, p.169.

[161] CWS Response to Public Advocates Office Data Request SIB-003, #5.a.

proposal for $432,503 in increased budget for UPS and SAN array replacements and only allow the original cost of $360,882.

R. CSS Database Encryption Software

The Commission should include $641,772 for database encryption software. As previously discussed, database encryption is a key aspect of protecting customer information. However, CWS overestimates the total cost of the project by including four years of software support.[162] CWS states it will complete this project by the end of 2022.[163] This means that only two years of support should be included as part of this rate case (2023, and 2024). The annual support cost is $93,324.[164] Removing the two additional years would lower the project estimate by $186,648. The $641,772 budget also excludes contingency as discussed elsewhere.

S. CSS GPS Base Stations

The Commission should include $149,877 in direct costs in rates for CSS GPS base stations. In discovery, CWS provided support to justify a direct cost of $149,877[165] for the project cost and not the $159,433 included in its application.

T. Install Cover Over Spoils/Dump Area and Car Port/Cover for Vehicle Maintenance

CWS incorrectly includes $1320 and $880 in construction overhead in its direct costs for the install cover over spoils/dump area and car port/cover for vehicle maintenance projects respectively.[166] CWS clearly states direct costs should exclude construction

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[162] CWS Response to Public Advocates Office Data Request SIB-007, #3.i.

[163] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.48.

[164] CWS Response to Public Advocates Office Data Request SIB-007, #3.i.

[165] CWS Response to Public Advocates Office Data Request SIB-016, #1.a. Attachment 1 Project Justifications.pdf, p.52.

[166] CWS Response to Public Advocates Office Data Request SIB-039, #1.a. Attachment

overhead.[167] The Commission should require CWS to remove these costs from the project estimates.

The Commission should include $63,037 and $42,025 in direct costs in rates for the install cover over spoils/dump area and car port/cover for vehicle maintenance projects respectively. This amount excludes the included construction overhead. This amount also excludes contingency as recommended elsewhere.

U. Projects Retired Early

In ratemaking, assets are depreciated based on their expected service life. In normal retirements, i.e. cases where an asset serves its useful life, there is no gain or loss. However early retirements provide utilities with unfair gains at ratepayers' expense. CWS has a significant number of projects that have a net book value ("NBV") despite being retired meaning they were retired early and not fully depreciated. CWS continues to earn returns on these projects even though they no longer benefit ratepayers because the projects are no longer used and useful.

Standard Practice U-4-W ("SP U-4-W"), "Determination of Straight-Line Remaining Life Depreciation Accruals", states "a basic depreciation object is that of recovering the original cost of fixed capital (less estimated net salvage) over the useful life of the property."[168] Theoretically, using the straight-line depreciation method should result in the asset being fully depreciated at the end of its useful life. Every year the depreciation expense is added to the depreciation reserve. Rate base is then calculated by subtracting the depreciation reserve from plant in service.

Early retirements are problematic and unfair to ratepayers. When an asset is retired, its total cost is subtracted from both plant in service and depreciation reserve. SP

125170_Cost_Estimate and 125171 Cost_Estimate.

[167] CWS Capital Project Justifications Book Customer Support Services and Rancho Dominguez Office, p.vii.

[168] Standard Practice U-4-W Determination of Straight-Line Remaining Life Depreciation Accruals, p.4.

U-4-W states that for a "historical cost on retirement from service" transaction a debit entry is made to the depreciation reserve account and a credit entry is made into the plant account (reduces the asset balance).[169] When an asset is retired early, its entire balance is deducted from the depreciation reserve. This has the net effect of unfairly increasing rate base and consequently rates.

For example, if a plant item costs $100 and is supposed to be useful for 10 years, the annual depreciation would be $10. At the end of ten years the depreciation reserve balance would be $100. When the plant is retired $100 would be removed from plant in service and $100 would be removed from the depreciation reserve. The net effect on rate base would be zero. Now imagine the utility uses the plant for only 5 years and retires it early. Only $50 would have been added to the depreciation reserve but $100 would be removed on retirement. Because of this there would be a $50 increase in rate base that lasts in perpetuity.

Early retirement has been recognized as an issue by the Commission and other experts on utility ratemaking. According to SP U-4-W the assumption is, "a deficiency due to early retirement of a particular unit is made up through greater accruals on a unit which outlives the average."[170] In general, given the nature of group depreciation, this approach makes sense when discussing projects that are retired a little earlier than expected. However, SP U-4-W also recognizes what is called "extraordinary obsolescence".

SP U-4-W states, "occasionally instances of extraordinary obsolescence such as the unexpected early retirement of a major unit of property may require some form of adjustment." Price Waterhouse Cooper also states that regular utility retirements should have no net gain or loss but in cases of extraordinary retirements a gain or loss should be

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[169] Standard Practice U-4-W Determination of Straight-Line Remaining Life Depreciation Accruals, p.5.

[170] Standard Practice U-4-W Determination of Straight-Line Remaining Life Depreciation Accruals, p.8.

1 considered.[171] These cases of extraordinary retirement result in significant effects to rate
2 base and as such require further scrutiny.
3 In response to discovery, CWS provided a list of CSS projects booked to rates
4 between 2010 and 2015 and their current NBV.[172] Of these projects, 32 had an NBV
5 over $100,000.[173] Of these 14 have already been retired despite the fact they have a
6 significant remaining NBV. Table 3-D below contains a breakdown of the projects in
7 question. These projects had between 39% and 84% of their original cost remaining in
8 NBV at retirement. This indicates that these projects were retired significantly earlier
9 than their depreciation rates anticipated. In fact, one of the projects was retired after only
10 two years in service.

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[171] Price Waterhouse Coopers Questions and Answers Interpretations for the Utility Industry Accounting for Property, Plant and Equipment, Asset Retirement Obligations and Depreciation p.5.

[172] CWS Response to Public Advocates Office Data Request SIB-040, #2. Attachment 1 - NBV

[173] CWS originally reported 28 projects in its response to Public Advocates Office Data Request SIB-044, #1. Attachment 1-List of CSS & RDOM Projects (2010-2015). CWS added four additional projects in its response to Public Advocates Office Data Request SIB-045, #1.

Table 3-D Early Retirement CSS Projects with an NBV above $100,000 as of 2021.[174]

Year	Work Order Number	Retirement Date	Years in Service	Actual Cost	NBV at Retirement	% NBV/Cost at retirement
2015	00017901	12/22/20	5	$ 1,485,427.35	$ 749,891.58	50%
2014	20942	10/15/20	6	$ 487,271.12	$ 200,582.01	41%
2014	21104	12/22/20	6	$ 3,964,778.72	$ 1,690,551.64	43%
2013	60832	12/28/15	2	$ 907,776.54	$ 762,895.40	84%
2015	00063312	12/10/20	5	$ 678,527.47	$ 345,099.07	51%
2015	00063315	10/13/20	5	$ 706,231.97	$ 330,778.88	47%
2014	64374	12/22/20	6	$ 660,882.72	$ 283,386.51	43%
2015	00064481	12/22/20	5	$ 612,413.76	$ 297,102.33	49%
2015	00064504	12/22/20	5	$ 479,652.85	$ 235,296.73	49%
2015	00074953	12/22/20	5	$ 848,922.22	$ 398,414.15	47%
2013	75513	12/31/18	5	$ 638,395.04	$ 364,061.53	57%
2014	92179	12/31/18	4	$ 376,523.65	$ 245,342.81	65%
2015	00096537	10/13/20	5	$ 297,435.48	$ 151,275.69	51%
2015	00021130	10/15/20	5	$ 434,262.30	$ 170,507.66	39%

Because these projects were retired significantly earlier than planned, they represent extraordinary circumstances as defined in SP U-4-W and elsewhere. Ratepayers should not be required to pay higher costs to fund projects that are no longer in service and thus not providing benefit. Adding insult to injury, these early retired projects are often replaced by other expensive projects (as discussed in the proposed Customer Care and Billing Cloud Upgrade earlier). The net effect is the ratepayer is forced to pay increased rates for both the project that did not provide its estimated service life and its replacement.

The Commission acts as a substitute for competition in the case of regulated monopolies. In competitive business environments, a business would not be able to benefit from a poor investment in an asset that does not meet its projected service life expectations. In fact, when this loss of asset value happens for a competitive business, an

[174] CWS Response to Public Advocates Office Data Request SIB-045, #1 Attachment 1 Retired CSS & RDOM Projects.

asset write-off is required and a loss must be reported. Assets not serving their expected lifetime is a normal risk of conducting business. Utilities are compensated for the risk of doing business through their Commission approved rate of return. Allowing the utility to not only fully recuperate but also benefit from assets that are retired early is in direct contradiction with the Commission's role as a substitute for competition.

The Commission should increase CWS' depreciation reserve by $6,225,186 to account for the early retired projects identified above.[175] CWS' application presents proposed rate base and profits calculated for multiple projects that were retired prematurely. This should not be allowed by the Commission. Retired projects, by definition, are not used and useful and as such ratepayers should not be burdened with higher rates because of them.

Increasing the depreciation reserve as recommended above will not result in "retroactive ratemaking" because the increase would only be applicable to customer rates moving forward and not impact prior collections.

IV. CONCLUSION

The Commission should adopt the recommendations presented above which have been incorporated in the calculations for Cal Advocates' recommended Utility Plant in Service as shown in Table 7-1 in Cal Advocates RO Tables.

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[175] Sum of NBV at retirement from table.

CHAPTER 4 Pipeline Replacement

I. INTRODUCTION

This chapter presents analyses and recommendations for CWS' pipeline replacement requests.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a direct cost of $57,388,618 in 2022, $58,823,334 in 2023, and $60,293,917 for 2024 for pipeline replacement.

The Commission should require CWS to shift its pipeline replacement approach from a mostly age-based analysis to an actual condition-based approach in the next rate case. The table below shows recommended physical pipeline replacement budget compared to CWS' proposed budgets.

Table 4-A: Capital Budget Summary – Pipeline Replacements

Pipeline Replacement	2022	2023	2024	Annual Average
Proposed	$100,835,819	$103,481,318	$106,196,525	$103,504,554
Recommended	$57,388,618	$58,823,334	$60,293,917	$58,835,290
Difference	$43,447,201	$44,657,984	$45,902,608	$44,669,264
Cal Advocates as % of CWS	57%	57%	57%	57%

III. ANALYSIS

CWS developed its current main replacement program in 2015.[176] CWS states its proposed mainline replacement program in the current GRC is a continuation of this 2015 program.[177] Prior to 2016 CWS' average pipeline replacement rate was approximately

[176] CWS Capital Project Justifications Book Common Plant p.11.

[177] CWS Capital Project Justifications Book Common Plant p.11.

0.3% per year.[178] CWS states, starting in 2016 it increased the rate to approximately 0.5%.[179] In the current GRC, CWS is proposing an annual average pipeline replacement rate of 0.7%.[180] Table 4-B below shows CWS' pipeline replacement request by district.

Table 4-B Proposed Pipeline Replacement Rate by District[181]

Districts	Proposed Replacement Rate (%/yr)	Unit Cost ($/ft)	Average Replaced (ft/yr)	Direct Cost		
				2022	2023	2024
AV	0.60%	$236.00	1,057	$288,289	$295,496	$302,883
BAY	0.75%	$421.60	20,832	$10,150,139	$10,403,892	$10,663,990
BG	1.00%	$503.08	17,774	$10,333,862	$10,592,208	$10,857,014
BK	0.70%	$357.26	35,969	$14,850,914	$15,222,187	$15,602,741
CH	0.60%	$285.30	12,901	$4,253,687	$4,360,030	$4,469,030
DIX	0.60%	$413.42	1,097	$262,590	$671,418	$688,204
DOM	0.50%	$444.00	9,664	$4,958,842	$5,082,813	$5,209,884
ELA	0.60%	$331.41	8,354	$3,199,635	$3,279,626	$3,361,617
HR	0.60%	$472.58	6,641	$3,627,014	$3,717,689	$3,810,632
KC	0.60%	$534.39	1,102	$680,582	$697,596	$715,036
KRV	0.60%	$200.03	3,159	-	$1,497,059	$767,243
LAS	0.70%	$418.77	10,686	$5,171,674	$5,300,966	$5,433,490
LIV	0.60%	$650.81	7,051	$5,303,290	$5,435,872	$5,571,769
MRL	0.40%	$375.67	1,122	$365,560	$499,303	$639,959
ORO	0.30%	$375.76	943	$409,509	$419,746	$430,240
PV	0.51%	$444.84	8,989	$2,310,862	$5,920,793	$6,068,812
RDV	0.60%	$310.15	1,056	$378,509	$387,972	$397,671
SEL	0.50%	$219.20	2,349	$595,064	$609,941	$625,190
SLN	0.60%	$369.89	10,720	$4,582,556	$4,697,120	$4,814,548
STK	1.56%	$411.89	43,394	$20,656,244	$21,172,650	$21,701,966
VIS	0.40%	$243.83	12,437	$3,504,638	$3,592,254	$3,682,060
WIL	0.40%	$346.72	796	$318,957	$326,931	$335,104
WLK	0.25%	$774.65	1,487	$1,331,242	$1,364,523	$1,398,636
Total		**-**	**219,582**	**$100,835,819**	**$103,481,318**	**$106,196,525**

[178] CWS Capital Project Justifications Book Common Plant, p.11.

[179] CWS Capital Project Justifications Book Common Plant, p.12.

[180] Average annual replacement rate = Average Replacement length / Total Pipeline Length which equals 219,582 feet / 31,521,284 feet = 0.6966%.

[181] CWS Capital Project Justifications Book Common Plant, p.10.

A. Historical Replacement Rates

To better understand CWS' pipeline replacement needs, Cal Advocates requested CWS provide recorded pipeline replacement rates for the past 10 years. CWS only provided data for the past five years (2016-2020).[182] CWS stated it could not provide data for earlier years because mainline replacements were handled differently prior to 2016 and as such the data is unavailable.[183]

The data clearly show CWS has consistently failed to meet its Commission adopted replacement rates. Table 4-C below provides a breakdown of CWS' adopted and recorded replacement rates. The table also shows the difference in recorded and adopted rates. Negative numbers indicate that CWS did not meet its adopted rates for that district for that year. These instances are highlighted in red. As the table clearly shows, CWS consistently underperforms its authorized replacement rates.

Table 4-C Adopted and Recorded Pipeline Replacement Rates and the Difference Between Them.[184]

District	2016			2017			2018			2019			2020		
	Adopted	Recorded	Difference	Adopted	Recorded	Difference	Adopted	Recorded	Difference	Adopted	Recorded	Difference	Adopted	Recorded	Difference
Antelope Valley	0.50%	0.00%	-0.50%	0.50%	0.00%	-0.50%	0.50%	0.00%	-0.50%	0.50%	0.00%	-0.50%	0.55%	0.00%	-0.55%
Bakersfield	0.50%	0.15%	-0.35%	0.50%	0.58%	0.08%	0.50%	0.34%	-0.16%	0.50%	0.09%	-0.41%	0.60%	0.46%	-0.14%
Bear Gulch	0.50%	0.11%	-0.39%	0.50%	1.47%	0.97%	0.50%	0.14%	-0.36%	1.00%	0.35%	-0.65%	1.25%	1.07%	-0.18%
Bayshore	0.50%	0.41%	-0.09%	0.50%	0.10%	-0.40%	0.50%	0.73%	0.23%	0.50%	0.40%	-0.10%	0.67%	0.46%	-0.21%
Chico	0.50%	0.27%	-0.23%	0.50%	0.72%	0.22%	0.50%	0.17%	-0.33%	0.50%	0.27%	-0.23%	0.55%	0.63%	0.08%
Dixon	0.49%	0.46%	-0.03%	0.49%	0.91%	0.42%	0.49%	0.00%	-0.49%	0.50%	0.00%	-0.50%	0.55%	0.96%	0.41%
Dominguez	0.50%	0.17%	-0.33%	0.50%	0.27%	-0.23%	0.50%	0.48%	-0.02%	0.50%	0.00%	-0.50%	0.50%	0.00%	-0.50%
East Los Angeles	0.58%	0.58%	0.00%	0.58%	0.29%	-0.29%	0.58%	0.23%	-0.35%	0.50%	0.61%	0.11%	0.55%	0.38%	-0.17%
Hermosa Redondo	0.50%	0.00%	-0.50%	0.50%	0.30%	-0.20%	0.50%	0.35%	-0.15%	0.50%	0.42%	-0.08%	0.55%	1.09%	0.54%
Kern River Valley	0.50%	0.22%	-0.28%	0.50%	0.12%	-0.38%	0.50%	0.49%	-0.01%	0.50%	0.12%	-0.38%	0.55%	0.38%	-0.17%
King City	0.50%	0.27%	-0.23%	0.50%	0.00%	-0.50%	0.50%	0.71%	0.21%	0.50%	0.00%	-0.50%	0.55%	0.97%	0.42%
Los Altos	0.50%	0.41%	-0.09%	0.50%	0.48%	-0.02%	0.50%	0.43%	-0.07%	0.50%	0.98%	0.48%	0.60%	0.64%	0.04%
Livermore	0.50%	0.00%	-0.50%	0.50%	0.13%	-0.37%	0.50%	0.39%	-0.11%	0.50%	0.69%	0.19%	0.55%	1.14%	0.59%
Marysville	0.50%	0.00%	-0.50%	0.50%	0.62%	0.12%	0.50%	0.60%	0.10%	0.50%	0.81%	0.31%	0.55%	0.00%	-0.55%
Oroville	0.50%	0.78%	0.28%	0.50%	0.87%	0.37%	0.50%	0.00%	-0.50%	0.50%	0.00%	-0.50%	0.55%	1.04%	0.49%
Palos Verdes	0.50%	0.09%	-0.41%	0.50%	0.16%	-0.34%	0.50%	0.89%	0.39%	0.50%	0.00%	-0.50%	0.55%	0.18%	-0.37%
Redwood Valley	0.50%	0.00%	-0.50%	0.50%	0.00%	-0.50%	0.50%	3.43%	2.93%	0.50%	0.00%	-0.50%	0.55%	0.00%	-0.55%
Salinas	0.50%	0.16%	-0.34%	0.50%	0.69%	0.19%	0.50%	0.46%	-0.04%	0.50%	0.49%	-0.01%	0.55%	0.57%	0.02%
Selma	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.50%	0.00%	-0.50%	0.50%	0.00%	-0.50%
Stockton	1.50%	1.43%	-0.07%	1.50%	1.33%	-0.17%	1.50%	1.31%	-0.19%	1.50%	0.75%	-0.75%	1.50%	0.63%	-0.87%
Visalia	2.20%	0.31%	-1.89%	2.20%	0.15%	-2.05%	0.22%	0.00%	-0.22%	0.22%	0.00%	-0.22%	0.30%	0.05%	-0.25%
Westlake	0.10%	0.00%	-0.10%	0.10%	0.00%	-0.10%	0.10%	0.20%	0.10%	0.10%	0.00%	-0.10%	0.25%	0.38%	0.13%
Willows	0.50%	0.31%	-0.19%	0.50%	0.70%	0.20%	0.50%	0.00%	-0.50%	0.50%	1.37%	0.87%	0.65%	0.00%	-0.65%

[182] CWS Response to Public Advocates Office Data Request SIB-014, #1.a.

[183] CWS Response to Public Advocates Office Data Request SIB-014, #1.a.

[184] Adopted and recorded data are from CWS Response to Public Advocates Office Data Request SIB-

CWS' performance in the past three years is no exception to this trend. As part of its filling, CWS provided a memorandum outlining a summary of all pipeline projects agreed in settlement for the 2018 GRC and their status as of June 2021.[185] This memorandum shows that of the 618,581[186] feet CWS was supposed to replace between 2019 and 2021, it replaced only 262,977 feet or approximately 42.5%[187].

In its September 1, 2021, Main Replacement Program presentation, CWS provided the following table showing adopted, installed to date, and forecast replacement footages. According to the table, as of September 1st 2021, CWS had completed an additional 18,174 feet for a total of 281,151 feet or 45.5% of its adopted replacement footage.[188] CWS forecasts a total replacement footage of 433,651 feet by the end of the year. This information cannot be verified as of the date of this report. Assuming CWS' forecast to be accurate, the company would have only completed 70.1% of its adopted pipeline replacements.

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014 #1.a. Attachment 1_ Summary of Pipes Info in Districts.

[185] CWS Capital Project Justifications Book Common Plant, p.10.

[186] D.20-12-007 Attachment 1 Exhibit A Settlement Agreement of California Water Service Company and the Public Advocates Office 2018 General Rate Case A.18-07-001, p.108.

[187] (262,977 feet / 618,581 feet) x 100 = 42.51%.

[188] (281,151 feet / 618,581 feet) x 100 = 45.45%.

Table 4-D CWS' Adopted, Recorded, and Forecast Pipeline Replacement Footage as of September 1, 2021.

District	2018 GRC Settlement (ft)	2018 GRC Installed to Date (ft)	2018 GRC Footage Forecast (ft)
AV	2,614	0	3,020
BAY	52,918	29,457	51,970
BG	69,062	30,675	47,625
BK	90,383	34,927	58,404
CH	33,367	22,606	22,606
DIX	2,875	1,764	1,764
DOM	28,987	4,159	13,924
ELA	22,913	11,051	19,726
HR	18,121	10,018	16,088
KC	2,962	1,786	3,188
KRV	8,015	3,240	6,115
LAS	27,562	26,587	28,977
LIV	19,079	11,491	11,491
MRL	4,704	4,436	4,436
ORO	5,140	5,128	5,128
PV	28,062	4,599	13,599
RDV	2,842	0	574
SEL	6,811	1,068	5,341
SLN	29,272	22,406	27,380
STK	127,126	46,103	77,095
VIS	26,960	2,679	8,229
WIL	3,810	4,701	4,701
WLK	4,396	2,270	2,270
Total	618,581	281,151	433,651

In the previous rate case, CWS proposed an annual replacement rate of 0.88%,[189] or approximately 271,611 feet.[190] Over three years that would amount to 814,833 feet. Cal Advocates proposed an annual replacement rate of 0.47% or 145,065 feet. Over three years that would amount to 435,195 feet. The settlement awarded CWS 619,581 feet. CWS is forecasting it will complete 433,651 feet or 1,544 feet less than the amount Cal Advocates recommended.

As previously shown, the underperformance goes back as far as recorded data is available. It cannot be blamed on recent events such as the Covid-19 pandemic for example. In fact, in the three years following the 2015 GRC (2016, 2017, 2018) CWS replaced 403,606 feet of pipeline. CWS' adopted replacement was 569,451 feet. That

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[189] D.20-12-007 Attachment 1 Exhibit A Settlement Agreement of California Water Service Company and the Public Advocates Office 2018 General Rate Case A.18-07-001, p.108.

[190] 0.88% x 30,864,874 feet = 271,611 feet.

puts CWS' completion rate at 70.88% of the adopted pipeline replacement or 0.78% better than its most recent performance.[191]

For at least the past six years, CWS has been under-replacing pipeline. In other words, for at least six years, CWS ratepayers have been funding pipeline replacements that were not completed. It is unfair for ratepayers to fund projects that do not materialize according to the authorized schedule. At this point, there is enough historical data to accurately predict the pipeline replacement rate which CWS can perform.

Cal Advocates used CWS' recorded performance over all the years available to calculate a recommended pipeline replacement rate. The results are show in Table 4-E below. Cal Advocates used CWS' proposed district rates were also used.[192] These rates are based on historical recorded costs escalated to the appropriate year.[193]

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[191] 70.88% - 70.1% = 0.78%.

[192] CWS Response to Public Advocates Office Data Request SIB-014, #8.

[193] Costs shown in the table are base year 2020 costs. The annual cost was then escalated and included in the final recommendation.

Table 4-E Annual Budgets based on Historical Replacement Rates

	Historical Replacement	Total Length	Replacement Feet	Per Foot Cost	Total Annual Budget
Antelope Valley	0.00%	176,161	-	$ 236.00	$ -
Bakersfield	0.32%	5,138,481	16,609.44	$ 357.26	$ 5,933,889.95
Bear Gulch	0.63%	2,777,629	17,450.13	$ 421.60	$ 7,356,972.89
Bayshore	0.42%	1,777,430	7,428.85	$ 503.08	$ 3,737,303.87
Chico	0.41%	2,150,129	8,888.82	$ 285.30	$ 2,535,981.16
Dixon	0.47%	182,834	854.17	$ 413.42	$ 353,129.48
Dominguez	0.18%	1,932,870	3,569.52	$ 444.00	$ 1,584,866.98
East Los Angeles	0.42%	1,392,414	5,842.10	$ 331.41	$ 1,936,132.00
Hermosa Redondo	0.43%	1,106,784	4,792.10	$ 472.58	$ 2,264,652.14
Kern River Valley	0.27%	526,548	1,421.12	$ 200.03	$ 284,266.42
King City	0.39%	183,690	716.97	$ 534.39	$ 383,140.09
Los Altos	0.59%	1,175,156	6,914.30	$ 650.81	$ 4,499,897.21
Livermore	0.47%	1,526,525	7,154.08	$ 418.77	$ 2,995,915.96
Marysville	0.41%	280,534	1,136.21	$ 375.67	$ 426,840.63
Oroville	0.54%	314,325	1,695.67	$ 375.76	$ 637,165.25
Palos Verdes	0.26%	1,762,484	4,668.13	$ 444.84	$ 2,076,571.68
Redwood Valley	0.69%	176,030	1,207.03	$ 310.15	$ 374,360.91
Salinas	0.47%	1,786,691	8,415.81	$ 369.89	$ 3,112,923.39
Selma	0.00%	469,759	-	$ 219.20	$ -
Stockton	1.09%	2,781,693	30,356.86	$ 411.89	$ 12,503,688.45
Visalia	0.10%	3,109,201	3,122.90	$ 243.83	$ 761,455.61
Westlake	0.12%	594,897	690.51	$ 774.65	$ 534,899.90
Willows	0.48%	199,019	949.64	$ 346.72	$ 329,258.96
Total	0.42%	31,521,284	133,884.36	NA	54,623,312.92

Using CWS' recorded replacement rates and proposed per foot costs, the total yearly replacement budget in 2020 dollars would be $54,623,312.92. Escalating this amount yields budgets of $57,388,618 in 2022, $58,823,333 in 2023, and $60.293.916. in 2024. The proposed budgets would allow a yearly companywide replacement rate of 0.42% or 133,884 feet. This replacement is in line with the recorded CWS performance for all available years as shown in Table 4-F below.

Table 4-F Yearly Pipeline Replacement Miles and Replacement Rates

Year	2016	2017	2018	2019	2020	Average
Miles Replaced	102,623	157,859	143,124	98,820	152,859	131057
Replacement Rate	0.33%	0.51%	0.46%	0.31%	0.48%	0.42%

B. System Condition

CWS bases its pipeline replacement needs on pipeline material, age, and diameter. CWS also factors in break records in some cases.[194] CWS determines a pipeline's likelihood of failure based on the expected lifespan of a particular material and the pipeline installation date. CWS then adds a point for pipes with more than two recorded breaks, provided these pipes are not already at the highest score based on age alone.[195]

The main issue with such an age-based approach is it does not consider key factors that help determine pipeline life such as operating pressures and soil conditions. When making pipeline replacement decisions based solely on a single criterion such as age, a utility replace a pipe that still has extensive service life. Conversely, a pipe that needs replacement due to other factors may go unnoticed resulting in serious disruptions to service if the pipeline fails and requires expensive repairs.

The American Water Works Association's ("AWWA") manual M77 discusses condition assessment of water mains. Discussing the key benefits of conducting pipeline replacement based on actual conditions of the pipeline, AWWA states that by using condition assessment "utilities can focus renewal efforts on pipelines that need repair rather than basing decisions on general characteristics that may not correlate to actual conditions such as age."[196]

AWWA states "in many cases, condition assessment efforts reveal that most of the pipeline is in good condition."[197] By relying on a solely age-based approach, CWS risks spending considerable funds on replacing pipeline that still have plenty of life remaining. Those funds could be spent more strategically benefiting ratepayers and CWS if the information to make more informed decisions were available.

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[194] CWS Response to Public Advocates Office Data Request SIB-014, #4.

[195] CWS Response to Public Advocates Office Data Request SIB-014, #5.

[196] American Water Works Association Manual M77, p.4.

[197] American Water Works Association Manual M77, p.4.

In discovery, CWS provided information on 752,896[198] feet of pipe it is proposing to replace this rate case. 60,199[199] feet of pipeline have had zero leaks. 169,101[200] feet of pipeline have had one leak. CWS does not factor break rates into its replacement criteria until a pipeline breaks at least twice.[201] CWS proposes to remove 229,300 feet of pipeline that has at most exhibited one leak.[202] In other words, 30%[203] of CWS' proposal is based on one factor that according to the AWWA may not correlate to actual pipeline conditions.[204]

According to AWWA, condition assessment can also help utilities focus their repair efforts. If only a small part of a pipeline needs repair, utilities can focus their repair efforts on these areas and benefit from extended use of the sections of pipeline that are in good condition.[205] Pipes with only two leaks account for 100,467 feet or another 13% of CWS' proposal. Approximately 44% or almost half of CWS' proposal is made up of pipeline that could have plenty of service life left in them. Removing these pipelines from the projected replacements results in 423,129 feet to be replaced.[206] This number is comparable to Cal Advocates recommended replacement of 401,653 feet based on CWS' demonstrated past performance.

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[198] CWS Response to Public Advocates Office Data Request SIB-014, #2 Attachment 7 2021 GRC MRP Project List - Risk Assessment, sum of column H.

[199] CWS Response to Public Advocates Office Data Request SIB-014, #2 Attachment 7 2021 GRC MRP Project List - Risk Assessment, sum of column H for pipeline with zero leaks.

[200] CWS Response to Public Advocates Office Data Request SIB-014, #2 Attachment 7 2021 GRC MRP Project List - Risk Assessment, sum of column H for pipeline with one leak.

[201] CWS Response to Public Advocates Office Data Request SIB-014, #5.

[202] 60,199 feet + 169,101 feet = 229,300 feet.

[203] (229,300 / 752,896 feet) x 100 = 30.46%.

[204] American Water Works Association Manual M77, p.4.

[205] American Water Works Association Manual M77, p.4.

[206] 752,896 feet - 60,199 feet - 169,101 feet – 100,467 feet = 423,129 feet.

The benefits of condition assessments to overall system pipeline management are not just theoretical. Aside from AWWA dedicating an entire manual to the subject, real world examples have shown the usefulness to the approach. The Mesa District in Orange County California, for example, found that using a condition-based program as opposed to age-based estimates will save the district $231 million in unnecessary pipe replacement over the next 30 years.[207]

The Mesa District also found that the average life of its asbestos cement pipes, the focus of the study, was 142 years.[208] The average life for asbestos cement pipe according to the AWWA's buried no longer report, which CWS cites and uses in its remaining life estimates,[209] is 65-105 years.[210] 54% of CWS pipelines are asbestos cement.[211]

A condition-based assessment may show that CWS pipeline lives are shorter than the age-based approach indicates and result in higher pipeline replacement program costs. Either way, the Commission and CWS would have the benefit of actual conditions and not simply guesswork when making decisions. This would benefit ratepayers and CWS in the long run and result in a more robust, well-run water system.

Aside from basing its replacement mainly on age, CWS also does not record the amount of water lost due to each break.[212] This information is essential in calculating the

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[207] Pipeline Integrity Testing to Assess the Useful Life of Pipeline Infrastructure (Mesa Study) AWWA Journal September 2019 Vol. 111 No. 9.

[208] Pipeline Integrity Testing to Assess the Useful Life of Pipeline Infrastructure (Mesa Study) AWWA Journal September 2019 Vol. 111 No. 9

[209] CWS Response to Public Advocates Office Data Request SIB-014, #5.

[210] Pipeline Integrity Testing to Assess the Useful Life of Pipeline Infrastructure (Mesa Study) AWWA Journal September 2019 Vol. 111 No. 9

[211] CWS Capital Project Justifications Book Common Plant, p.15.

[212] CWS Response to Public Advocates Office Data Request SIB-014, #7.

1 financial impact of break events to the utility. CWS states it is currently in working on
2 initiatives that would make this data available in the future.[213]

3 **IV. CONCLUSION**

4 The Commission should authorize a direct cost of $57,388,618 in 2022,
5 $58,823,334 in 2023, and $60,293,917 for 2024 for pipeline replacement. This budget is
6 based on CWS' recorded historical performance over the lifetime of its current pipeline
7 replacement program. The Commission should also require CWS to move from an age-
8 based replacement approach to a condition-based approach to allow targeted replacement
9 where necessary and avoid the waste associated with replacing fully functional pipelines.

[213] CWS Response to Public Advocates Office Data Request SIB-014, #7.

CHAPTER 5 Physical Security

I. INTRODUCTION

This chapter presents analyses and recommendations for CWS' physical security requests.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize $5,257,336 in direct costs for physical security upgrades for the years 2022 to 2024. The table below shows the recommended physical security budgets compared to CWS' proposed budgets.

Table 5-A: Capital Budget Summary – Physical Security Additions

Physical Security	2022	2023	2024	Annual Average
CWS Proposed	$5,483,051	$5,511,498	$5,264,492	$5,419,680
Cal Advocates Recommended	$1,709,355	$1,752,089	$1,795,891	$1,752,445
Difference	$3,773,696	$3,759,409	$3,468,601	$3,667,235
Cal Advocates as % of CWS	31%	32%	34%	32%

III. ANALYSIS

CWS began its current security program in the 2018 GRC. In 2017 CWS hired Navigant to perform an assessment of its overall physical security program. Navigant's report formed the basis of CWS' proposals in A.18-07-001. Recognizing the importance of physical security, the Commission authorized $10,893,719, or 94% of CWS' requested amount of $11,649,068 in D.20-12-007.

A. CWS Completed Upgrades

Despite receiving approval and customer funding to complete most of its requested projects, CWS only completed a small portion of the budget authorized by the Commission. Table 5-B below shows CWS' proposed, approved, recorded, and

forecasted budgets for the years 2019, 2020, and 2021. As the table clearly shows, CWS only completed a small portion of the projects it requested. The Commission authorized $12,752,288 (including direct costs, overhead, etc.) but CWS only spent $1,053,609. Cal Water is also forecasted to spend $4,778,479 in 2021. The total security expenditure as of the end of 2021 would be $5,832,087, or 45.7% of the authorized amount.

Table 5-B shows CWS failed to complete any improvements in several districts. These include Bakersfield, Bear Gulch, Dixon, Stockton, Antelope Valley, and Redwood Valley (Lucerne and Coast Springs). CWS also failed to complete a substantial number of the projects authorized in other districts. In fact, based on the information CWS provided, the only districts where it is scheduled to spend all its approved budget are East LA, Hermosa Redondo, King City, Selma, Visalia, Palos Verdes, and Dominguez. There are seven areas where spending is between 9% and 55% and three with spending between 75% and 90%. This information is summarized in Table 5-C.

Ratepayers already paid for a substantial number of upgrades CWS considered necessary for physical security. CWS failed to complete physical security upgrade projects that were authorized in the previous rate case. The Commission should not reward CWS with additional funds to complete additional projects when it has proven unable to complete those previously authorized and funded by ratepayers.

CWS has little reason to minimize capital costs. The more CWS spends on capital projects, the more its shareholders are rewarded. This fact is recognized by CWS. The Company rewards executives for utility plant investment.[214] CWS states "investment in utility plant, property, and equipment is a driver of stockholder return."[215] Given the nature of regulated monopolies and how they earn a profit, CWS has very little incentive to control its capital expenditure. It is therefore incumbent on the Commission to fulfill

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[214] CWS Application Attachment B Financial Reports 2020 Proxy Statement, p.47.

[215] CWS Application Attachment B Financial Reports 2020 Proxy Statement, p.47.

its role as a substitute for competition in determining what is a necessary and reasonable capital budget.

Table 5-D shows CWS' previously approved budget, amount it spent or is forecasted to spend, and proposed amount in this rate case. In the Bakersfield, Bear Gulch, Dixon, and Stockton districts, the Commission authorized $4,026,263. It spent zero dollars for all four districts meaning ratepayers have funded the authorized amount without receiving any benefit. CWS now requests $5,519,342 to perform security upgrades in the same districts.

Overall CWS only recorded $1,053,609 and is forecasted to complete $4,778,479 for a total cost of $5,832,088. The Commission previously authorized $12,752,288 in total costs. CWS now requests approximately $19,038,337 in additional capital spending.[216] Based on CWS' track record on physical security, it makes no sense for the Commission to award CWS anywhere near that amount.

The Commission should instead base CWS' physical security budget on the amount of work CWS has shown itself capable of performing. CWS completed $5,832,088 in work in the years 2019, 2020, and 2021. Converting that number into direct costs results in a total of approximately $4,880,967.[217] Escalating this number by to the appropriate years results in a total of $5,257,336 in direct costs.[218]

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[217] The Commission authorized CWS $10,893,719 in direct costs which translate into $12,752,288 in total costs. Therefore to move from total costs to direct costs multiply by $10,893,719/$12,752,288 = 0.85. CWS completed $255,883 in 2019, $460,256 in 2020 and $337,470 in 2021. CWS is also forecasted to complete $4,778,478.72 in 2021. These numbers translate into $218,589, $393176, $288,286, and $4,082,044 in direct costs respectively. Changing everything to a base year value of 2020 results in direct costs of $224,054, $393,176, $281,255, and $3,982,482 respectively. Summing the base year 2020 costs results in a total direct cost of $4,880,967.

[217] The Commission authorized CWS $10,893,719 in direct costs which translate into $12,752,288 in total costs. Therefore to move from total costs to direct costs multiply by $10,893,719/$12,752,288 = 0.85. CWS completed $255,883 in 2019, $460,256 in 2020 and $337,470 in 2021. CWS is also forecasted to complete $4,778,478.72 in 2021. These numbers translate into $218,589, $393176, $288,286, and $4,082,044 in direct costs respectively. Changing everything to a base year value of 2020 results in direct costs of $224,054, $393,176, $281,255, and $3,982,482 respectively. Summing the base year 2020 costs results in a total direct cost of $4,880,967.

[218] Dividing the total 2020 direct cost of $4,880,967 by 3 results in an annual cost of $1,626,989.

1 The Commission should authorize $5,257,336 in physical security improvements.
2 This number more accurately reflects CWS' capacity based on its actual track record of
3 completing these projects. Reducing the physical security budget will also serve the
4 added benefit of allowing the Commission to review the effectiveness of the program
5 more thoroughly before committing additional customer resources.

Escalating to the years 2022, 2023, and 2024 results in an annual cost of $1,709,355, $1,752,089, and $1,795,892 respectively for a total of $5,257,336. The annual escalated costs were divided evenly over each physical security PID for inclusion in the RO model.

Table 5-B CWS Physical Security Upgrades 2019, 2020, and 2021[219]

			Total Cost			
PID	Description	Year (Settlement)	CWS Application	Settlement	Recorded	Forecasted
117207	BK 2019 Physical Security Upgrades	2019	$ 380,795	$ 373,509	$ -	
117208	BK 2020 Physical Security Upgrades	2020	$ 547,331	$ 540,743	$ -	
117213	BK 2021 Physical Security Upgrades	2021	$ 508,663	$ 510,202	$ -	
117232	BG 2019 Physical Security Upgrades	2019	$ 329,522	$ 324,137	$ -	
117234	BG 2020 Physical Security Upgrades	2020	$ 333,197	$ 330,138	$ -	
117237	BG 2021 Physical Security Upgrades	2021	$ 384,110	$ 386,386	$ -	
117227	CH 2019 Physical Security Upgrades	2019	$ 78,519	$ 77,116	$ 84,007	
117228	2020 CH Physucal Security Upgrades	2020	$ 144,157	$ 142,609	$ -	
117230	CH 2021 Physical Secutrity Upgrades	2021	$ 121,245	$ 121,772	$ -	
117142	DIX 2019 Physical Security Upgrades	2019	$ 30,028	$ 29,469	$ -	
117143	DIX 2020 Physical Security Upgrades	2020	$ 68,421	$ 67,636	$ -	
117144	DIX 2021 Physical Security Upgrades	2021	$ 84,066	$ 84,369	$ -	
117173	ELA 2019 Physical Security Upgrades	2019	$ 130,595	$ 127,735	$ 144,103	
117179	ELA 2020 Physical Security Upgrades	2020	$ 33,898	$ 33,399	$ 45,541	
117182	ELA 2021 Physical Security Upgrades	2021	$ 156,044	$ 156,093	$ -	$ 177,559.39
117185	HR 2019 Physical Security Upgrades	2019	$ 410,078	$ 334,687	$ -	$ 460,636.00
117187	HR 2020 Physical Security Upgrades	2020	$ 290,855	$ 287,442	$ -	$ 296,297.00
117188	HR 2021 Physical Security Upgrades	2021	$ 398,769	$ 400,099	$ -	$ 408,596.25
117042	KC 2019 Physical Security Upgrades	2019	$ 78,495	$ 77,481	$ -	$ 86,038.00
117043	KC 2020 Physical Security Upgrades	2020	$ 23,096	$ 22,958	$ -	$ 24,494.00
117044	KC 2021 Physical Security Upgrades	2021	$ 1,567	$ 1,582	$ -	
117039	LIV 2019 Physical Security Upgrades	2019	$ 339,269	$ 333,053	$ -	$ 335,000.00
117040	LIV 2020 Physical Security Upgrades	2020	$ 295,208	$ 291,911	$ -	$ 302,142.00
117041	LIV 2021 Physical Security Upgrades	2021	$ 330,117	$ 221,252	$ -	
117219	LAS 2019 Physical Security Upgrades	2019	$ 288,793	$ 284,134	$ 259,314	
117223	LAS 2020 Physical Security Upgrades	2020	$ 328,903	$ 325,951	$ -	
117225	LAS 2021 Physical Security Upgrades	2021	$ 318,737	$ 320,693	$ -	
117216	MRL 2019 Physical Security Upgrades	2019	$ 57,160	$ 56,230	$ -	$ 61,511.49
117217	MRL 2020 Physical Security Upgrades	2020	$ 79,173	$ 78,446	$ -	
117218	MRL 2021 Physical Security Upgrades	2021	$ 25,294	$ 25,444	$ -	$ 25,948.23
117224	ORO 2020 Physical Security Upgrades	2020	$ 83,807	$ 82,939	$ -	$ 65,000.00
117226	ORO 2021 Physical Security Upgrades	2021	$ 116,933	$ 117,485	$ -	
117238	SLN 2019 Physical Security Upgrades	2019	$ 186,377	$ 183,090	$ -	$ 190,000.00
117249	SLN 2020 Physical Security Upgrades	2020	$ 240,523	$ 237,995	$ -	
117251	SLN 2021 Physical Security Upgrades	2021	$ 177,988	$ 74,556	$ -	
117257	SEL 2019 Physical Security Upgrades	2019	$ 19,992	$ 19,649	$ 36,510	
117259	SEL 2020 Physical Security Upgrades	2020	$ 56,826	$ 56,249	$ 121,944	
117269	SEL 2021 Physical Security Upgrades	2021	$ 68,103	$ 68,440	$ -	$ 69,587.00
116837	STK 2019 Physical Security Upgrades	2019	$ 392,369	$ 384,725	$ -	
117176	STK 2020 Physical Security Upgrades	2020	$ 407,852	$ 402,840	$ -	
117195	STK 2021 Physical Security Upgrades	2021	$ 590,473	$ 592,109	$ -	
117229	VIS 2019 Physical Security Upgrades	2019	$ 227,302	$ 222,980	$ -	$ 230,138.00
117233	VIS 2020 Physical Security Upgrades	2020	$ 139,961	$ 138,293	$ 131,519	
117235	VIS 2021 Physical Security Upgrades	2021	$ 143,672	$ 144,124	$ -	$ 160,880.00
117236	WIL 2021 Physical Security Upgrades	2021	$ 30,347	$ 30,496	$ -	$ 31,186.00
117258	WIL 2019 Physical Security Upgrades	2019	$ 33,866	$ 33,281	$ -	$ 41,000.00
117313	WIL 2020 Physical Security Upgrade	2020	$ 33,182	$ 32,845	$ -	
117192	PV 2019 Physical Security Upgrades	2019	$ 135,956	$ 133,149	$ -	$ 137,160.00
117193	PV 2020 Physical Security Upgrades	2020	$ 287,563	$ 283,682	$ -	$ 293,856.00
117194	PV 2021 Physical Security Upgrades	2021	$ 322,754	$ 323,253	$ -	$ 331,737.93
117196	WLK 2019 Physical Security Upgrades	2019	$ 41,662	$ 40,915	$ -	$ 30,789.00
117197	WLK 2020 Physical Security Upgrades	2020	$ 152,209	$ 150,554	$ 118,890	
117198	WLK 2021 Physical Security Upgrades	2021	$ 73,797	$ 74,108	$ -	$ 90,000.00
117200	DOM 2019 Physical Security Upgrades	2019	$ 315,188	$ 308,974	$ -	$ 357,638.26
117203	DOM 2020 Physical Security Upgrades	2020	$ 261,156	$ 257,866	$ -	$ 266,450.26
117211	DOM 2021 Physical Security Upgrades	2021	$ 111,271	$ 111,545	$ -	$ 114,188.17
116308	Antelope Valley SCADA Implementatio	2019	$ 336,713	$ 330,536	$ 57,722	
117183	AV 2019 Physical Security Upgrades	2019	$ 26,721	$ 26,230	$ -	
117186	AV 2020 Physical Security Upgrades	2020	$ 30,463	$ 30,120	$ -	
117189	AV 2021 Physical Security Upgrades	2021	$ 62,400	$ 62,637	$ -	
117243	KRV 2019 Physical Security Upgrades	2019	$ 97,404	$ 91,507	$ -	$ 112,970.75
117253	KRV 2020 Physical Security Upgrades	2020	$ 133,998	$ 132,553	$ -	
117256	KRV 2021 Physical Security Upgrades	2021	$ 85,168	$ 85,534	$ -	
117355	RDV 2019 Security - GRN CSC	2019	$ 49,546	$ 48,940	$ -	
117263	RDV 2019 Physical Security Upgrades	2019	$ 21,536	$ 21,226	$ -	
117265	RDV 2020 Physical Security Upgrades	2020	$ 77,111	$ 76,547	$ -	
117268	LUC-147 2021 Physical Security Upgr	2021	$ 92,654	$ 93,378	$ -	
117357	RDV 2019 Security - LUC CSC	2019	$ 60,391	$ 59,521	$ -	
117342	COS-148 2020 Physical Security Upgr	2020	$ 20,371	$ 20,215	$ -	
117162	BAY 2019 Physical Security Upgrades	2019	$ 55,340	$ 54,417	$ 54,057	
117165	MPS 2020 Physical Security Upgrades	2020	$ 134,913	$ 133,630	$ -	
117169	SSF 2021 Physical Security Upgrades	2021	$ 372,983	$ 375,069	$ -	
117282	SSF 2020 Physical Security Upgrades	2020	$ 3,180	$ 3,150	$ -	
117284	MPS 2021 Physical Security Upgrades	2021	$ 64,765	$ 65,127	$ -	
117341	ARM-148 2020 Physical Security Upgr	2020	$ 73,091	$ 72,696	$ -	$ 77,674.99
117344	HKN-150 2020 Physical Security Upg	2020	$ 786	$ 782	$ -	
117345	RDV-ARM 2021 Physical Security Upgr	2021	$ 94,731	$ 95,655	$ -	
			$ 13,141,503	$ 12,752,288	$ 1,053,609	$ 4,778,479

[219] CWS Response to Public Advocates Office Data Request SIB-015, Attachment #2 2018 GRC

Table 5-C Settlement Budget vs Recorded/Forecasted[220]

District/Region	Settlement Approved	Recorded	Forecasted	Total	Total as % of Settlement
Bakersfield	$ 1,424,454	$ -	$ -	$ -	0%
Bear Gulch	$ 1,040,661	$ -	$ -	$ -	0%
Chico	$ 341,497	$ 84,007	$ -	$ 84,007	25%
Dixon	$ 181,474	$ -	$ -	$ -	0%
East Los Angeles	$ 317,227	$ 189,645	$ 177,559	$ 367,204	116%
Hermosa Redondo	$ 1,022,228	$ -	$1,165,529	$1,165,529	114%
King City	$ 102,021	$ -	$ 110,532	$ 110,532	108%
Livermore	$ 846,216	$ -	$ 637,142	$ 637,142	75%
Los Altos	$ 930,778	$ 259,314	$ -	$ 259,314	28%
Marysville	$ 160,120	$ -	$ 87,460	$ 87,460	55%
Oroville	$ 200,424	$ -	$ 65,000	$ 65,000	32%
Salinas	$ 495,641	$ -	$ 190,000	$ 190,000	38%
Selma	$ 144,338	$ 158,455	$ 69,587	$ 228,042	158%
Stockton	$ 1,379,674	$ -	$ -	$ -	0%
Visalia	$ 505,397	$ 131,519	$ 391,018	$ 522,537	103%
Willows	$ 96,622	$ -	$ 72,186	$ 72,186	75%
Palos Verdes	$ 740,084	$ -	$ 762,754	$ 762,754	103%
Westlake	$ 265,577	$ 118,890	$ 120,789	$ 239,679	90%
Dominguez	$ 678,385	$ -	$ 738,277	$ 738,277	109%
Antelope Valley	$ 449,523	$ 57,722	$ -	$ 57,722	13%
Kern River Valley	$ 309,594	$ -	$ 112,971	$ 112,971	36%
Redwood Valley (RDV)	$ 48,940	$ -	$ -	$ -	0%
RDV - Lucerne	$ 250,672	$ -	$ -	$ -	0%
RDV - Coast Springs	$ 20,215	$ -	$ -	$ -	0%
Bayshore	$ 631,393	$ 54,057	$ -	$ 54,057	9%
RDV - Unified Area	$ 169,133	$ -	$ 77,675	$ 77,675	46%
Total	$ 12,752,288	$1,053,609	$4,778,479	$5,832,087	46%

Recorded and Forecasted Projects.

[220] CWS Response to Public Advocates Office Data Request SIB-015, Attachment #2 2018 GRC Recorded and Forecasted Projects.

Table 5-D Previous vs Currently Requested Physical Security Budgets[221,222]

District/Region	Settlement Approved	Forecast+Recorded	Requested
Bakersfield	$ 1,424,454	$ -	$ 2,408,192
Bear Gulch	$ 1,040,661	$ -	$ 1,408,395
Chico	$ 341,497	$ 84,007	$ 386,301
Dixon	$ 181,474	$ -	$ 249,766
East Los Angeles	$ 317,227	$ 367,204	$ 516,575
Hermosa Redondo	$ 1,022,228	$ 1,165,529	$ 614,979
King City	$ 102,021	$ 110,532	$ 222,018
Livermore	$ 846,216	$ 637,142	$ 1,174,730
Los Altos	$ 930,778	$ 259,314	$ 2,002,218
Marysville	$ 160,120	$ 87,460	$ 172,556
Oroville	$ 200,424	$ 65,000	$ 158,848
Salinas	$ 495,641	$ 190,000	$ 968,746
Selma	$ 144,338	$ 228,042	$ 268,504
Stockton	$ 1,379,674	$ -	$ 1,452,989
Visalia	$ 505,397	$ 522,537	$ 764,578
Willows	$ 96,622	$ 72,186	$ 108,571
Palos Verdes	$ 740,084	$ 762,754	$ 964,216
Westlake	$ 265,577	$ 239,679	$ 311,342
Dominguez	$ 678,385	$ 738,277	$ 333,453
Antelope Valley	$ 449,523	$ 57,722	$ 100,764
Kern River Valley	$ 309,594	$ 112,971	$ 591,578
Redwood Valley (RDV)	$ 488,960	$ 77,675	$ 218,573
Bayshore	$ 631,393	$ 54,057	$ 861,149
Total	$ 12,752,288	$ 5,832,087	$ 16,259,041

B. CWS Incident Tracking

While CWS only completed a portion of the work it was supposed to, CWS did finish some security upgrades. To understand the effectiveness of CWS' physical security program, Cal Advocates requested a breakdown of security incidents before and after security measures were installed at various sites. Cal Advocates expected data to be available showing the effectiveness of past projects. However, CWS responded to this

[221] CWS Response to Public Advocates Office Data Request SIB-015, Attachment #2 2018 GRC Recorded and Forecasted Projects.

[222] CWS Capital Project Justifications, Physical Security Justifications and Other Matters Public Version p.vi

request for information by casually noting that it "thoroughly recognizes the need to document and track physical security incidents."[223]

Despite recognizing the importance of documenting and tracking physical security incidents, CWS did not deploy a tracking tool until January 2021. CWS further stated that prior to the activation of the tool "the company did not have a formal tracking system which could be audited."[224] Given this lack of data, it is impossible for Cal Advocates to make an objective assessment of CWS' physical security program. CWS agrees that an objective source of data on physical security incidents is necessary as it stated repeatedly in its data request responses that it "recognizes the importance" of accurate physical security incident tracking data.[225]

By reducing the physical security budget, the Commission would give CWS time to obtain the necessary data and present it to the Commission in its next GRC. The data would allow the Commission to make a more informed recommendation on CWS' need for security upgrades and further adjustments to its proposed capital budgets.

IV. CONCLUSION

The Commission should authorize $5,257,336 in direct costs for physical security upgrades for the years 2022 to 2024. This amount is reasonable based on CWS' actual completion of physical security projects. The Commission should also require CWS to collect information demonstrating the effectiveness of its completed security measures as a condition of authorizing additional increases in customer funding.

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[223] CWS Response to Public Advocates Office Data Request SIB-015, #3.e.

[224] CWS Response to Public Advocates Office Data Request SIB-015, #3.e.

[225] CWS Response to Public Advocates Office Data Request SIB-015, #3.e.

1 **Attachment 1-1: Qualifications of Witness**

2

QUALIFICATIONS AND PREPARED TESTIMONY

OF

Suliman Ibrahim

Q.1 Please state your name and address.

A.1 My name is Suliman Ibrahim and my business address is 320 West 4th Street, Suite 500, Los Angeles, California 90013.

Q.2 By whom are you employed and what is your job title?

A.2 I am a Utilities Engineer in the Water Branch of the Public Advocates Office.

Q.3 Please describe your educational and professional experience.

A.3 I am a licensed Professional Civil Engineer. I graduated from the Illinois Institute of Technology with a Bachelor of Science Degree in Biology. I also have a Master of Science degree in Civil Engineering from California State University, Fullerton. I have been employed at the CPUC since May 2019. Prior to joining the CPUC, I worked in the environmental remediation field and have worked on various treatment systems and remediation projects.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am responsible for Allocations and Plant for CSS & RDOM District, Pipeline Replacement, and Physical Security.

Q.5 Does that complete your prepared testimony?

A.5 Yes

Attachment 1-2: Capital Budget Summaries

Table 1-2-A: Capital Budget Summary

Customer Support Services District Plant Additions, including Carryovers and Non-Specifics

Customer Support Services	2022	2023	2024	Annual Average
Cal Advocates	$ 4,264,161	$ 7,984,312	$19,122,257	$ 10,456,910
CWS	$20,709,070	$15,472,466	$33,496,615	$ 23,226,050
CWS > Cal Advocates	$16,444,909	$ 7,488,154	$14,374,357	$ 12,769,140
Cal Advocates as % CWS	20.59%	51.60%	57.09%	43.09%

Table 1-2-B: Capital Budget Summary

Rancho Dominguez District Plant Additions, including Carryovers and Non-Specifics

Rancho Dominguez	2022	2023	2024	Annual Average
Cal Advocates	$ 1,235,124	$ 399,475	$ 341,898	$ 658,833
CWS	$ 1,451,535	$ 593,592	$ 475,307	$ 840,145
CWS > Cal Advocates	$ 216,411	$ 194,117	$ 133,409	$ 181,312
Cal Advocates as % CWS	85.09%	67.30%	71.93%	74.77%

Table 1-2-C: Capital Budget Summary Customer Support Services 2022

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00125327	CSS Survey Equipment for Eng South	$ 35,574	$ 35,574	$ -	100.00%
2022	00124403	CSS 2022 AM Large Tools	$ 99,809	$ 99,809	$ -	100.00%
2022	00125030	CSS Dist. System Integrity Tools	$ 74,369	$ 81,806	$ 7,437	90.91%
2022	00125062	CSS Tank Inspection Tools ROV	$ 34,580	$ 38,038	$ 3,458	90.91%
2022	00125096	CSS 2022 Portable Large Test Meter	$ 26,266	$ 28,892	$ 2,627	90.91%
2022	00125097	CSS Portable SCADA Radio Tower	$ 62,614	$ 62,614	$ -	100.00%
2022	00125041	CSS AutoCAD AECC Subscriptions	$ 42,051	$ 42,051	$ -	100.00%
2022	00125055	CSS Bluebeam Software	$ 28,660	$ 28,660	$ -	100.00%
2022	00124816	CSS CAMPUS SECURITY FENCING	$ -	$ 1,232,121	$ 1,232,121	0.00%
2022	00124853	CSS Energy Efficiency - HVAC	$ -	$ 756,046	$ 756,046	0.00%
2022	00124968	CSS-SC RCC PHASE 2 OFFICE SP. BUILD	$ 330,960	$ 397,152	$ 66,192	83.33%
2022	00124855	CSS Media Center - Furniture	$ 47,465	$ 52,211	$ 4,746	90.91%
2022	00124543	CSS PC Refresh 2022	$ 241,462	$ 789,710	$ 548,248	30.58%
2022	00123734	CSS 2022 Vehicle Replacemnt Program	$ 182,731	$ 541,718	$ 358,986	33.73%
2022	00124667	CSS Meter Reading Handheld Replace	$ 251,000	$ 552,933	$ 301,933	45.39%
2022	00124562	CSS 2022 Network Hardware Replacmt.	$ 296,907	$ 326,597	$ 29,691	90.91%
2022	00124605	CSS SCADA Server & Network Replace	$ 304,681	$ 335,149	$ 30,468	90.91%
2022	00124615	CSS Database Encryption Software	$ 641,772	$ 921,657	$ 279,885	69.63%
2022	00124547	CSS 2022 Website Enhancements	$ 105,062	$ 115,569	$ 10,506	90.91%
2022		**Specific Total**	$ 2,805,963	$ 6,438,306	$ 3,632,343	43.58%
2022	330-NON-SP	**Non-specific Total**	$ 1,458,198	$ 1,822,748	$ 364,550	80.00%
2022		**Carry-Over Total**	$ -	$ 12,448,017	$ 12,448,017	0.00%
		TOTAL 2022	$ 4,264,161	$ 20,709,070	$ 16,444,909	20.59%

Table 1-2-D: Capital Budget Summary Customer Support Services 2023

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00124888	LIV Portable Booster Pump	$ 97,008	$ 97,008	$ -	100.00%
2023	00124406	CSS 2023 AM Large Tools	$ 102,305	$ 102,305	$ -	100.00%
2023	00125065	CSS GPS Basestations	$ 149,877	$ 159,433	$ 9,556	94.01%
2023	00125068	CSS Three Dimensl. (3D) GIS - Pilot	$ 61,272	$ 61,272	$ -	100.00%
2023	00125099	CSS 2023 Portable Large Test Meter	$ 26,922	$ 29,615	$ 2,692	90.91%
2023	00125007	CSS Hydraulic Model Rebuild	$ 897,385	$ 897,385	$ -	100.00%
2023	00124815	CSS OPEN OFFICE ACOUSTICS	$ 470,318	$ 564,382	$ 94,064	83.33%
2023	00124817	CSS ADDITIONAL EV CHARGERS	$ 258,113	$ 309,736	$ 51,623	83.33%
2023	00124818	CSS BLDG A SPACE IMPROVEMENTS	$ 1,291,592	$ 1,549,910	$ 258,318	83.33%
2023	00124856	CSS Replace Building Eaves	$ 227,835	$ 273,402	$ 45,567	83.33%
2023	00124857	CSS Access Control System	$ 211,777	$ 254,133	$ 42,355	83.33%
2023	00124909	CSS - RDOM 2ND FLOOR IMPROVEMENTS	$ -	$ 582,937	$ 582,937	0.00%
2023	00124910	CSS-WATER QUALITY SATELLITE LAB	$ -	$ 3,668,420	$ 3,668,420	0.00%
2023	00123737	CSS 2023 Vehicle Replacemnt Program	$ 579,476	$ 1,079,207	$ 499,731	53.69%
2023	00124576	CSS 2023 Network Hardware Replacmt.	$ 304,329	$ 334,762	$ 30,433	90.91%
2023	00124609	CSS 2023 SCADA Server Replacement	$ 305,837	$ 336,421	$ 30,584	90.91%
2023	00124544	CSS PC Refresh 2023	$ 992,770	$ 789,549	$ (203,221)	125.74%
2023	00124551	CSS 2023 Website Enhancements	$ 107,689	$ 118,458	$ 10,769	90.91%
2023	00125088	CSS RO Model Improvements	$ 267,069	$ 293,776	$ 26,707	90.91%
2023	00125105	CSS Install high volume printer	$ 13,120	$ 14,432	$ 1,312	90.91%
2023	00124445	CSS Climate Change Study	$ -	$ 427,284	$ 427,284	0.00%
2023	CSSCompVeh	CSS Vehicle for Proposed Complement	$ -	$ -	$ -	0.00%
2023	00124754	CSS Recycled Water Strategic Plan	$ 124,972	$ 137,469	$ 12,497	90.91%
2023		**Specific Total**	$ 6,489,667	$ 12,081,295	$ 5,591,628	53.72%
2023	330-NON-SP	**Non-specific Total**	$ 1,494,645	$ 1,868,306	$ 373,661	80.00%
2023		**Carry-Over Total**	$ -	$ 1,522,864	$ 1,522,864	0.00%
		TOTAL 2023	$ 7,984,312	$ 15,472,466	$ 7,488,154	51.60%

Table 1-2-E: Capital Budget Summary Customer Support Services

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00124633	CSS Portable Booster Pumps	$ 187,737	$ 187,737	$ -	100.00%
2024	00124409	CSS 2024 AM Large Tools	$ 104,862	$ 104,862	$ -	100.00%
2024	00125100	CSS 2024 Portable Large Test Meter	$ 27,595	$ 30,355	$ 2,760	90.91%
2024	00124978	CSS Energy Management System	$ 439,940	$ 527,928	$ 87,988	83.33%
2024	00123739	CSS 2024 Vehicle Replacement Progrm	$ 172,850	$ 427,145	$ 254,295	40.47%
2024	00124273	CSS PeopleSoft FS&PeopleTools Upgr.	$ -	$ 616,107	$ 616,107	0.00%
2024	00124278	CSS Workday Ongoing Enhancements	$ 282,203	$ 310,423	$ 28,220	90.91%
2024	00124473	CSS Automate HR Bidding Process	$ 282,203	$ 310,423	$ 28,220	90.91%
2024	00124483	CSS Digitize Hist. Personnel Rec.	$ 242,350	$ 266,585	$ 24,235	90.91%
2024	00124485	CSS Integrate Data- Dashboard Tool	$ 565,482	$ 622,031	$ 56,548	90.91%
2024	00124488	CSS Procurement Process Improvm.	$ -	$ 917,525	$ 917,525	0.00%
2024	00124489	CSS Inventory Management System	$ -	$ 603,784	$ 603,784	0.00%
2024	00124669	CSS EAM GIS Modernization	$ 1,061,944	$ 1,168,138	$ 106,194	90.91%
2024	00124682	CSS Cust. Serv. Analytics Software	$ 198,651	$ 218,516	$ 19,865	90.91%
2024	00124691	CSS EWWM-Buildout of Integration	$ 799,179	$ 879,097	$ 79,918	90.91%
2024	00124692	CSS EAM-Work Digitization,Analytics	$ 1,817,053	$ 1,998,759	$ 181,705	90.91%
2024	00124693	CSS CC&B Cloud Upgrade	$ 7,055,380	$ 14,119,326	$ 7,063,945	49.97%
2024	00124696	CSS Omni-channel Customer Serv. SW	$ -	$ 750,308	$ 750,308	0.00%
2024	00124699	CSS Customer Feedback Mngmt. System	$ 538,555	$ 592,410	$ 53,855	90.91%
2024	00124700	CSS Compliance Monitorng Analytics	$ 107,453	$ 118,198	$ 10,745	90.91%
2024	00124702	CSS Op. Data Management System	$ 1,646,110	$ 1,810,721	$ 164,611	90.91%
2024	00124703	CSS LIMS Software Enhancements	$ 269,277	$ 296,205	$ 26,928	90.91%
2024	00124601	CSS 2024 Network Hardware Replacem.	$ 311,937	$ 343,131	$ 31,194	90.91%
2024	00124611	CSS 2024 SCADA Server Replacement	$ 314,587	$ 346,045	$ 31,459	90.91%
2024	00124612	CSS UPS and Storage Replacement	$ 30,452	$ 576,836	$ 546,384	5.28%
2024	00124496	CSS Zoom Video Conference	$ -	$ 612,511	$ 612,511	0.00%
2024	00124545	CSS PC Refresh 2024	$ 485,450	$ 809,288	$ 323,838	59.98%
2024	00124552	CSS 2024 Website Enhancements	$ 110,381	$ 121,419	$ 11,038	90.91%
2024	00124491	CSS Identity Access Managmt. System	$ -	$ 710,892	$ 710,892	0.00%
2024	00124492	CSS SCADA security system	$ 215,422	$ 236,964	$ 21,542	90.91%
2024	00124493	CSS Next Gen. Data Loss Prevention	$ -	$ 592,410	$ 592,410	0.00%
2024	00124805	CSS Next Generation Vulnerab. Scan	$ 323,133	$ 355,446	$ 32,313	90.91%
2024		**Specific Total**	$ 17,590,188	$ 31,581,528	$ 13,991,340	55.70%
2024	330-NON-SP	**Non-specific Total**	$ 1,532,070	$ 1,915,087	$ 383,017	80.00%
2024		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 19,122,257	$ 33,496,615	$ 14,374,357	57.09%

Table 1-2-F: Capital Budget Summary Rancho Dominguez District 2022

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00124137	RD Office Improvements 2022	$ 16,705	$ 18,375	$ 1,670	90.91%
2022	00124312	RD Replace Signage	$ 42,250	$ 46,475	$ 4,225	90.91%
2022	00125170	Car Port/Cover For Vehicle Maint.	$ 42,025	$ 47,152	$ 5,127	89.13%
2022	00125171	Install Cover Over Spoils/Dump Area	$ 63,037	$ 70,728	$ 7,691	89.13%
2022	00125490	RD Replace 1st floor bathrooms	$ 15,759	$ 17,335	$ 1,576	90.91%
2022	00125543	RD Refurbish/Replace Clarifier	$ 71,443	$ 71,443	$ -	100.00%
2022	00123765	RD 2022 Vehicle Replacement Program	$ 89,890	$ 184,481	$ 94,591	48.73%
2022	00123882	RD 2022 CARB Vehicle Replacement	$ 664,316	$ 730,748	$ 66,431	90.91%
2022	00125186	RD Purch. Meter Reading Handhelds	$ 62,407	$ 69,341	$ 6,934	90.00%
2022	00125195	RD 2022 Hand Tools	$ 10,506	$ 10,506	$ -	100.00%
2022	00125198	RD 2022 Air Tools	$ 31,519	$ 31,519	$ -	100.00%
2022	00125532	RD New Copier For Operations	$ 21,012	$ 23,114	$ 2,101	90.91%
2022		**Specific Total**	$ 1,130,870	$ 1,321,217	$ 190,347	85.59%
2022	151-NON-SP	**Non-specific Total**	$ 104,255	$ 130,319	$ 26,064	80.00%
2022		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2022	$ 1,235,124	$ 1,451,535	$ 216,411	85.09%

Table 1-2-G: Capital Budget Summary Rancho Dominguez District 2023

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00124224	RD Office Improvements 2023	$ 17,123	$ 18,835	$ 1,712	90.91%
2023	00124260	RD Slurry /Re-Stripe Back Park. Lot	$ 23,907	$ 26,298	$ 2,391	90.91%
2023	00123766	RD 2023 Vehicle Replacement Program	$ 208,572	$ 371,887	$ 163,314	56.08%
2023	00125196	RD 2023 Hand Tools	$ 10,769	$ 10,769	$ -	100.00%
2023	00125199	RD 2023 Air Tools	$ 32,307	$ 32,307	$ -	100.00%
2023		**Specific Total**	$ 292,677	$ 460,095	$ 167,417	63.61%
2023	151-NON-SP	**Non-specific Total**	$ 106,798	$ 133,497	$ 26,699	80.00%
2023		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2023	$ 399,475	$ 593,592	$ 194,117	67.30%

Table 1-2-H: Capital Budget Summary Rancho Dominguez District 2024

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00124228	RD Office Improvements 2024	$ 17,551	$ 19,306	$ 1,755	90.91%
2024	00123768	RD 2024 Vehicle Replacement Program	$ 170,724	$ 275,011	$ 104,286	62.08%
2024	00125197	RD 2024 Hand Tools	$ 11,038	$ 11,038	$ -	100.00%
2024	00125200	RD 2024 Air Tools	$ 33,114	$ 33,114	$ -	100.00%
2024		**Specific Total**	$ 232,428	$ 338,469	$ 106,041	68.67%
2024	151-NON-SP	**Non-specific Total**	$ 109,471	$ 136,839	$ 27,368	80.00%
2024		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 341,898	$ 475,307	$ 133,409	71.93%

Attachment 1-3: Data Request Responses

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**	
Brian Yu, P.E. Project Coordinator	Phone: (213) 576-7075 Email: byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: (213) 226-4714 Email: suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney for CPUC	Phone: (415) 696-7329 Email: marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney for CPUC	Phone: (213) 620-6456 Email: caryn.mandelbaum@cpuc.ca.gov
From: **Greg Milleman** Vice President, California Rates	Phone: (408) 367-8489 Email: gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: (408) 367-8566 Email: nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: (408) 367-8230 ext. 78230 Email: palexander@calwater.com
Date: **August 5, 2021**	Request Received from CPUC: **July 26, 2021**
Re: **Partial Response #2 (Final) to SIB-002**	Requested Due Date: **August 3, 2021**
Subj: **Non-Regulated Revenue**	Partial Extension: **August 5, 2021**

Comments:

- No information in this response is identified as confidential.
- Adds responses for Question 1 regarding West Basin, and for Question 2(f) regarding Commerce.

Data Requests and Responses

1. On page 46 of Cal Water's Unregulated and Affiliate Report, Cal Water states "Ten Percent (10%) of gross revenues from activities classified as "active" must be shared with rate payers." In Section III of the same report on pages 41 to 45, Cal Water includes Non-Regulated Operating Income Statements for the years 2016 to 2020. These income statements classify activities as active or passive and provide revenue and revenue sharing amounts. For several of the active activities listed, revenue sharing is less than 10% of gross revenue. For example, in 2020, revenue from the City of Hawthorne Lease is listed as $10,458,289 and revenue sharing is only $515,946 or approximately 5% of gross revenue. Revenue sharing for the City of Commerce Lease is even lower at approximately 3% of gross revenue. For each activity between 2016 and 2020 including but not limited to, the City of Commerce Lease for all the years, the Hawthorne lease for all the years, the Bakersfield Treatment Plant for all the years, West Basin in 2018 and 2019, Crane Ridge in 2020, and any other instance between 2016 and 2020 where revenue sharing is less than 10% of gross revenue, please:

    a. Explain why revenue sharing is less than the 10% set by the Commission.

    b. Provide a complete accounting in Microsoft Excel format of how Cal Water arrived at its revenue sharing numbers.

    c. Identify any pass-through costs that are deducted from gross revenues.

    d. Provide support for why the costs from part (c) above are identified as pass-through costs, including the specific contract identifying the costs as pass-through costs, and proof that the costs do not include any cost "mark-up" such as invoices.

    Responses to (a) through (d): Cal Water identified the following contracts that have a revenue-sharing amount that is less than 10% of revenues in 2016-2020. Cal Water responds to the sub-parts of this question as they apply to each contract.

    Note that the actual revenue sharing for the below contracts is higher than the amounts provided in the attached workpapers. This is because the first $100K of unregulated revenues Cal Water receives each year is shared fully (100%) with customers through an allocation across all active contracts. The revenue sharing of 10% or 30% is then added on top.

    - City of Commerce (2016-2020):
        - Attachment "Q1a 2016-2020 Revenue Share-HAW & COM" shows how the revenue sharing associated with the Commerce contract was calculated for each year. The costs for pump taxes, purchased water, and purchased power are separately identified and removed from the revenue subject to the 10% revenue sharing.
        - These exclusions are consistent with Section 6.1(b)(ii) in the contract provided as attachment "Q1a Contract - City of Commerce," where "pass through costs" over which Cal Water "has no substantial control" are specifically identified.

  - A list of the pump tax, purchased water, and purchased power charges in 2020 are provided in attachment "Q1a 2020 Commerce - pass-through cost detail." *To the extent Cal Advocates would like to view individual invoices, please identify the invoices and Cal Water can pull them. Similarly, please indicate if the same data lists for previous years are requested*.

- City of Hawthorne (2016-2020):
  - Attachment "Q1b 2016-2020 Revenue Share-HAW & COM" shows how the revenue sharing associated with the Hawthorne contract was calculated for each year. The costs for pump taxes, purchased water, and purchased power are separately identified and removed from the revenue subject to the 10% revenue sharing.
  - These exclusions are consistent with Section 6 in the contract provided as attachment "Q1b Contract - City of Hawthorne," where "pass through costs" are specifically identified as "costs of water, power, and City-imposed fees."
  - A list of the pump tax, purchased water, and purchased power charges in 2020 are provided in attachment "Q1b 2020 Hawthorne - pass-through cost detail." *To the extent Cal Advocates would like to view individual invoices, please identify the invoices and Cal Water can pull them. Similarly, please indicate if the same data lists for previous years are requested*.
- Bakersfield Treatment Plant (also known as the Northwest Treatment Plant) (2016-2020):
  - Attachment "Q1c 2016-2020 Revenue share for NWTP" are the workpapers that show how the revenue sharing associated with the NWTP contract was calculated. This contract is unusual in that Cal Water and the City of Bakersfield jointly constructed the assets at the station as described in attachment "Q1c Contract - NWTP Joint Use 7.9.2003."
  - Sections 4.2 and 4.3 of attachment "Q1c Contract - NWTP Amended Joint Use 7.19.2006" describe how compensation goes to Cal Water and the City, respectively. The costs of operations are effectively shared between Cal Water and the City. Section 4.3 indicates that the price the City pays Cal Water reflects, in part, "actual operations and maintenance expenses" with no mention of a markup. (By contrast, the same section specifically allows the Commission-authorized rate of return to be applied to capital costs).
  - Consistent with the contract, the workpapers separately identify the costs of purchased water and purchased power, a portion of which are allocated to the City based on the water used each month. (The actual allocation is done on a monthly basis; the workpapers show the monthly average for the year.) After the pass-through expenses are removed, 10% of the revenue is shared.

  - Details of the purchased water and power charges are not as easily obtained for the NWTP operations. *To the extent Cal Advocates wants a list of these charges, please identify what year(s) is requested.*

- Crane Ridge (2019-2020):
  - In early 2020, the Commission approved Cal Water's acquisition of Crane Ridge and incorporated those customers into the company's regulated Livermore District.
  - Cal Water completed a larger than usual number of "job orders" for Crane Ridge that were invoiced in 2019, resulting in annual revenue and revenue-sharing that was unusually high.
  - In early 2020, Crane Ridge disputed several invoices. An example is provided in attachment "Q1d Crane Ridge disputed invoices. As a result, Cal Water reversed some invoices in 2020, and because the contract ended with Cal Water's acquisition of Crane Ridge, the net result is negative "revenue" for 2020. This also reversed a portion of the revenue shared with ratepayers in 2019.
  - Attachment "Q1d Crane Ridge Revenue Share 2019-2020" shows several job orders highlighted in yellow in the tab for 2019. Portions of those job orders are shown as reversed in 2020. (Note that these workpapers were put together for illustrative purposes. Amounts in the "revenue sharing" column are not directly related to the specific line item they are listed on, but instead were added to the given month in which the amount was shared. Similarly, the Journal Line Descriptions are not filled in for all rows. *Please let Cal Water know if additional detail is desired*.)

- HomeServe (2016):
  - Before 2007, the unregulated California affiliate of Cal Water, CWS Utility Services (CWSUS) provided an "extended service protection" ("ESP") service to Cal Water customers to provide for emergency repairs for residential water lines. In 2007, HomeServe, an unrelated third party, purchased CWSUS's customer base and paid approximately $1.5M over the course of 10 years through monthly installments of $11,532.81.
  - After the Commission's affiliate/unregulated rules were adopted, Cal Water and Cal Advocates (the Division of Ratepayer Advocates, at the time) entered into a settlement resolving how the new rules would apply to Cal Water's relationship with HomeServe.
  - As shown in attachment "Q1e HomeServe D.13-02-026," the parties agreed on a one-time payment of $2M to ratepayers (Section V of the settlement), and specified how revenues would be shared going forward (Section IV.B). Section IV.B(1) of the settlement provides for a 10% revenue sharing of the monthly

revenues Cal Water receives from HomeServe (Section IV.B(1)). Section IV.B(2) also indicates that 10% of HomeServe's ongoing "annual payment" to Cal Water would be shared. Although known to the parties at the time, however, the settlement did not include revenue sharing of the original transfer cost of $1.5M that was paid over 10 years, ending in 2016.

- Attachment "Q1e 2016 Homeserve Revenue Sharing" shows how the revenue shared in 2016 is more than 10% of the annual revenue when the monthly installments for the purchase price is removed.

- **West Basin (2018): 8/5/21 Response**
  - Attachment "Q1f West Basin Revenue Share (2018)" shows how the revenue sharing associated with the West Basin contract was calculated in 2018. In addition to a $3000 monthly service fee, Cal Water performed operations and maintenance work as needed on a "time and materials" basis. The contract ended on June 30, 2021 and therefore is not included in the forecasted revenue sharing in the 2021 GRC.
  - West Basin paid a mark-up on all costs for time and materials. As shown in Exhibit B of the contract provided as attachment "Q1f Contract - West Basin 8-1-16 to 6-30-21," the labor markup was 10%, and then an overall "administrative" mark-up of 24% was applied to all charges – labor, materials, and service charges.
  - Attachment "Q1f West Basin Revenue Detail (2018)" shows that the revenue identified as subject to sharing consisted of the monthly service charge and the mark-ups of 10% and 24% discussed above. The costs of time and materials, before markup, were excluded from the revenue category as pass-through costs. In addition, there were $38K in construction billing charges In 2018 identified as revenue that were deemed to not be subject to sharing.
  - As with all incremental costs, when the costs for time and materials were incurred, they were charged directly to the non-regulated account for the West Basin contract, rather than to a regulated account.

2. On page 70 of Cal Water's "General Report," Cal Water states in reference to revenue sharing, "Cal Water used the 2020 balance in this account as the basis for the projections to 2023." Please provide:

   a. A detailed explanation of how exactly Cal Water projected revenue sharing for this rate case.

   Response: Cal Water projected revenue sharing for this rate case using 2020 recorded amounts, escalated to the expense Test Year 2023. Cal Water used 2020 instead of a 5-year escalated average as its basis for forecasting because the revenue sharing amounts in 2020 are more reflective of what the latest revenue sharing is for each district.

b. Detailed copies in Microsoft Excel of the revenue sharing projections for each contract/service for each year covered by the rate case. One Excel Sheet containing all the projects is fine.

Response: Please see attachment "Q2b 2020-2023 Admin Transfer Projections." "Calw Jos" refers to Cal Water Job Orders. "Allocate manual payers commiss" refers to the commission HomeServe provides to Cal Water for those Cal Water customers who pay HomeServe directly rather than through Cal Water's billing system. "To record 10% revenue sharing" in Department 101 (BKD) is for the O&M contract with the City of Bakersfield.

c. Based on the revenue sharing from the past 5 years, revenue sharing percentage decreased significantly in 2020 for the City of Commerce lease. In 2016, 2017, 2018, and 2019 revenue sharing was between 6% and 7% of gross revenue. In 2020 revenue sharing was only 3% of gross revenue. Please explain this significant decrease in revenue sharing percentages.

Response: Early in 2020, Cal Water had to begin shifting to more purchased water as a result of PFOS detections in Commerce's well water. Over the course of the year, Cal Water discussed options with the City regarding treatment, and cost recovery for the higher purchased water costs incurred until treatment is implemented. In the meantime, attachment "Q1a 2016-2020 Revenue Share-HAW & COM" shows the significant increase in purchased water/power/pump taxes costs in 2020 ($2,196K, as compared to $1,200K and $1,173K in 2019 and 2018, respectively).

d. Cal Water states on page 13 of its 2020 "Annual Report", with regards to the City of Hawthorne Lease, that "Cal Water requested rate increases of 11.7% in 2020, 11.6% in 2021, and 11.6% in 2022. On August 27, 2019, the rate increases were approved via resolution 8123." Did Cal Water factor in these rate increases when projecting City of Hawthorne Revenue sharing? If so, how did Cal Water factor in these rate increases? If not, why not?

Response: Cal Water did not factor in the rate increases into its projection for the City of Hawthorne's revenue sharing. Because of Cal Water's numerous contracts for non-tarifffed services, and the relatively small impact revenue sharing has on revenue requirements, Cal Water opted for a consistent and transparent methodology that could be applied across the board to all unregulated contracts.

Cal Water would consider other methodologies, but notes that, with contracts like the City of Hawthorne that have significant pass-through costs, calculations based on rate increases may need to account for changes in pass-through costs.

e. Cal Water states on page 6 of its 2020 "Annual Report", with regards to the City of Commerce Lease, that the agreement with the City of Commerce "allows us to request a rate change annually in order to recover costs." Please list all the rate increases Cal Water has requested from the City of Commerce since 2016.

Response: Attachment "Q2e Commerce Contract Rates" shows the rate changes that went into effect on October 1, 2015, July 1, 2016, and July 1, 2017, identified as Years 1, 2, and 3 (effective date appears in lower right-hand corner). Cal Water has not changed any changes in rates since then, but has recently been in discussions about recovery for increased costs due to PFOS contamination, as discussed in response to Question 2.c.

f. Does Cal Water plan to ask for rate increases from the City of Commerce during the period covered by this rate case? If so, please explain why. If not, please explain why not.

8/5/21 Response: In 2018, the parties renewed the lease for 15 years without changing rates. As a result of negotiations since 2017, the City Council approved moving forward with the Proposition 2018 process for 3 years of proposed rate adjustments that would start on September 1, 2021 after a public hearing now scheduled for August 17, 2021. See attachments "*Q2f 7.20.21 Agenda Report on Water Rate Adjustment*," "*Q2f 8.2.21 Agenda Report rescheduling to 8.17.21*," and "*Q2f 8.2.21 Resolution setting public hearing for 8.17.21*."

In addition, as discussed in response to Question 2.c, above, water production costs have been increasing due to a necessary shift in the water mix to more purchased water. The City previously agreed to a memo account to track the incremental increase in purchased water. The balance in that account is approximately $1.3 million (about $700K in 2020 and $600K in 2021). It appears that the rates currently subject to the public hearing include recovery for these costs.

As discussed in response to Question 2.d above with regard to the City of Hawthorne contract, Cal Water is open to considering other methodologies for forecasting revenue in this case.

g. Does Cal Water factor in City of Commerce rate increases when forecasting revenue sharing? If so, how does Cal Water Factor in these rate increases? If not, why not.

Response: Cal Water has treated the City of Commerce contract the same way it has treated the City of Hawthorne contract as described in response to Question 2.d, above.

End Response

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date:	**August 18, 2021**	Request Received from CPUC:	**July 29, 2021**
Re:	**Partial Response #3 to SIB-003**	Requested Due Date:	**August 5, 2021**
Subj:	**CSS Previous Projects**	Extension for Q5d:	August 13, 2021

Comments:

- **Amended response to Question 1a and 1b**
- **Amended response to Question 5d included below.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment 1 – Technology Master Plan**
  - **Attachment 2 – Support for 00114430**
  - **Attachment 3 – Support for 00116854**

Data Requests and Responses

1. In its "CSS & RDOM Project Justification Book", Cal Water constantly describes equipment and software as "obsolete". For example, Cal Water states, "this project replaces obsolete computer equipment and accessories" (p. 12) and "the current DLP system is now obsolete and needs a replacement." (p. 98)

   a. Is obsolete or no longer useful hardware removed from rate base once it is replaced?
   PARTIAL Response #3: ~~Yes.~~ Obsolete or longer useful hardware is removed from Cal Water's continuing property records after it is replaced. As noted on page 96 of the General Report, Cal Water forecasts retirements for prospective years based on average retirements over the last three years. The retirements for each district are calculated by asset account. The recorded and forecasted retirements for each district and asset account are located on the *Fcst PLT Retirements WS 2.8* tab in the *CH07_RO_RB_PLT* file. A listing of the asset accounts and their corresponding descriptions is found on the *REF_Asset Accounts by District* tab in the same file.

   b. Is obsolete or no longer useful software removed from rate base once it is replaced?
   PARTIAL Response #3: ~~Yes.~~ Obsolete or longer useful software is removed from Cal Water's continuing property records after it is replaced. Please refer to response to 1a for an explanation of how Cal Water forecasts retirements in the rate case.

   c. Can obsolete hardware be recycled or traded in?
   Response: It depends on the type of hardware, vendor and or age. If we can recycle or trade in the hardware we will do so. Other items may be multi-purposed for other uses such as testing, donated. In some cases, destroying the hardware is the only viable option.

2. If obsolete or replaced hardware is not removed from rate base, please provide in Microsoft Excel format a list of any obsolete or replaced hardware still included in rate base.
   Response: N/A

3. If obsolete or replaced software is not removed from rate base, please provide in Microsoft Excel format a list of any obsolete or replaced software still included in rate base.
   Response: N/A

4. In its "CSS & RDOM Project Justification Book" Cal Water constantly refers to a "Cal Water Technology Master Plan" refreshed in 2020. Please provide a copy of the document.
   Response: Please see Attachment 1 – Technology Master Plan.

5. In "Table 3:" of "Attachment A" of Cal Water's "Report on the Results of Operation Customer Support Services" Cal Water lists several carryover projects. "PID 00114330 Bakersfield WV Office Improve" has an adopted budget of $177,753 and a revised cost of $409,955. "PID 00116250 UPS and SAN Array Replacements" has an adopted budget of $360,882 and a revised cost of $432,503. "PID 0116854 Network Reconfiguration – Cloud App" has an adopted budget of $417,155 and a revised cost of $646,704. For each of these projects please:

a. Provide a detailed explanation of why the project budgets were increased. If there were any changes to the project scope, please provide the justification for the scope changes as well.

PARTIAL Response #2: in blue font below

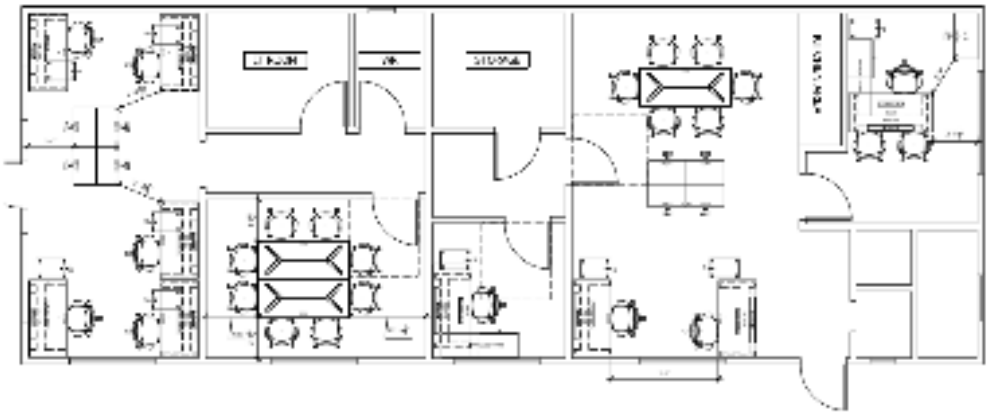
<u>Bakersfield WV Office Improve (00114330)</u> – Cal Water's capital needs and program has grown over the years and had demanded expansion of engineering and project management resources to execute this growing program. As Cal Water has grown its engineering department it has considered strategic placement of the resources and identified an opportunity to develop an engineering presence in the Central Valley to more effectively and efficiently service districts in this region in an area that has a lower cost of living. What started as a small team of 3 has now grown to 13. In 2015, Cal Water was made aware of an opportunity to lease a property that is adjacent to its operations center in Bakersfield. The property, known as the WV Property, was needed mostly for the open space for parking and equipment but also included a small building. This project was originally scoped to fund minor improvements to that building such as carpet and paint to house the engineering team. The property is now under lease and as improvements to the building were being planned the team continued growing, necessitating expansion of the building, which would have triggered extensive ADA and other improvements all to a property that is leased/not owned.

Leasing a triple wide trailer was considered for an alternative for the engineering team. We explored the option of leasing a trailer that could be placed on the leased West Valley property. A double wide trailer would not be large enough at the start, and a triple-wide would not provide sufficient work and storage space for day to day activities, nor allow for the expected team growth and the larger footprint would reduce the much needed parking capacity. This coupled with the 7 year lease term and set-up costs were determined to not be a good fit for this team, nor the district over the long term.

At the same time, Cal Water was moving forward with its Regional Call Center Initiative and leased a property offsite that resulted in space being made available within the existing BK operations office. This project was then utilized to fund the improvements needed to that existing space. Additionally, given the size of the group, it was determined that the WV building would also need minor improvements to accommodate additional staff. A summary of total project scope is noted below. Cal Water believes that its investments here were necessary, prudent and that it selected the best alternative to meet this critical staff need at the lowest cost.

Renovated 1,276 SF office structure on leased property for EMT team

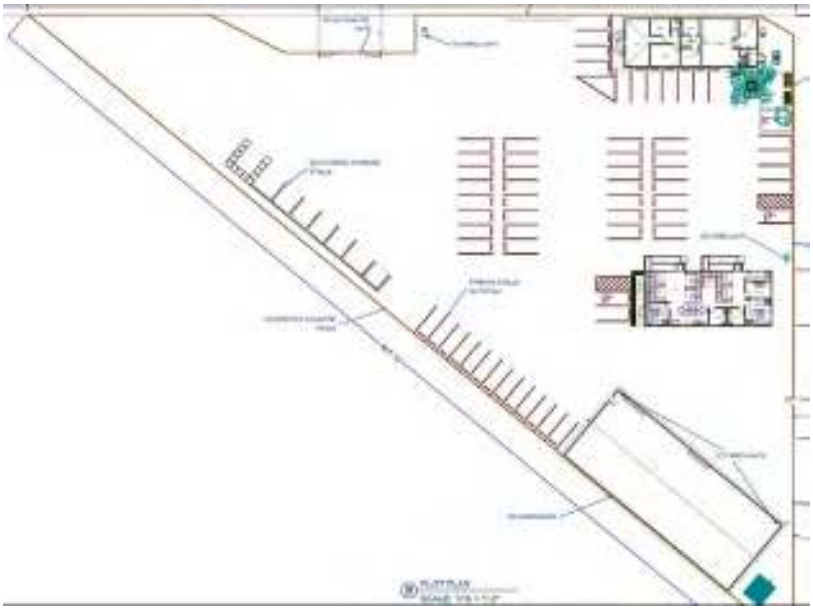
Paint, carpet, light fixtures, data connection, and furniture

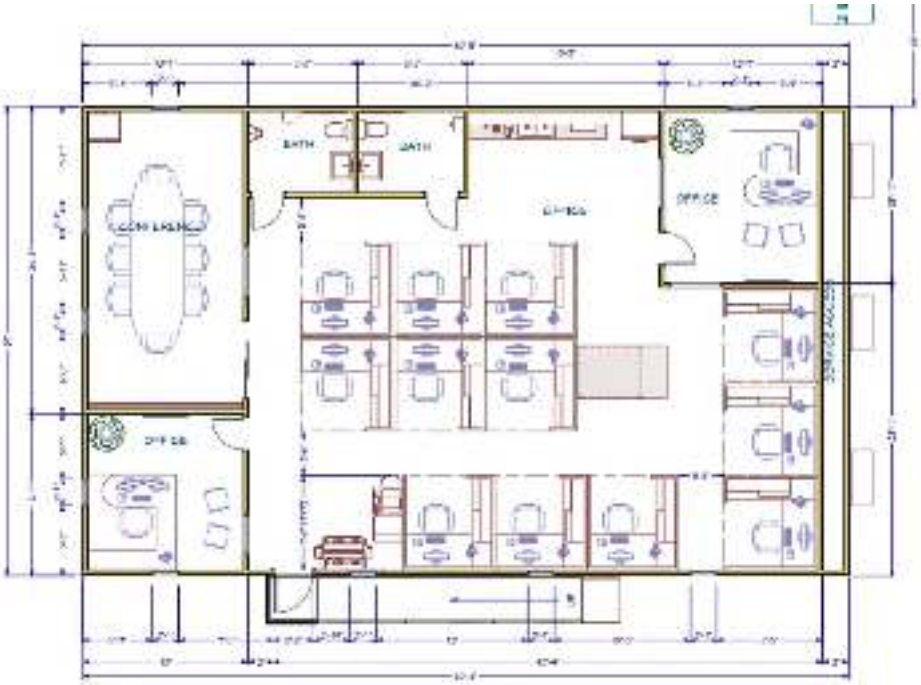


Considered Trailer for Engineering Team

Double-wide trailer, shown below, insufficient workspace

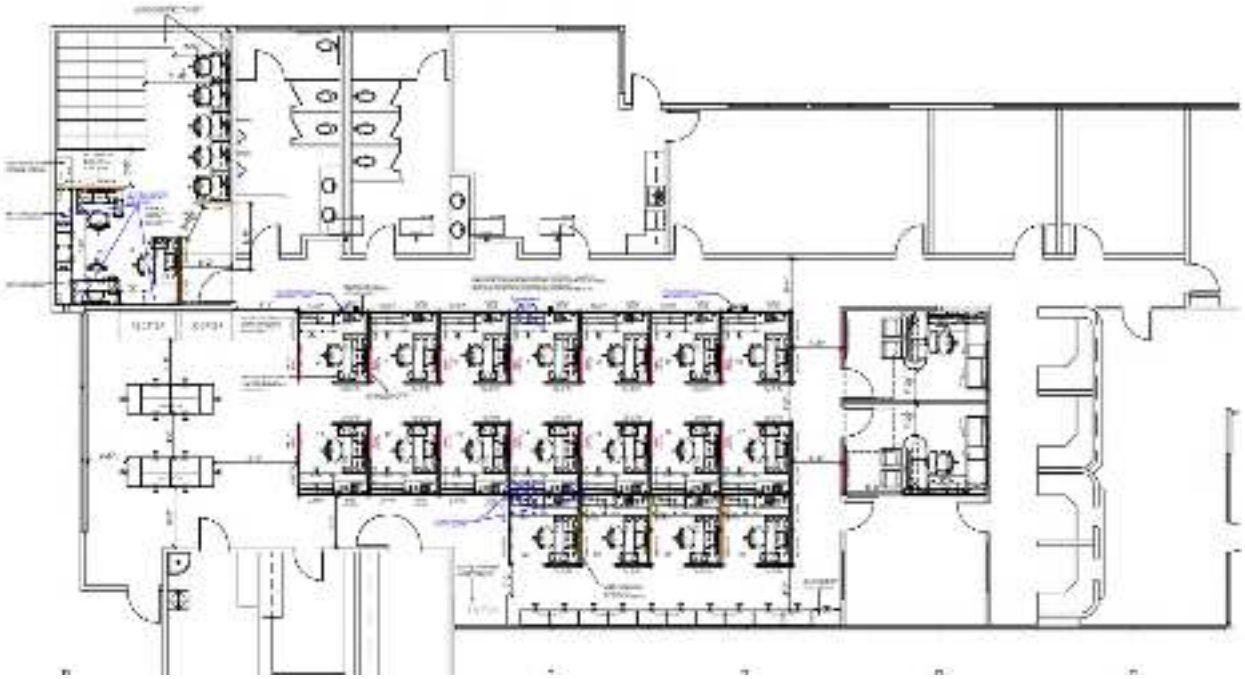
Triple-wide trailer, no growth space, and impact on available parking





Renovated Customer Service building for engineering team following opening of Central Valley RCC

- **Paint, carpet, light fixtures, minor ADA improvements to restrooms, furniture, and high density storage, portable restrooms during construction**



UPS and SAN Array Replacements (00116250) – ~~**This effort proved to be a much more labor-intensive project than was originally scoped. Integration with other systems and vendors, as well installing more disk space and shelving, took additional time and resources.**~~ **Upon further evaluation, Cal Water believes the original authorized estimate of $360,882 is achievable.**

Network Reconfiguration – Cloud App (00116854) – **Increased efforts for network integration of mobile devices and the transition from email/exchange to cloud computing was more complex than originally estimated. Scope change also occurred when Cal Water had to replace its core switch due to a failure.**

b. Provide documentation to support the above explanations. This includes but is not limited to, vendor quotes, invoices, internal company communications, etc.

PARTIAL Response #1: Please find Attachment 2 for support for Project 00114330. Cal Water will provide the support for Projects 00116250 and 00116854 in a subsequent response.

PARTIAL Response #2: Please find Attachment 3 for support for Project 0016854.

CALIFORNIA WATER SERVICE COMPANY
1720 NORTH FIRST STREET
SAN JOSE, CA 95112 ● (408) 367-8200 ● F (408) 367-8428 – Page 1

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 226-4714 suliman.ibrahim@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **Jul 29, 2021** Re: **SIB-004** Subj: **CSS PC Refresh**	Request Received from CPUC: **July 29, 2021** Requested Due Date: **August 09, 2021**

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **SIB-004 Q1 - GRC Inventory**
  - **SIB-004 Q2b - WiPro PC Upgrade – Industry**
  - **SIB-004 Q3a - Personal Device Replacement**

Data Requests and Responses

1. Referring to "CSS & RDOM Project Justification Book", Cal Water states it "has over 4,000 technology devices." (p. 12) Please provide a complete list of company owned technology devices referenced. Include the month and year the device was purchased and the original price for each device. Also include the year the device is planned to be replaced. Provide the information in an Excel format.

   Response: See attached "Q1 - GRC Inventory."

2. Also referring to "CSS & RDOM Project Justification Book", Cal Water states "Cal Water has found it is most efficient to take a proactive approach and currently employs an annual replacement project to upgrade a quarter of the devices every year." (p. 12)

   a. Why has Cal Water "found it most efficient" to upgrade a quarter of its devices every year as opposed to a fifth, for example?

      Response: With current staffing we have found it only possible to replace a quarter of our devices each year**.** Reliable technology tends to maximize worker productivity (due to lower rates of down-time), and minimize calls for IT staff assistance in responding to problems. Many agencies have experienced more support costs and productivity loss when personal computers age beyond four years. PC's begin to fail, requiring more intervention of IT support staff, greater costs of parts and labor to repair, and the loss of productivity of program staff during down time or repeated re-booting.

   b. Provide a cost-benefit analysis that shows a four-year replacement cycle is optimum.

      Response: See attachment "Q2b - WiPro PC Upgrade – Industry" regarding the use of total cost of ownership to determine optimal PC refresh lifecycles.

   c. Provide support that substantiates any assumptions, numbers, or calculations provided in the above requested cost-benefit analysis.

      Response: See attachment "Q2b - WiPro PC Upgrade – Industry."

3. In "CSS & RDOM Project Justification Book", Cal Water states "today's average life cycles for computers, monitors and printers is between three to five years." (p. 14) Cal Water bases this claim on standards published by Excelsior Institute and Statista.

   a. Please provide copies of these standards and best practices as referenced in the Project Justification Book.

      Response: See attachment "Q3a - Personal Device Replacement."

   b. Cal Water states it considered studies by Excelsior Institute and Statista. Why did Cal Water not consider other studies in determining average life cycles for its equipment?

      Response: Statista is an online portal providing data on the global digital economy, industrial sectors, consumer markets, public opinion, media, demography and

macroeconomics trends. Quantitative data from 425 economic sectors in 50 countries are provided with a range of infographic tools for analysis and visualization.

c. Given the quoted life cycle, why did Cal Water choose a four-year life cycle as opposed to a five-year life cycle.

Response: Our goal is to take a proactive approach to limit our vulnerability and breakdown of hardware, therefore reducing effort and costly repairs.

4. What happens to old computer equipment once it is replaced? For example, can old computer hardware be traded in for a discount on replacement or sold to help offset replacement costs? Has Cal Water explored such opportunities? Please explain.

Response: We repurpose the laptops to be used in our loaner laptop pool. Other hardware is picked up by an e-waste recycling company which is a WMDVLGBTBE business. They also are partnered with the City of San Jose and its work2future employment initiative to provide training and employment opportunities for at-risk young adults through its Green Cadre program for which GreenMouse, Inc., received the Community Builder Award from the City of San Jose for its contributions and leadership.

5. Cal Water is requesting replacement of several iPhones and iPads.

   a. Has Cal Water explored using alternative, lower-cost options from competing manufacturers such as Microsoft or Lenovo? Yes, we have

      i. If Cal Water has explored alternatives, please explain why the lower-cost options were not chosen.

      Response: After complete review the cost differences are very similar. Considering this, we find that our enterprise apps such as Kloudgin & Clear SCADA work more efficiently on iPads. Applications load faster, navigation and learning are more efficient, and backups and security enhancements are more manageable.

      ii. If Cal Water has not explored alternatives, please explain why not.

      Response: N/A

6. Cal Water is requesting to replace several Panasonic Toughbooks.

   a. Has Cal Water explored using alternative, lower-cost options from competing manufacturers such as Microsoft or Lenovo? Yes, we have

      i. If Cal Water has explored alternatives, please explain why the lower-cost options were not chosen.

Response: Having a dedicated serial port is necessary for our field technicians; screen brightness in indirect sunlight, fully integrated keyboard, Windows operating system (some applications used by field technicians are only available on Windows), and device ruggedness were key factors in choosing the Panasonic Toughbook over the Microsoft and Apple devices.

ii. If Cal Water has not explored alternatives, please explain why not.

Response: N/A

7. Given that monitors do not contain any hardware critical to cybersecurity or computer processing powers, why do monitors need to be replaced on a four-year basis?

Response: Benefits from newer monitors are improved ergonomics, adjustable viewing angle, increased USB ports, clearer picture, and larger space to open additional screens and side by side compares. Overall, we have found this increases productivity, reduces stress and time, and creates a better environment for increased production.

8. Why is Cal Water requesting replacement of 230 desktop computers and 355 monitors? Shouldn't the number of replaced monitors match the number of replaced desktop computers?

Response: The majority of our support staff have dual monitors to provide a more streamlined and efficient working space that allows for multiple applications to be open and viewable at the same time. This provides a more productive operation with the ability to multitask.

9. Cal Water provides several quotes from Tri Nguyen at CDW in support of its request.

d. Does Cal Water receive a discount on bulk purchases from CDW?

Response: Yes

e. How many vendors other than CDW has Cal Water explored?

Response: 2 – SHI and Zones

f. If Cal Water explored vendors other than CDW, please provide the quotes received from those vendors.

Response: These are usually verbal quotes for comparison pricing. We have found that CDW is consistently lower in cost than other vendors.

g. If Cal Water did not explore vendors other than CDW, please explain why not.

Response: N/A

h. The quotes also include a "1 year – 4th year extended service agreement". Provide the details of this service agreement.

Response: The systems we usually purchase come with a 3-year warranty. We purchase an additional 1 year to provide coverage for 4 years total or the length of our life cycle.

i. Manufacturers usually have a minimum one-year warranty on electronic products. Does the above extended service agreement overlap with the manufacturer's warranty?

Response: No, this is an extension of the manufacturer's warranty**.**

10. Does Cal Water receive a discount on bulk purchases from Verizon?

Response: Yes.

11. The iPhone quote from Verizon on page 23 of the "CSS & RDOM Project Justification Book" states "you will be receiving a promo credit in 1-2 billing cycles". This promo credit is not reflected in Cal Water's price estimate. Please explain why not.

Response: To qualify for the promo credit you are required to establish a new line of service with a new phone number. We do not purchase new lines of service since we are replacing already existing devices with the same phone number and service plan. Therefore we do not qualify for promo credits.

12. Cal Water declined device protection on the iPhones but purchased device protection for other equipment. Please explain why.

Response: We have found that iPhones typically do not have hardware or software issues that require a warranty replacement. Most of the time the device is damaged by user which is not covered by the standard warranty, or the device is lost.

13. What is the purpose of the "Lenovo ThinkPad Basic Docking Station" included in the Lenovo laptop quote on page 25 of the "CSS & RDOM Project Justification Book"?

Response: Docking stations allow laptop users to reconnect their PC peripherals such as monitors, keyboard, mouse, and direct network connection, etc., by simply placing their laptop on the docking station while located in their office. This provides the full experience of a desktop while still allowing for portability. Laptop users bring their computers into meetings, to offsite office visits, or home to do work.

CALIFORNIA WATER SERVICE COMPANY
1720 NORTH FIRST STREET
SAN JOSE, CA 95112 ● (408) 367-8200 ● F (408) 367-8428 – Page 1

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 226-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **Jul 29, 2021**

Re: **SIB-005**

Subj: **UPS and Storage Replacement**

Request Received from CPUC: **July 29, 2021**

Requested Due Date: **August 11, 2021**

Comments:

- **Full response attached.**
- **Response provided by IT.**

- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – UPS Devices**
  - **Attachment #2 – CDW PO Jan-Aug 2021**
  - **Attachment #3 – CDW PO Jan-Dec 2020**
  - **Attachment #4 – Invoices Jan-Aug 2021**

Data Requests and Responses

1. Referring to "CSS & RDOM Project Justification Book", Cal Water states it will be "replacing Storage Area Network (SAN) controllers due to end of life support." (p. 30)

   a. What does end of life support mean?

      Response: OEM (Original Equipment Manufacturer) no longer sells, provide updates, or renews hardware support contracts for the system. Furthermore, the vendor will not send Cal Water a replacement part in the event of a hardware failure. SAN controllers are being replaced every six to seven years because of EOL (End of Life). NetApp hard drives will last between nine to ten years before being retired or EOL so Cal Water does not have to replace them at the same time.

      i. Provide supporting documents to show why SAN controller use cannot be extended.
      Response: From past experience with NetApp (OEM), it will be more beneficial if Cal Water purchases new controllers rather than keeping the old ones because it will cost more to renew our support contract with the old controllers. Cal Water is in need to replace the Storage Area Network (SAN) with a newer model to accommodate additional storage requirements and the lifecycle upkeep of the hardware. The newer software supports additional features that will allow enhanced operability to reduce administrative burden and support future cloud initiatives (the ability to deploy virtual servers to the cloud easily). Cal Water could choose to leave equipment as is but performance issues affect productivity as hardware ages. Older hardware is more likely to develop mechanical problems over time due to wear and tear. Even if the hardware is fine for the tasks, it will likely become less reliable and more expensive to maintain over time, along with provide the inability to secure against cyber-attacks in the future.

   b. What is the function of a SAN controller?
      Response: It provides a shared pool of storage space and computers. It managers the aggregate of disk shelves and is responsible for the operations of the SAN system.

   c. On page 30, Cal Water's detailed project scopes only list replacement of the SAN controllers. Will Cal Water only be replacing SAN controllers for $458,578?
      Response: Yes

   d. If the answer to the above (1.c.) is no, please provide a detailed scope of what the SAN controller replacement projects entails.
      Response: N/A

   e. How many SAN controllers will Cal Water be replacing?
      Response: Six controllers – Four controllers in San Jose and two controllers in Torrance

   f. When were the current SAN controllers replaced or installed?
      Response: June 2018

g. Does Cal Water have one SAN that serves all districts or are there multiple SAN locations throughout the districts?
Response: The SAN in San Jose serves all districts and the other SAN in Torrance serves all districts for disaster recovery purposes

h. Given Cal Water is moving most of its storage to cloud-based solutions, why is a SAN still necessary?
Response: The majority of Cal Water systems are virtual machines that live on the Net App SAN system. For example, Water Quality, Engineering Files, all working department files, Accounting & Financial systems to name a few. A SAN gives the ability to pool storage and dynamically allocate exactly what each server requires, allowing for efficient operation. Given Cal Water's multiple locations, users can store and access files at a single centralized location regardless of where they are located, creating cost efficiency and ease of use. SAN works independently from the business' servers. This means that if there are issues with any of the servers, SAN will be unaffected and the data they store are still accessible. Additionally, it helps performance through improved disk utilization. The storage availability contained within a centralized manner allows everything to be managed as one single entity. This reduces the stress on our Local area network bandwidth by minimizing bottle necks that reduce performance. It also allows for improved security, simplified data backup across multiple locations, increased scalability, and for adding capacity and upgrading when needed. Reliable disaster recovery is another benefit, as critical business data from multiple applications can be easily accessed and used to bring up another location. Without SAN storage, we would have to maintain this storage at a higher cost at each server location making it more costly and less efficient.

i. In its list of carryover projects Cal Water includes UPS and SAN Array Replacements as having a revised completion year of 2021. What exactly does this project entail?
Response: This project will allow for additional storage shelves (SAN disks) to meet projections of data utilization. Uninterruptible Power Supplies (UPS) hardware is being replaced every four years based on the initial installation date. Not replacing this crucial equipment can lead to significant loss in capital investment, such as network hardware and servers. If a power outage occurs and there is not backup power, this can cause the equipment to be damaged.

j. Why are SAN arrays being replaced in 2021 if the SAN is being upgraded?
Response: For any SAN controllers under the initial warranty, Cal Water will be installing the newest software on the SAN system so all disk drives can be reused if they are not at the end of their lifecycle. With the increased cost to a support contract, it is beneficial to replace any of the older out of warranty SAN controllers in order to reduce costs. Rather than purchase support at a higher cost, these will be replaced at a lower cost benefit.

k. On page 28, Cal Water states, "SAN are refreshed using the IT industry best practice lifecycles for these hardware devices." Please provide support that substantiates this statement regarding the "IT industry best practices lifecycle."

Response: If equipment is no longer supported by the manufacturer it will be updated so that it is supported to reduce repair delays, operational outages, lost productivity and security vulnerabilities. (For best practice, reference the ISO 55001 in response #3 below)

2. Provide a list, in Excel format, of all Cal Water owned UPS devices including date of installation (month and year) and original cost. Also indicate which of these devices are to be replaced under this requested project.
   Response: Please reference attachment 1.

3. Please provide a copy of ISO 55001-Asset Management hardware lifecycle recommendations.
   Response: This can be found on the website: iso.org (iso.55000. asset management)

   https://www.iso.org/obp/ui/es/#iso:std:iso:55000:en

4. Provide support for Cal Water's UPS costs such as a vendor's quote, invoice, etc. Please include quotes/invoices from all vendors Cal Water obtained prices from.
   Response: Please reference attachments 2 through 4.

5. Is Cal Water receiving a discount for bulk UPS purchases?
   Response: No

6. Cal Water provides a vendor quote from Groupware Technology for NetApp Storage Area Network replacement on page 32 of the "CSS & RDOM Project Justification Book".

   a. How many vendor quotes did Cal Water obtain other than Groupware Technology?
      Response: Two

   b. If Cal Water did not obtain any additional vendor quotes, please explain why Cal Water did not investigate the possibility of lower prices.
      Response: N/A

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 226-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **Jul 30, 2021**

Re: **SIB-006**

Subj: **Meter Reading Handheld Replacement**

Request Received from CPUC: **July 30, 2021**

Requested Due Date: **August 13, 2021**

Comments:

- **Full response attached.**
- **Response provided by IT.**
- **Does not contain confidential information.**

- **This response refers to the following attachments included separately:**
  - **Attachment #1 – ITRON FC300 Inventory**
  - **Attachment #2 – 2014 ITRON FC300 Quote**
  - **Attachment #3 - FC300 End of Life Notification from ITRON**
  - **Attachment #4_FCS with Itron Mobile brochure**
  - **Attachment #5_Itron Mobile Radio 2 WEB**
  - **Attachment #6_CN80handheldcomputerdatasheet**
  - **Attachment #7_FCS Upgrade Quote**

Data Requests and Responses

1. On page 33 of its "CSS & RDOM Project Justification Book", Cal Water states "the current FC300 handhelds provided by ITRON will be at end of life."

   a. What is the expected life expectancy for an FC300 handheld meter?
   Response: Five years is the lifecycle standard for these and similar electronic devices.

   b. What is the average age of the FC300 handheld meters in Cal Waters inventory?
   Response: The current inventory age is greater than five years and no longer manufactured by the vendor since 2016.

   c. Provide, in Excel format, a list of FC300 handheld meters in Cal Waters inventory. Please include purchase year and original purchase price.
   Response: Cal Water has an inventory list which is provided as attachment #1. However, it was unable to locate a list which also contained the individual purchase price and year. This spreadsheet inventory of FC300 units deployed in the districts was reviewed and updated during a recent effort to upgrade the ITRONS MVRS collection system to their latest software Field Collection System (FCS) in 2020. Based upon a search of the companies Power Plan system, the last mass purchase of FC300 handheld devices occurred in 2014 for 51 units and related accessories such as docking units, chargers and communications cables. The total purchase amount was $205,149 for a unitized average cost of $4,022. Attachment #2 2014 ITRON FC300 Quote for this purchase is included.

   d. Does ITRON have a trade-in program since they are discontinuing the device?
   Response: ITRON does offer a trade-in program to offset the cost of purchasing new equipment or a replacement device. The value is based on age, condition and volume of the existing devices.

   e. Please provide support substantiating Cal Water's assertion that ITRON will no longer support these devices after December 31, 2021.
   Response: Please refer to the notice from Cal Water's ITRON Account Executive provided as attachment #3.

   f. Does support for these existing FC300 handheld devices exist outside of ITRON?
   Response: ITRON does not have specified partners that support these devices that Cal Water is aware of.

2. On page 33 of its "CSS & RDOM Project Justification Book", Cal Water suggests replacing current meter readers with Apple iOS units since they are "lighter, provide more functionality, secure and more cost effective."

   a. Cal Water already owns many iPads, iPhones, etc. Can these existing units be used to read the meters? If not, explain why not.
   Response: Yes, ITRON provides an application that is supported on these devices that allow it to be used as a valid replacement for the FC300's. Cal Water has piloted these in several areas with good success. The application does require use of ITRON's

mobile Radio (IMR) to support getting radio frequency reads for AMR meters which are included in the project proposal.

b. What criteria does Cal Water use when comparing different meter reader choices?
Response: Criteria used for meter reader choices include cost, functionality, ergonomics and compatibility with existing network, server and software solutions. The solution must be able to interface with Cal Water's meter data management and customer billing systems.

c. Please provide a cost-benefit analysis showing Cal Water's proposed purchase of Apple iOS units is more cost effective than alternative options such as purchasing other meter readers.
Response: Cal Water currently supports several mobile devices which include iOS, Android, laptops and the existing ITRON FC300 and CN80 handheld devices. In 2020, Cal Water piloted the CN80 and Apple iPad with the ITRON mobile application installed and paired with the ITRON Mobile Radio Device to pick up AMR reads and provide communication in the field with the FCS software. At the time the project proposal was developed, Cal Water estimated around a 55/45 allocation for iOS versus the ITRON CN80 as provided in the estimate in question 5 below. This was based on the assumption that larger districts have dedicated meter readers and the specialized handhelds are the device most commonly used. In smaller districts, field workers may perform multiple duties other than meter reading and the iOS devices provide the functionality to perform meter reading as well as other activities. Cal Water's has standardized on iOS devices for other mobile applications and is our preferred meter reading alternative based on cost, ease of use and manageability by support staff. The iOS devices are about half the cost of the specialized handhelds as seen in the cost estimate below. However, the CN80 devices are a more ruggedized unit and ergonomically designed for continual handheld meter use. Refer to question 5 for cost comparison between these devices.

3. On page 34 of its "CSS & RDOM Project Justification Book", Cal Water provides a detailed project scope that simply states, "Replace 135 meter reading handhelds throughout the 26 operating districts with new devices to replace the FC300 which will be de-supported by ITRON December 31, 2021."

a. What criteria does Cal Water use to chose determine its choice of meter readers?
Response: The primary determinant for meter reading device of choice is compatibility with the specific headend meter reading solution. Many of the meter reading software companies have specific devices and technology that are certified and compatible with their solutions. Cal Water also takes into consideration cost, ergonomics and functionality to determine its reading device based on compatibility with the headend read system.

b. What are the new devices Cal Water is proposing to purchase?
Response: Cal Water is proposing to leverage iOS devices (iPhones, iPads) as the primary device. ITRON also provides a newer handheld, referred to as the CN80, that

have also been acquired and used in the field by Cal Water Meter Readers and this device is being considered as a secondary option.

c. Provide documentation/literature for the devices described above in part 3(a.)
Response: Cal Water uses ITRON's Field Collection System (FCS) as one of its main Meter Data Management system for collecting meter reads manually and from AMR and ITRON AMI end points. AMR and AMI end points installed are less than 2% of total meters installed. Vendor literature for the devices being proposed under this project include FCS with ITRON Mobile (attachment #4), ITRON Mobile Radio (attachment #5), and ITRON CN80 Handheld (attachment #6).

d. Is Cal Water asking to replace its entire inventory of FC300 handheld meter readers as part of this project?
Response: Yes. The project funding being requested will allow Cal Water to replace all FC300's over the course of the 3 year rate case.

e. What is the time frame for the replacement? For example, will all the meters in Cal Water inventory be replaced in one year?
Response: The replacement plan is to systematically replace the FC300's by district over the course of the 3 year rate case with expectation to replace majority of devices in the first year and as they fail given the limited support and replacement of the devices by ITRON.

4. On page 12 of its "General Report" Cal Water states "Cal Water is in the process of refining a proposal for a more comprehensive, company-wide AMI program that is currently scheduled for filing in the 4th quarter of 2021."

   a. Please provide the latest draft copy of Cal Water's company-wide AMI program proposal.
   Response: Cal Water is in process of implementing the approved pilot project to install an estimated 10,000 meters in the Dominguez District. The company is in the assessment, evaluation, and planning stages of a potential company-wide AMI program. The analysis and evaluation of a potential company-wide AMI program has not yet been completed. Future submittal of a proposal for a company-wide AMI program will be determined based on the results and completion of the analysis.

   b. How will this proposed project (replacing handheld meter readers) be affected by Cal Water's AMI proposal?
   Response: As mentioned in response 4a, the company is in the assessment, evaluation and planning stages of a potential company-wide AMI program. If the company proceeds, it is possible the transition to AMI would occur over multiple rate cases to complete a program once approved. Therefore, it is expected AMI will not impact the immediate need to purchase replacement technology for the existing handhelds since they are at the end of their life. The iOS devices can be leveraged for other applications within company operations if AMI were expanded to these areas.

c. How long will the requested devices be in service if Cal Water begins the transition to AMI?
Response: As noted above in 1a, the lifecycle of these and similar devices being considered is 5 years. It is possible a company-wide AMI program could span multiple rate cases to complete and the company would get full value from this proposed project to replace the existing ITRON FC300 devices.

d. Does Cal Water currently have AMR meters in its system?
Response: Yes. Cal Water currently has AMR meters installed in several districts.

e. If Cal Water is currently using AMR meters, why are these handheld meters necessary?
Response: AMR meters collect and store data locally to the meter end point and requires pulling that data via radio frequency using an electronic device such as a handheld, ruggedized laptop, tablet or smart phone. Several of the current handheld devices have built in radios that can be used to pull the reads for the AMR meters without physically removing the meter lid. The project proposal for replacing the handhelds includes technology to continue to read meters using existing radio frequency.

f. Has Cal Water explored purchasing devices that can be more easily adapted to AMI usage as an alternative to this project's proposed devices?
Response: Cal Water has explored and evaluated several devices and alternatives as identified in the proposal. The primary device of choice is an iOS based device such as an iPad or iPhone paired with the ITRON mobile application and radio. The iOS devices are used for other field operations, reducing the need for field employees to carry multiple specialized devices to perform their work. These devices can also be used for Cal Water's existing AMI solutions.

5. On page 35 of its "CSS & RDOM Project Justification Book" Cal Water provides a "Capital Project Cost Estimate". This estimate only includes "meter reading handheld replacements" at $478,445 and "contingency" at $47,845.

   a. Please provide a detailed cost estimate that itemizes how the proposed funds will be spent.
   Response:

   Estimated Unit Cost for iPad and accessories (based on recent purchases)

Equipment and Accessories	Unit Cost	Estimated Number of Units	Estimated Cost
iPad	$1,055	75	$79,125
Rugged Case with Handstrap	$100	75	$7,500
Portable Charger	$100	75	$7,500
Total Est. Cost			$94,125

Estimated Unit Cost for ITRON CN80 Handhelds and Accessories (based on ITRON Quote)

Equipment and Accessories	Unit Cost	Estimated Number of Units	Estimated Cost
CN80 Handhelds	$2,650	60	$159,000
CN80 Complete Repair	$995	60	$59,700
Mobile Radio	$2,080	60	$124,800
Docking station – 4 slot	$770	16	$12,320
Docking station – single slot	$425	4	$1,700
CN80 Battery Packs	$135	32	$4,320
Battery Charging Station	$310	8	$2,480
Total Est.			$364,320

Estimated Labor Cost for Installation: 160 hours X $125 = $20,000

Replacement and Installation Cost $478,445

Contingency – Class 4 (10%) for $478,445 = $47,845

b. Please provide support in the form of sales quotes or invoices substantiating the cost estimate requested in part 5 (a.).
Response: ITRON Quote is provided as attachment # 7.

c. Please provide support for how Cal Water determined the contingency for this proposed project.
Response: Cal Water used the standard capital budgeting program contingency for Class 4 projects (routine replacements), which is 10%.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 226-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **Jul 30, 2021**

Re: **SIB-007**

Subj: **Database Encryption Software**

Request Received from CPUC: **July 30, 2021**

Requested Due Date: **August 13, 2021**

Comments:

- **Full response attached.**
- **Response provided by IT.**
- **Does not contain confidential information.**

Data Requests and Responses

1. On page 47 of its "CSS & RDOM Project Justification Book", Cal Water states "the current Oracle database at Cal Water is not encrypted."

   a. How does Cal Water currently protect customer information and other sensitive data?
   Response: From a computer application perspective, data is protected/encrypted via SSL traffic from load balancer to browser/browser to Weblogic side, however data is not protected/encrypted on the database/storage side.

   b. Is Cal Water currently in compliance with all governing Federal, State, and local database protection laws and regulations such as, for example, the California Consumer Privacy Act? Please explain.
   Response: Yes, we are in compliance with the California Consumer and Privacy Act (CCPA).
   We have a process in place for a customer who request to have their sensitive data purged. If they meet the conditions to remove data (inactive customer for 3 years), a Change Request will be created to have the data purged from Customer Care & Billing (CC&B).

   c. What options other than database encryption exist to safeguard consumer data? Please describe in detail.
   Response: For Oracle DB/data encryption, using Oracle Advanced Security is a recommended method for Customer Care & Billing (CCB) application.

2. On page 46 of its "CSS & RDOM Project Justification Book", Cal Water proposes to "implement Oracle Advanced Security."

   a. Will the proposed Oracle Advanced Security upgrade bring Cal Water into compliance with all industry standards, as well as legal, and insurance requirements on how data can be handled?
   Response: Yes, using Oracle Advanced Security is a preferred method to protect/encrypt CCB data from a cyberattack on the database/storage level.

   It also provides data encryption and strong authentication services to the Oracle database, safeguarding sensitive data against unauthorized access from the network and the operating system. It also protects against theft, loss, and improper decommissioning of storage media and database backups

   This will also bring Cal Water into compliance with industry standards.

   b. What is the estimated useful life of the proposed Oracle Advanced Security upgrade?
   Response: It will be ongoing and we will need to renew for annual/extended support.

   Why did Cal Water choose Oracle Advanced Security as the proposed database encryption software?
   Response: It is a recommended approach for protecting/encrypting Oracle databases and highly recommended by Oracle and our CCB expert/consultant. It provides data encryption for data at rest, for data in transit, and for data on backup tapes.

c. What other encryption software did Cal Water consider? Why were these options not chosen?
Response: Because Customer Care & Billing runs on Oracle, Oracle Advanced Security is tailored for this type of environment and this method is recommended by Oracle and our CCB expertise/consultant, we did not consider other options.

d. Please provide a cost benefit analysis showing Oracle Advanced Security as the most economical and beneficial encryption software option.
Response: Due to the unique nature of the Cal Water environment, we did not consider other options, hence, there is no cost/benefit comparison.

Oracle Advanced Security includes multiple features including Oracle Database Vault, Oracle Data Redaction, Oracle Data Masking and Subsetting, and Oracle Label Security. It protects data at rest -- Transparent Data Encryption (TDE) stops would-be attackers from bypassing the database and reading sensitive information directly from storage by enforcing data-at-rest encryption in the database layer. It encrypts individual data columns, entire tablespaces, database exports, and backups to control access to sensitive data. Other benefits are there is no additional storage overhead and the performance overhead is typically in the single digits, making Oracle Advanced Security/TDE tablespace encryption a 'near-zero impact' encryption solution. TDE is transparent to business applications and does not require application changes. Encryption and decryption occur at the database storage level, with no impact to the SQL interface that applications use. TDE protects against malicious parties who try to restore stolen database files, such as the data, logs, backups, snapshots, and database copies.

3. On page 49 of its "CSS & RDOM Project Justification Book", Cal Water provides a quote from Oracle for the Advanced Security program.

e. Can the Oracle software be purchased from an alternative source?
Response: No, since this is an Oracle component.

f. Why does Cal Water need 48 of the Advanced Security software?
Response: CCB runs on 3 databases and each DB runs on 16 CPUs. Oracle Advanced Security is licensed per CPU so → 16 (CPUs) x 3 (Database servers) = 48 CPUs requiring Advanced Security software.

g. What does the support fee cover and why is it necessary?
Response: The support fee covers the support/maintenance of our current Oracle databases with TDE database encryption in place. If we should run into any issues with this component, Oracle will assist with reaching resolution.

h. Please explain in detail why Cal Water chose to treat the support fee as an "expense" as opposed to "capital" from a rate making perspective?
Response: Cal Water treats software renewal as an operating expense because, as a general matter, a capital asset is something that has economic benefit for more than

one year, while an expense provides benefits just for the current period. The development or purchase of software is generally capitalized because the period of use is usually more than one year, however the subsequent ongoing maintenance and support costs are more comparable to normal day-to-day costs that are expensed, and so not appropriate for capitalization.

i. The quote lists the 1st year net cost at $517,524. This $517,524 includes $93,324 for support and $424,200 in license fees. The 3-year TCO is listed as $797,495. Based on the numbers provided in the quote, the 3-year cost should be $424,200 + $93,324 + $93,324 + $93,324 = $704,172 or $93,323 less than the total price of $797,495 listed. Please explain.

Response: The quote contains a typo. This is good for four years

Net License Fees	**$424,200**
1st year support	**$93,324**
---	---
1st year Net Cost	**$517,524**
2nd year support	**$93,324**
3rd year support	**$93,324**
4th year support	**$93,324**
---	---
Total	**$797,495 (this should be the final number)**

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 226-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **August 4, 2021**

Re: **SIB-008**

Subj: **Campus Security Fencing**

Request Received from CPUC: **July 30, 2021**

Requested Due Date: **August 6, 2021**

Comments:

- **Full response attached.**
- **Contains Confidential (Category 1) information**
- **This response refers to the following attachments included separately:**

- **SIB-008 CONFIDENTIAL Attachment 1 – CSS Vulnerability Assessment**
- **SIB-008 Attachment 2 – COBE Fence ROM Estimate**

Data Requests and Responses

1. On page 50 of its "CSS & RDOM Project Justification Book", Cal Water states "current CSS campus perimeter fences are lower than the recommended height in the Cal Water physical security assessment conducted by a third-party security company in 2017."

   a. Please provide the 2017 third-party security assessment.
   Response: See Confidential Attachment 1. This contains the first 24 pages of the study, which includes the study parameters and results specific to the CSS campus in San Jose.

   b. What is the height of the existing fence?

      i. Is the height of the existing fence uniform throughout? If, not, provide the height variances.
      Response: No.

West side	**6'H**
North side	**ranges 5'H – 7'H**
East side	**ranges 7'H to 6'H**
South side	**ranges 5'5"H – 6'H**

   c. What material is the existing fence made of?
   Response:

West	**wrought iron**
North	**chain link**
East	**chain link with angled barbed wire topper**
South	**chain link**

   d. Can the current fence be retrofitted to increase height, using extensions and barbed wire for example, as opposed to replacement? If not, why not.
   Response: The existing Westside wrought iron fencing and gates could be retrofitted to increase the height. This has been factored into the cost estimate. The balance of the existing fence is chain link. The footings for this fencing is not large/deep enough to support extensions.

   e. On page 51 of it "CSS & RDOM Project Justification Book", Cal Water states it investigated adding on-site security and it was rejected because it "proved to be too expensive." Please provide a cost benefit analysis comparing the currently proposed project with adding on-site security.
   Response:

Alternate 1 On-Site Patrol 24/7							
	Hr/Wk	$/Hr	Total/Wk	Wks/Yr	Regular	Holiday Premium	Annual Estimate
Security Guard Patrol	168	$ 28	$ 4,704	52	$244,608	$ 10,080	$ 254,688
Vehicle (golf cart type)							$ 4,000
					Total Alternate 1		$ 258,688

f. Please provide support justifying the numbers and assumptions used in the answer to question 1(e).
Response: Developed cost estimate based on one (1) security guard 24/7 with a small golf cart type vehicle to patrol the 10 acre site. This would be an on-going annual cost that would increase with then current labor rates. Based on year 1 costs, the return on investment of the perimeter fencing improvement would be less than 4 years.

This option is not ideal as it would not provide full coverage. Multiple buildings and the significant vegetation along the property perimeter provide numerous hiding places for intruders.

2. On page 50 of its "CSS & RDOM Project Justification Book", Cal Water states "Per preliminary feedback from the City of San Jose Planning Department, we could install the 8-foot-tall fencing, with anti-climb features, on the North, West, and East sides of the property."

   g. Will the Southside fence also be upgraded?
   Response: Yes, but per the City's planning department comments the Southside fence needs to be a solid fence, constructed of either wood or concrete.

   h. Is the cost for the Southside fence also included in the current proposed project?
   Response: Yes, however both cost proposals were generated prior to receiving the preliminary feedback from the planning department, so the cost is currently based on a single wrought iron solution. In reviewing with the general contractor the material cost may be lower, but labor costs may be higher due to a more labor intensive installation process. The overall cost is expected to be comparable.

3. On page 63 of its "CSS & RDOM Project Justification Book", Cal Water provides a price quote by Gordon Prill.

   i. Please define and explain the "general conditions by %" that is included in the quote?
   Response: As this is a rough order magnitude (ROM) budget, Gordon Prill estimated general conditions as a percentage of project budget. General conditions could include items such as jobsite trailer, jobsite utilities, superintendent salaries, safety costs, project accounting. This cost would be more accurately calculated once project scope is fully defined.

   j. Did Cal Water obtain quotes other than the one from Gordon Prill? If so, please provide these additional quotes.

Response: Additional ROM quote obtained from COBE construction October 2020. See attached. Does not include architectural, permitting fees, and landscaping.

k. If Cal Water did not obtain any additional vendor quotes, please explain why Cal Water did not investigate or pursue lower prices.
Response: N/A

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 226-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **August 19, 2021**	Request Received from CPUC: **August 12, 2021**
Re: **SIB-009**	Requested Due Date: **August 19, 2021**
Subj: **PeopleSoft FS & People Tools Upgrade**	

Comments:

- **Full response attached.**
- **Response provided by IT.**
- **Does not contain confidential information.**

Data Requests and Responses

The page numbers referenced in the below questions are from the "CSS & RDOM Project Justification Book."

1. On page 70, Cal Water states the proposed upgrade "will help extend the life of PeopleSoft FS for at least one more rate cycle." On page 71 it also states "Oracle has committed to support our version until 2027."

   a. Will PeopleSoft need to be replaced after 2027?
   Response: The Company is not proposing to replace PeopleSoft but to ensure the Company stays current with the underlying software framework (Peopletools) for support, functionality, and cybersecurity objectives.

   b. Please provide a cost benefit analysis comparing replacement of PeopleSoft with alternative software. Please take into account the possible lack of support after 2027 and the fact the lifetime will possibly only be extended by one more rate cycle.
   Response: The Company plans to perform the evaluation of financial ERP systems, including PeopleSoft before the next rate case.

   c. Please provide support to substantiate any of the assumptions or calculations made in the cost benefit analysis requested in question 1.b.
   Response: Not applicable

   d. What are the alternative programs to PeopleSoft?
   Response: Potential candidates include SAP, Workday, and Oracle Fusion.

   e. Has Cal Water obtained any quotes for alternative programs? If so, please provide quotes obtained.
   Response: No, the Company has not obtained quotes for alternative programs.

2. On page 72, Cal Water includes a project cost estimate that includes 2000 hours at $110 hourly rate for "internal labor effort. On page 73, Cal Water provides a "Proposal for Annual PeopleTools Upgrade" from Gefira Business Solutions. The proposal estimates it will require "three Calwater developers with 25% time allocated to the project" and a "Calwater Functional Lead/Project Manager". The proposal also estimates a yearly 4-month upgrade period. 4 months equates to approximately 16 weeks or 640 hours. 25% of 640 hours is 160 hours. For three employees that would amount to approximately 480 hours per year/1440 hours over 3 years.

   a. How did Cal Water determine 2000 hours for its internal labor effort?
   Response:

Team Members	Resources	Hours/ Resource	Total Hours/ Year	Total Hours (3 Years)
Project Manager	1	20	20	60
Functional Lead's	3	25	75	225
Subject Matter Expert's for Testing	3	35	105	315

Developers	3	160	480	1,440
				2,040

The Company plans to resource this project with 50% consultants and 50% internal labor, which will help us know the project status and learn functionality to reduce training costs.

b. Do the 2000 hours include Cal Water's Functional Lead/Project manager?
Response: Yes

c. How did Cal Water calculate the $110 hourly rate?
Response: It's a fully loaded cost.

$65/ hour (Wages) + $45 (Benefits) = $110

d. Isn't internal labor already covered through Cal Water's payroll?
Response: No, this work would be for capital. As noted on page 111 of the General Report, Cal Water forecasts payroll expenses based upon 2020 recorded actuals with a few minor adjustments. Employees will allocate their time between expenses and capital projects at each pay period. By only using 2020 actuals, employee time spent on capital projects is excluded from payroll expenses.

e. Cal Water also states on page vii that direct costs exclude construction overhead. Why doesn't Cal Water consider internal labor as part of overhead in this case?
Response: Internal labor in this case is the time spent by employees directly working on this project and who will charge their time accordingly. Construction overhead represents general costs associated with capital projects that are not directly charged to individual projects. These include indirect labor (general engineering supervision, administrative salaries and expenses associated with construction activities, and general construction supervision), benefit costs associated with such labor, and other indirect expenses that are capital in nature. For example, instead of charging a specific capital project for the time spent processing an invoice that is related to that project, an accounts payable clerk allocates a portion of their time to the construction overhead account commensurate to the overall time spent on capital related activity. Please refer to General Report chapter seven for a discussion on how construction overhead is applied to capital projects.

f. Did Cal Water obtain quotes other than the one from Gefira Business Solutions? If so, please provide these additional quotes.
Response: No, not at this time.

g. If Cal Water did not obtain any additional vendor quotes, please explain why Cal Water did not investigate the possibility of lower prices.
Response: Once the project is approved, CalWater will go for the proper RFP process. During the RFP process, the prices will be negotiated.

3. Why is the entirety of the project added to rates in 2024 if the project is a yearly upgrade?
Response: The estimated project duration will be three years, starting in 2022 and completing in 2024.

4. On page 74, Cal Water includes a cost estimate from Gefira Business Solutions. Gefira proposes a fixed cost estimate of $100,000 per year for a 3-year total of $300,000. Gefira does not escalate. Why is Cal Water escalating its cost estimate?
   Response: PowerPlan, the estimating software Cal Water uses to estimate and track projects, applies escalation to all direct costs.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
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Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **August 19, 2021**	Request Received from CPUC: **August 12, 2021**
Re: **SIB-011**	Requested Due Date: **August 19, 2021**
Subj: **Procurement Process Improvements**	

Comments:

- **Full response attached.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – 00124488 Procurement Process Improvements Justification**
  - **Attachment #2 – 00124488 Cost Avoidance**

Data Requests and Responses

The page references in the following questions are from the "CSS & RDOM Project Justification Book."

1. On page 80, Cal Water states "The current system processes in PeopleSoft that support Procurement are convoluted, non-user-friendly and labor intensive." Cal Water goes on to further describe the problems inherent in the current PeopleSoft software.

   a. Given the myriad of issues described by Cal Water, why did Cal Water choose its current procurement system?
   Response: **The final draft of the Justification for this project was inadvertently omitted from the GRC filing. The version intended to be submitted provides more details, including some of the information requested in the Data Request. This is included as Attachment 1.**

   The procurement system Cal Water uses is part of the PeopleSoft Financials system. The system was originally chosen in 1999 to replace the Main Frame system with a Client-Server based ERP system. The strategy was to choose one ERP vendor for both HR and Financials systems to avoid complicated integrations between systems and simplify the vendor support. PeopleSoft had the best HR system and good financial functionalities in general. Therefore, weighing in all factors, PeopleSoft was chosen as the ERP vendor even though it does not have the best procurement functionalities on the market.

   b. How old is Cal Water's current procurement system?
   Response: **Over 20 years. It was implemented in 1999.**

   c. Have upgrades to the current procurement system been previously performed?
   Response: **There were major upgrades in 2005, 2011, 2016. There were additional modules (eProcurement, Expense Report, Contract Authorization and Workflow) implemented in 2012.**

   d. What is the total cost of the procurement system currently in rate base?
   Response: **The total investments in implementation, upgrade and enhancement of the system from 1999-2013 was $4.69 million. All of the costs associated with this should be fully depreciated. There have been $1.192 million investments in system upgrade and enhancements since 2013. These depreciate over time based on current depreciation rates authorized by the CPUC during the respective years.**

   e. If the total cost in question 1.d. includes multiple improvements/purchases, please provide a breakdown of the costs describing each cost and showing the year the cost was incurred.
   Response: **See table, below.**

Description	In Service Year	Cost
PeopleSoft Implementation (including Procurement)	1999	$ 1,000,000.00 (est)
PeopleSoft Upgrade to V8	2004	$ 58,304.69
System Enhancement (Contract Tracking)	2009	$ 38,413.83
P2P System Automation (Implemented eProcurement, Expense Report, Contract Authorization, Workflow)	2012	$ 2,852,196.22
PeopleSoft Upgrade to V9	2013	$ 750,031.60
PeopleSoft Upgrade to V9.2	2016	$ 475,650.24
Integration for Supplier Management	2017	$ 140,743.37
xPO for Master Contracts	2018	$ 460,220.00
Integration for Insurance Tracking	2019	$ 114,609.24

2. Cal Water states on page 80 "Currently, an excessive amount of time is spent by the Procurement team as well as by requestors to manage these documents while complying with policies using the underlying business processes."
   a. How much time does Cal Water anticipate saving as a result of the proposed system upgrade?
   Response: We estimate 4,432 hours of time saving for various employees. Please see the Time Saving Analysis under Question 3.a.
   b. Given the improved efficiency and decreased time requirements, does Cal Water anticipate reducing its IT workforce requirement once this project is implemented?
   Response: No, the efficiency gain and decreased time requirements will benefit primarily the functional users. The system support tasks that need IT's support, such as reporting, data analysis, troubleshooting, minor system updates, still stay the same. We anticipate the same IT workforce requirement to support the Procurement system after the project is implemented.
3. On page 80, Cal Water states it estimates an "annual cost avoidance of $223,274 per year."
   a. On page 80, Cal Water references an ROI worksheet. Please provide the referenced worksheet.
   Response: As noted in Cal Water's response to Question 1.a., the justification that was included in Cal Water's filing was an older draft. The figure provided on page 80 of $223,274 was not substantiated. Please see Attachment 2 for Cal Water's estimation of annual cost avoidance.
   b. Are these cost reductions currently reflected in Cal Water's RO model? If so, how so?
   Response: No. As noted above, the efficiencies gain and decreased requirements will be dispersed through a group of functional users. However, these employees will be able to dedicate the time saved from this improvement to higher value work.
4. On page 81, Cal Water provides three alternatives. Cal Water says it can replace PeopleSoft, upgrade PeopleSoft, or do nothing.

a. Please provide a cost benefit analysis comparing the three alternatives and showing a financial benefit to ratepayers resulting from Cal Water recommended upgrade solution.

Response:

	Replace PeopleSoft with a different ERP system	**Utilize upgraded PeopleSoft Application**	**Do Nothing**
Investment	$5.6 million	$851,840.00	None
Support data	The magnitude of effort to replace PeopleSoft P2P system (including eProcurement, Purchasing, Inventory, Expense Report and AP) is similar to the scale of replacing a Human Resource Management system. Cal Water recently completed the replacement of Human Resource Management system with total cost of $5.6 million. Therefore we estimate the replacement of a P2P system will be similar.	See Attachment 1	
Cost Avoidance	To be determined	$444,580.00, annually	None
Evaluation	Replacing an ERP system requires tremendous financial investment and stakeholders' time, it adds financial burden on customers. With the aging of the current ERP system, although there is a need to replace the system in the future, we will be taking careful measures to determine the right timing of the replacement. For now it is best to leverage the existing ERP and maximize the value of	This is a great solution to as we can enhance the current PeopleSoft System to streamline the P2P process and enable workforce mobility, while avoiding expensive migration/implementation of a new system to add financial burden to our customers.	Under this scenario, field operations will continue spending a large amount of time in office handling administrative work instead of being in field supporting customers. Efficiencies cannot be gained in the P2P processes and ever-growing volume of work will necessitate additional headcount(s) in order to maintain high level of customer service.

	it with continued enhancements to the system.		

b. Please provide support for any assumptions or calculations used in the cost benefit analysis requested in question 4.a.
Response: **See the chart in 4.a.**

c. If PeopleSoft is such a problematic software, as Cal Water stated on page 80, why is Cal Water proposing upgrading PeopleSoft instead of replacement?
Response: **See the evaluations in the chart in 4.a.**

d. Cal Water previously stated on page 71 regarding PeopleSoft "Oracle has committed to support our version until 2027." Will the proposed upgrade investment become obsolete if PeopleSoft is no longer supported after 2027?
Response: **No. We anticipate the system can still be supported by other third-parties on the market for a period of time if Oracle does not provide support any more.**

e. If PeopleSoft is no longer supported after 2027, will Cal Water be required to invest in an alternative procurement process i.e., replace PeopleSoft?
Response: **Yes we are likely to replace the system at some point and the decision needs to be made in coordination with other departments using Peoplesoft Financials as well.**

5. Starting on page 87, Cal Water provides a cost estimate from Gefira Business Solutions.

a. Did Cal Water obtain quotes other than the one from Gefira Business Solutions? If so, please provide these additional quotes.
Response: **Gefira is our designated service provider for PeopleSoft support and enhancements. We have a master service agreement (MSA) with Gefira which we negotiate every 3-5 years to make sure the pricing in the contract is competitive. Although we did not obtain other quotes for this particular project, we know Gefira's billing rates in the MSA are very competitive comparing to other agencies we work with. Besides as the designated service provider to support our PeopleSoft system, Gefira is very familiar with our business processes and system configuration. If we were to engage another service provider, more time and costs will be spent to have the service provider get familiar with our business and system therefore the cost for the project will be higher.**

b. If Cal Water did not obtain any additional vendor quotes, please explain why Cal Water did not investigate the possibility of lower prices.
Response: **The total cost for implementing the project also includes the internal labor and contingency. Please see the answer to 5.d for the cost information on internal labor and contingency.**

c. On page 88, Cal Water states that Gafira includes a proposed subtotal of $580,000 to complete the project. Cal Water's proposed cost on page 86 is $774,400. Cal Water does not explain why its estimate is substantially higher than the cost estimate provided

by Gafira. Please explain this discrepancy.
Response: **The total cost for implementing the project also includes the internal labor and contingency. Please see the answer to 5.d for the cost information on internal labor and contingency.**

d. Please provide support to substantiate the answer to question 5.c. above.
Response:

Internal Labor

Tasks	Duration Months	Total Hours	Per Hour	Estimates
PeopleSoft Mobile Requisition, Approval & Receiving	3	240	$ 110.00	$ 26,400.00
Supplier Contract Management	6	480	$ 110.00	$ 52,800.00
Supplier Portal	6	480	$ 110.00	$ 52,800.00
Supplier 360	2	160	$ 110.00	$ 17,600.00
Supplier Scorecarding	2	160	$ 110.00	$ 17,600.00
Chatbot for Requester Inquiries	3	240	$ 110.00	$ 26,400.00
			Sub Total	**$ 193,600.00**

Total:

Professional Consulting Services - Anoushka Inc.	$ 580,800.00
Internal Labor	$ 193,600.00
IT Standard Contingency (10%)	$ 77,440.00
Grand Total:	**$ 851,840.00**

e. Gafira's cost estimate extends over several month totaling over a year and yet Gafira does not escalate costs. Given this fact, why is Cal Water escalating costs in its proposed cost estimate?
Response: **The time Gefira will spend working on each of the tasks will occur concurrently. The maximum duration for their work is 6 months.**

END RESPONSE

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 226-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
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Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **August 20, 2021**	Request Received from CPUC: **August 12, 2021**
Re: **SIB-012**	Requested Due Date: **August 20, 2021**
Subj: **Inventory Management System**	

Comments:

- **Full response attached.**
- **Response provided by Procurement and IT.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment 1_Quote_Inventory Management System**

Data Requests and Responses

The page references in the following questions are from the "CSS & RDOM Project Justification Book."

1. On page 89, Cal Water states "The proposed upgrade to the inventory management system will increase productivity and reduce operational cost per employee by an estimated 6%, along with an annual inventory reduction cost of approximately 2%. The combination of these will provide an estimated annual cost avoidance of $210,000."

   a. How did Cal Water calculate the cost avoidance of $210,000?
   Response: This is based on three factors, employee productivity, inventory cost and depreciation.

   Employee productivity is based on a 6% time saving for 40 employees at the districts to repurpose time from managing inventory (4 hours of work each day) to crucial tasks such as processing contractors' insurance or issuing purchase orders for infrastructure upgrades.

   Inventory cost savings is based on a 2% reduction of material waste, as a streamlined management system allows to curtail buffer inventory used to mitigate current process deficiencies.

   Depreciation expenses are due to a reduction in the value of an asset with the passage of time, due to advances in technology.

   b. Please provide support to substantiate any assumptions or calculations used in answering part 1.a. above.
   Response:

Employee Productivity	+$177,408 (savings) ((($70/hr * 0.06) * 4hr) *22 days) * 12 mo) * 40 emply
Inventory Cost Savings	+$146,000 (savings) $7.3M Inventory x 2%
System Depreciation	-$112,112 (expenses)
Total	$211,296

   c. Does Cal Water anticipate a reduction in its payroll requirement given the afore-mentioned increase in productivity?
   Response: No, the increase in productivity would allow us to focus on other critical processes such as processing contractors' insurance or issuing purchase orders for infrastructure upgrades.

   d. Cal Water states on page 91 "project duration will be approximately six months with a start in Q1 2022 and go-live in Q3 2022." Is Cal Water reflecting the estimated annual

cost savings of $210,000 starting in 2022 in its RO model and revenue requirements? If so, please explain how.
Response: No, they are not reflected since these are avoided costs.

2. On pages 89 and 90, Cal Water provides several alternative options to deal with inventory management. Use of a material-supplier based inventory system, enhancement of current PeopleSoft inventory system, and do nothing.

   a. Please provide a cost benefit analysis comparing the three alternatives and showing a financial benefit to ratepayers resulting from Cal Water recommended upgrade solution.
   Response:

Material-Supplier Inventory System	*Mobile Inventory (PeopleSoft Financials)*	*Do Nothing*
Loss of negotiation power, no subsequent RFP for material purchases Average Yearly Inventory Material Purchases * Average Savings on an RFP event $7.3M * 8%	See 1b. See 1b.	Current Inventory-Management System Deficiency Labor Demand $177,408 ((($70/hr * 0.06) * 4hr) *22 days) * 12 mo) * 40 emply System Deficiency Inventory Buffer Demand $146,000 $7.3M Inventory x 2%
$584,000 (Savings Forfeiture)	*$211,296 (Cost Avoidance)*	*$323,408 (Deficiency Forfeiture)*

   b. Please provide support for any assumptions or calculations used in the cost benefit analysis requested in question 2.a.
   Response: Included in 2.a.

   c. Cal Water previously stated on page 71 regarding the PeopleSoft that "Oracle has committed to support our version until 2027." Will the proposed inventory management upgrade investment become obsolete if PeopleSoft is no longer supported after 2027?
   Response: No, we can continue to get extended (limited) support for the product from Oracle but will at some point need to upgrade the system in order to gain new functionalities and security improvements..

   d. If PeopleSoft is no longer supported after 2027, will Cal Water be required to invest in an alternative inventory management system i.e., replace PeopleSoft?
   Response: Yes, we are likely to replace the system at some point and the decision needs to be made in coordination with other departments using Peoplesoft Financials as well.

3. On page 92, Cal Water includes a project cost estimate.

   a. What is this cost estimate based on?
   Response: The cost estimate is based on a previously submitted quote.

b. Please provide support to substantiate the cost estimate.
Response: See attached quote for $330,000.00 and breakdown below totaling $560,560.00 as submitted:

Tasks	Source	Total Hours	Per Hour	Travel Expenses	Estimates
Professional Consulting Services	Gefira	2000	$165.00		$330,000.00
Business Consulting Fees	Estimate	160	$362.50	$11,600	$69,600.00
Internal labor effort		1000	$110.00		$110,000.00
Contingency Cost [10%]					$50,960.00
			Total:		**$560,560.00**

c. Has Cal Water obtained any quotes regarding this project? If so, please provide the quotes.
Response: Please see response 3.b.

d. If Cal Water has not obtained any consultant quotes, please explain why not.
Response: Gefira is our designated service provider for PeopleSoft support and enhancements. We have a master service agreement (MSA) with Gefira which we negotiate every 3-5 years to make sure the pricing in the contract is competitive. Although we did not obtain other quotes for this particular project, we know Gefira's billing rates in the MSA are very competitive comparing to other agencies we work with. Besides as the designated service provider to support our PeopleSoft system, Gefira is very familiar with our business processes and system configuration. If we were to engage another service provider, more time and costs will be spent to have the service provider get familiar with our business and system therefore the cost for the project will be higher.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 226-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **August 20, 2021**

Re: **SIB-013**

Subj: **Identity Access Management System**

Request Received from CPUC: **August 12, 2021**

Requested Due Date: **August 20, 2021**

Comments:

- **Full response attached.**
- **Response provided by IT.**
- **Does not contain confidential information.**

Data Requests and Responses

The page references in the following questions are from the "CSS & RDOM Project Justification Book."

1. On page 93, Cal Water states Identity and Access Management ("IDAM") will "enable MFA to satisfy Defense Federal Acquisition Regulations Supplement (DFARS), National Institute Standards and Technology (NIST), and Payment Card Industry Data Security Standards (PCI DSS) requirements." On page 94, Cal Water goes on to state not purchasing IDAM will result in "flagrant violation of federal regulations such as DFARS, NIST, PCI DSS, and Sarbanes Oxley (SOX)."

   a. Is Cal Water currently in violation of any federal, state, or local laws, regulations or requirements related to its employee network access? Please explain.
   Response: No

   b. If Cal Water is in violation of any of the laws or regulations mentioned above, what are the penalties and legal ramifications of such violations?
   Response: N/A

   c. If Cal Water is in violation of any of the laws or regulations mentioned above, what is Cal Water's plan to come into compliance with these laws and regulations while it awaits the implementation of IDAM?
   Response: N/A

   d. Do the laws or regulations mentioned above specifically require Cal Water to implement the proposed changes to its existing system? Please also provide supporting documentation.
   Response: NIST 800 (DFARS) compliance requirement 3.5.3 requires the use of multifactor authentication for local and network access to privileged accounts and for network access to non-privileged accounts. According to PCI DSS 8.3.1 Administrators should use MFA for non-console access to the cardholder data environment (CDE). PCI SSC defines non-console access as access to the system component over a network interface rather than through a direct physical connection.

2. On page 94, Cal Water states it will have "more work for the Helpdesk with forgotten or expire password" if IDAM is not implemented.

   a. Please provide a cost benefit analysis comparing the cost of IDAM software to the cost of increased work Cal Water anticipates in its absence.
   Response: The helpdesk on avg. processes 670 password reset requests each month manually. Utilizing this IDAM software will replace this manual cost effort that occurs each month, allowing us to shift resources to other critical efforts and reducing the need to add additional headcount at this time. These requests are also "high" priority, as users are unable to access systems when waiting on a password request. This assumption does not take into consideration of the cost of employee down time,

while waiting for this task to be completed. If a current request occurs during off hours, an employee must wait till the next business day to complete their work.

b. Please provide support for any assumptions or calculations used in the cost benefit analysis requested in question 2.a.
Response: Avg. time to reset a password = 10 Minutes, Avg cost of employee = $100 loaded with benefits,

[(670 requests X 10 min) / 60] X $100 = $11,166 per month or approximately $134K per year

3. On page 94, Cal Water states not implementing IDAM "will increase the Company's chance to suffer a data security breach that severely tarnish the Company's reputation and lose customer trust." On pages 45 through 49, Cal Water discusses its proposal to purchase database encryption software. One of the benefits of database encryption according to Cal Water is it will prevent unauthorized personnel from accessing encrypted data and protect against situations such as breaches. Please explain why IDAM is necessary if data encryption already serves to protect the data.
Response: Access control (e.g. IDAM) and database encryption are two different cyber security disciplines that are complimentary. Access control prevents unauthorized access including brute force attempts by a hacker to gain access to Cal Water's critical systems such as SCADA, Customer Care and Billing (CCB), Workday, and PeopleSoft. It's considered one of the initiate level of I.T. security. Data encryption takes place at the database level of the system architecture to protect sensitive information only from both external and internal users. For example, if a hacker is able to download the entire database of our customer billing system, database encryption will obfuscate the data and make it meaningless and useless to the hackers. Both access control and database encryption are important, but they serve different purposes as part of the larger cyber security program.

4. On page 96, Cal Water includes a project cost estimate. On page 97, Cal Water includes a quote from Optiv as a support.

a. Optiv's quote provides very little detail. Please provide an itemized cost breakdown of the $600,000 presented in the quote.
Response: This is a preliminary quote based on high level requirements provided by Cal Water. The actual quote can vary quite a bit depending on the detailed needs identified by Cal Water. The itemized quote can only be obtained once we have gone through the RFP process. Most vendors will also not provide a detailed quote unless the purchase is imminent since software and labor cost can fluctuate from year to year.

b. Did Cal Water obtain quotes from providers other than Optiv? If so, please provide the quotes.
Response: No, Optiv is one of the most respected cyber security firms in the market and has a great reputation for the goods and services they provide. The full RFP will involve multiple vendors.

c. If Cal Water has not obtained any quotes other than the one from Optiv, please explain why not.
Response: Please see explanation under item 4a and b. Optiv is an existing vendor Cal Water uses, and we are grateful they are cooperating with us to provide a high level estimate for the project.

d. Has Cal Water decided on which IDAM software it wishes to install?
Response: No.

e. How many types of IDAM software did Cal Water explore?
Response: Due to the availability of several possible solutions, we will begin exploring those from the top right quadrant of the Gartner Magic Quadrant for Identity Access Management. Gartner is a global research and advisory firm providing information, advice, and tools for leaders in IT, finance, HR, customer service and support, communications, legal and compliance, marketing, sales, and supply chain functions.

Figure 1: Magic Quadrant for Access Management

Source: Gartner (November 2020)

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
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From: **California Water Service Company**

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Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **September 3, 2021**

Re: **SIB-014 – Partial Response # 2 (Final)**

Subj: **Pipeline Replacement**

Request Received from CPUC: **August 27, 2021**
Requested Due Date: **September 03, 2021**

Extension for 3,4,5,6,8,9, and 10: **September 10, 2021**
Extension for 1,2, and 7: **September 13, 2021**

Comments:

- **Partial response # 2 identified in blue font.**

- **Response provided by Engineering.**
- **Does not contain confidential information.**
- **The first response refers to the following attachments included separately for partial response #1 on September 10:**
  - **Attachment #1 – Summary of Pipes Info in Districts**
  - **Attachment #2 – AWWA Buried No Longer - BNL**
  - **Attachment #3 – Asset Plan for Pipelines**
  - **Attachment #4 – 2021 GRC MRP Unit Cost Calculations**
- **This response refers to the following attachments included separately:**
  - **Attachment #5 – Replacement Rates and Costs**
  - **Attachment #6 – 2021 GRC MRP Project List - Existing Material**
  - **Attachment #7 – 2021 GRC MRP Project List - Risk Assessment**
  - **Attachment #8 – Break Count 2010 – 2020 by District**

Data Requests and Responses

1. Please provide in Microsoft Excel format a table showing Cal Water's: requested pipeline replacement rate, Commission adopted pipeline replacement rate, completed pipeline replacement rate, requested cost, Commission adopted cost, and actual recorded cost per district for the past 10 years from 2010 to 2020. See example table below:

District	Year	Requested Replacement Rate	Commission Adopted Replacement Rate	Completed Replacement Rate	Requested Cost	Commission Adopted Cost	Recorded Cost

Response: The data requested is included in Attachment 5. Please note that prior to 2016 (the 2015 GRC), pipeline requests, approvals, and replacement rates were handled differently, and Cal Water did not have the Mainline Replacement Program that we currently have. Prior to 2016, pipeline projects were requested individually within each district, rather than a combined program, and thus replacement rates and costs are not available in the same way. Data for requested and adopted replacement rates and costs are provided for the program after 2016. Hence, completed replacement rate and recorded costs are shown for 2016-2020.

Please note that replacement rates and recorded costs per year can be misleading, as in many instances, there is a zero value in one year, followed by a larger value the next year. In many cases, it makes sense to combine the footage per year into a larger project that is done the following year. This was especially true in districts like Antelope Valley, Chico, Dixon, Marysville, Oroville, Redwood Valley, Visalia, Willows, and Westlake. Additionally in some of these districts, due to rising costs, work was stopped once the budget was reached and the current project was completed, to avoid further additional costs. Please also note that in some cases, costs are shown as direct costs rather total costs.

2. As part of its pipeline justification Cal Water includes pipeline replacement schematics in each of its district project justification books. For example, Attachment B starting on page 20 of the Bay Area Region Capital Projects Justifications Book. Please provide a table in Microsoft Excel Format that illustrates this information for all the various districts. This table should include the district, Project ID, budget year, number of leaks, likelihood of failure (numerical score), consequence of failure (numerical score), business risk exposure, install footage, retirement footage, and water system. Also include the pipeline's diameter, age, current material, and proposed replacement material. See example template attached.

Response: The data requested is included in Attachments 6 and 7. The proposed projects and existing pipe information are maintained in separate databases and therefore are provided as separate attachments. Attachment 6 is the risk assessment and preliminary recommended pipe material. Attachment 7 is the data for the existing material, including pipe size, material and age. Within the GIS system, these two databases are overlaid visually, as shown on the maps in the Justification Books. This data is not easily combined because in most cases there

are many small pipe segments of different materials that make up each project. The two lists can be cross referenced through the columns "MRP ID" in Attachment 6, and column "Map ID" in Attachment 7, as well as by looking at the visual maps provided in the Justification Books.

3. For each district, please provide in Microsoft Excel Format, a breakdown that shows the total length of each material by pipe size and vintage.

Response: Please see Attachment 1, tab "Summary Table". Please note tab "Material Definitions" explains the acronyms used in the summary table. Also, please note 9999 and -99 are placeholders for an unknown or missing installation date and pipe size, respectively.

4. Please explain in detail what factors Cal Water uses other than material, age, and break history such as (but not limited to) operating pressures, soil conditions, shrink-swell factor, water corrosively, etc. when determining remaining useful life of pipelines. If Cal Water does not take other factors into consideration, please explain why not.

Response: Cal water uses material, age, and diameter to determine the remaining useful life of pipelines. This industry approach is further augmented by Cal Water's historical pipeline break records as an indicator of condition. While other factors such as ground movement and soil types can influence service life, Cal Water currently analyzes the impacts of such factors as they manifest in actual breaks.

5. Please provide and explain the formulas Cal Water uses to develop likelihood of failure and consequence of failure. Include all factors that go into each formula.

Response:

Likelihood of Failure (LoF): The AWWA's Buried No Longer report (See Attachment 2) is referenced for the expected lifespan of a particular pipeline material. Using each pipes installation date, an initial score of 1-5 (<20% = 5, 20%-40% = 4, 40%-60% = 3, 60%-80% = 2, >80% = 1) is assigned based on the percentage of remaining life the pipe is expected to have (example: a pipe with 50% remaining life would be assigned a 3). The pipe is then assessed for its break history. If the pipe segment has two or more breaks, the LoF score is increased by 1 (exception is if the pipe is already a 5 as it is the highest score possible).

Consequence of Failure (CoF): The development of the CoF is highly complex as it uses multiple data points such as pipe size, zoning, road classes, environmentally sensitive areas, fire hazard zones, and other weighted elements to determine a score. The elements were selected to reflect a Triple Bottom Line approach which is an established methodology for developing CoF. This method attempts to balance social, environmental, and financial impact. The formulation used in Cal Water's analysis was developed by a third party contractor (Kayuga Solution), experienced with the development of business risk exposure methodologies (See Attachment 3).

6. Please confirm and explain whether Cal Water follows AWWA manual M77 "Condition Assessment of Water Mains".
    - Provide a copy of the manual.

Response: Cal Water does not use the AWWA reference manual M77 directly in the Main Replacement Program (MRP). However, there is some incidental overlap with Cal Water's Pipeline Asset Management program and M77. This similarity mainly derives from Cal water's adherence to the industry norms and practice.

Cal Water does not have an electronic copy of the AWWA reference manual M77. Cal Water can loan a hard copy of the manual to Cal Advocates.

7. For each of Cal Water's districts please provide in Microsoft Excel available water main leak data for years 2010 through 2020, including number of leaks, quantity of water associated with each leak, cost of lost water associated with each leak event, and associated cost of repair of each leak.

Response: The attached Excel spreadsheet contains the break count for the years 2010 – 2020 by District (See Attachment 8). There is not a current process to capture cost associated to repair each break, however; the total dollar figure for the general ledger account that break repair is charged to have been included for each year. This data can be found in Section II, Subsection Letter E, and Item 8 of the Minimum Data Requirement Response Form for the last three rate cases.

The amount of water lost due to each break event is not collected since it typically is not known and has to be estimated. Cal Water's Water Resources Sustainability team is currently working on initiatives that could make this data available in the future. Since the amount of water lost due to breaks is unknown, the cost associated with lost water is also unknown.

8. How did Cal Water determine its district pipeline replacement per foot costs?

Response: District pipeline replacement per foot costs were calculated based on the total historical actual costs for each main replacement program project completed between 2016 and 2020 for each district. Overhead was subtracted from these total costs, and then the totals were divided by the quantity of main installed on a per year basis to achieve a cost per foot per year per district. These yearly average per foot costs for 2016-2020 were then escalated to 2020 dollars for each year, and then averaged over the five years to get an average cost of replacement for each district.

9. Please, provide all related supporting documents explaining the estimated cost for each district proposed in the current General Rate Case ("GRC") A.21-07-002. The supporting documents should include, but should not be limited to, project description, engineering

reports, requests for bids, bid results, contractor estimates, and any internal company communications or memorandums.

Response: As described in Question #8, the cost per foot values were developed using historical project costs between 2016 and 2020, rather than specific bids or additional reports. Once these costs per foot were developed, the total main replacement project costs per district were found by first determining the yearly footage by multiplying the footage of pipe in a district by the replacement rate, and then multiplying the result by the pipeline replacement per foot cost. Overhead and escalation are then calculated and added to the estimate to arrive at the total cost per district per year for all of the combined projects in that district (see Attachment 4 for additional details).

10. On page 21 of the Common Plant Justification Book Cal Water states, it submits pipelines with a certain LOF and COF to the MRP manager as candidates for replacement "along with the recommended replacement rate range from the AWWA Pipeline Replacement Tool." What is the AWWA pipeline replacement tool? Please provide an in-depth explanation.

Response: The AWWA Pipeline Replacement Tool (also known as the Buried No Longer Tool or the BNL Tool) was developed by AWWA and accompanied the Buried No Longer report published in 2012 (See Attachment 2). The tool uses inventory data and other water system attributes to develop a forecast of a water systems pipeline replacement needs. Around 2018, AWWA discontinued access to the tool as it became unsupported. It is understood that AWWA was having trouble supporting and updating the tool and was attempting to replace it with a newly developed tool, however; an updated tool has yet to be published.

The tool provides a multiyear projection of its results. Cal Water has maintained the past results of the tools recommended replacement rates as a reference for future planning.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
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From: **California Water Service Company**

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Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **September 3, 2021**

Re: **SIB-015**

Subj: **Physical Security**

Request Received from CPUC: **August 27, 2021**

Requested Due Date: **September 3, 2021**

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Contains Confidential (Category #1) information.**

- **This response refers to the following attachments included separately:**
  - **Attachment #1 – Navigant Report 2017 Confidential (Category #1)**
  - **Attachment #2 – 2018 GRC Recorded and Forecasted Projects**

Data Requests and Responses

All page numbers referenced, unless otherwise noted, refer to Cal Water's "Physical Security Project Justification Book",

1. On page 8 Cal Water references a 2017 Navigant security assessment report. On page 11 Cal Water further states that in the fall of 2020 it reviewed and updated the recommendations presented in the 2017 report.

   a. Please provide a copy of the original 2017 Navigant report.
   Response: See Attachment 1 for the original 2017 Navigant report.

   b. Please provide a copy of the updated Cal Water report.
   Response: As discussed in the second paragraph on page 11 of the "Physical Security Project Justification and Other Matters Book", for the 2021 GRC filing Cal Water conducted a review of the remaining projects recommended in the 2017 Navigant report but updated this with the help of the district staff to ensure the recommendations in the 2021 GRC filing were still appropriate (e.g., some stations had been retired or were no longer as critical). These updates are reflected in the proposed costs estimates, scopes of work, and stations identified for each district in the "Physical Security Project Justification and Other Matters Book" of the 2021 GRC filing.

   c. Please describe Navigant's role, if any, in updating the report?
   Response: The original Navigant report from 2017 formed the basis for all recommended projects presented in the 2021 GRC filing. The proposed projects included in the 2021 GRC filing were updated as recommended by district staff to accommodate changes (e.g. some stations had been retired or were no longer critical). Navigant was not involved in any updated projects presented in the 2021 GRC filing. However, Cal Water hired an independent consultant with extensive physical security experience to review the project justifications/budget and lead the security improvement projects.

2. Cal Water provides capital project cost estimates in support of its physical security requests, for example on page 18. These estimates seem to be prepared by Navigant and Cal Water.

   a. Please explain how Cal Water calculates/estimates each cost it uses in these estimates?
   Response: Costs presented for the physical security requests are based primarily on Navigant's estimates as subject matter experts. Cal Water escalated these costs to 2020 dollars using the yearly inflation rates presented in the Cal Advocates Inflation Memorandums (see "Common Plant Project Justification Book" page PJ – 121). Cal Water also included Cal Water labor required to complete design, installation, and/or manage the project, as well as other costs such as permitting fees and surveying. Unit costs for additional items were obtained from the cost catalogue (see "Common Plant Project Justification Book" page PJ-119) or from contractor cost quotes and a cost basis was included for those costs (e.g. surveying). Cal Water also incorporated additional cost factors where appropriate and the final total direct costs were then escalated to the project completion year assuming a 2.5% inflation rate.

b. Please provide supporting details for the numbers used in Cal Water's security improvement estimates. This support includes but is not limited to, vendor quotes, invoices, etc.
Response: The quantity of improvements required at a given site was based primarily on the original recommendations from the Navigant report (see Attachment 1). These numbers were modified based on discussion with Operations staff in each district after reviewing the proposed projects from the Navigant Report for 2022, 2023, and 2024. The results of those verbal discussion are presented in the 2021 GRC project justification Attachment A included within the "Physical Security Project Justification and Other Matters Book".

c. Please provide vendor quotes for any of the costs included in its cost estimates Cal Water obtained. If none, why not?
Response: Costs provided were primarily obtained from the Navigant report (see Attachment 1). Any costs adjusted by Cal Water from the Navigant report are from SKUs presented in the Cost Catalog or invoices presented as attachments in the "Physical Security Project Justification and Other Matters Book".

3. In its 2018 GRC filling Cal Water similarly requested various physical security improvement projects.

a. Please provide a table in Microsoft Excel format for each district showing the yearly requested physical security improvement budget, the Commission approved yearly budget, the actual recorded yearly budget, the yearly work proposed, and the yearly work completed.
Response: Please see Attachment 2. In addition to the recorded project closings to date, Cal Water also included the anticipated close for 2021 for projects not yet closed (Forecasted). Cal Water has completed a number of critical physical security projects to date (as further discussed in subsequent responses); however, Cal Water has also had to mature its Physical Security Program in parallel by hiring subject matter experts and developing new physical security standards. Given the success Cal Water has achieved developing these standards, coupled with the aggressive leadership that has been put in place, Cal Water anticipates an increased ability to close projects more systematically and at a higher volume for 2021 and beyond.

b. Please explain whether the completed physical security projects resulted in a tangible improvement in Cal Water's security. Please provide concrete examples.
Response: Cal Water continues to complete physical security site improvement projects and has realized the effectiveness of these enhanced security measures in a number of its stations. Below are 7-examples of security enhancements which have increased the safety and security of the facility, the customers that the facility supports, and the Cal Water employees that work in these facilities.

i. Visalia District Office Example

Before the fence upgrade, vagrants consistently cut the aged fence at this location, which included a reservoir, station, pumps, and motors. Access was gained quickly to this location to sleep, steal, or dump trash. Once the new fence was installed in

compliance with our new fencing standard, there have been no further incidents (see Figure 1).

Figure 1. Visalia Elevated Tank New Fencing

ii. Westlake District

There were no cameras at this location in the past. Before cameral installation, homeless persons were sleeping behind the building which is in an industrial park. The cameras have served as a deterrent, and have caused the homeless to move elsewhere (see Figures 2 and 3).

Figure 2. Security Camera Installation

Figure 3. View of Security Camera Footage

iii. Hermosa Redondo Station HR-9

This is considered a very critical facility supporting a significant amount of the Cal Water coastal zone. This project consisted of replacing 1,925 linear feet of fencing. Before the fence was replaced it was very easy to walk through the damaged areas of the fence. Typically is was just children, however, Cal Water does store and use sodium hypochlorite on site which poses a risk if a child were to get into the chemical storage building. According to the District Manager, Cal Water often received anecdotal information from neighbors that children would enter the facility. Chalk graffiti was fairly common as well. With the installation of the new fence, the District is not aware of any unauthorized entry to the site. The neighbors have also voiced their appreciation of having a nice new fence, opposed to the dilapidated one (see Figures 4 – 7).

Figure 4. Fencing Before Improvements

Figure 5. Fencing Before Improvements (see broken slates)

Figure 6. New Fencing

Figure 7. Another view of New Fencing

iv. East LA District Station 62

This location previously did not have any lighting, cameras, or intercom, and the homeless had an encampment in an adjacent easement. Before the security upgrades, the homeless jumped the fence, walked throughout to property to access power, steal anything they could recycle, and dump trash.

Following the District's security enhancements, which included new LED lights with motion detection, security cameras, and an intercom speaker to communicate with intruders via our 24/7 Pump Operator who monitors all facilities live from the District's Operations Center, they have had no further incidents (see Figures 8 – 14).

Figure 8. View of Homeless Encampment near station

Figure 9. View of Homeless Encampment through new Fencing

Figure 10. New Fencing Around Station Perimeter

Figure 11. View of Station CCTV and Alarms

Figure 12. View of Station Lighting Pole

Figure 13. Station Lighting Pole and CCTV

Figure 14. Close-up view of Lights and CCTV

v. East LA Customer Service Center

The Customer service center is located in an industrial area and homeless are an issue, and as such homeless have entered the facility and walked through the property to steal from company or personal vehicles. They have also been observed to be walking around the exterior perimeter which is at times is dangerous for all employees accessing or leaving the property.

The installation of new remote control access on all gates which enter the property makes the location much safer to enter and leave as employees do not have to get out of their vehicles to enter into the parking lot. Interior cameras have also been installed at all exits so that employees can see everything outside of the door before walking out, this also makes a safe exit for all employees. In addition the cameras outside are monitored by the 24/7 Pump Operator at the ELA Operations Center.

All employees now feel safe to come to work and leave work and ELA has not had any further incidents following these physical security enhancements.

Figure 15. CCTV Camera View outside Door (see Figure 17)

Figure 16. Fenced Gate and Card Reader

Figure 17. CCTV Camera Outside Door and Card Reader

vi. Selma Station 20

Station 20 had issues in the past with people cutting the fencing and/or digging under it (very sandy/easy digging). The fence was replaced which is depicted below. The photos show a much taller fence, thicker chain link, and barbed wire. You'll also notice 3'-wide concrete at the base of the fence. It was decided to add this 6"-thick concrete to prevent people from digging under the new fence.

Figure 18. New Fencing and Concrete berm

Figure 19. Additional View of New Fencing

vii. Selma District Office

Old cameras were out dated and did not function well and didn't record. This office houses SCADA and Customer servers. Photos below depict new camera system which provides enhance viewing and recording capabilities.

Figure 20. New CCTV Camera

Figure 21. Camera Along Building Exterior

Figure 22. CCTV Camera Along Building Exterior

c. Please provide support to justify any claims made regarding an improvement in Cal Water's security.
Response: Staff at Cal Water have worked diligently to buildout the company's Physical Security Program. This effort is exemplified by the following:

In 2017, Cal Water hired a security company call Navigant to assess its physical security program. An extensive report was issued by Navigant detaining vulnerabilities as well as deficiency solutions and made recommendations for physical security program development. Since the Navigant review Cal Water has hired a full time consultant to oversee physical security. Cal water staff have prioritized and updated physical security standards, to include; Fencing, Lighting, Risk Criticality Rating, Vegetation Management and are currently developing company standards for CCTV, Intrusion Detection Systems, Access Control/Locks.

Since 2019, Cal Water has worked persistently to complete site improvement projects despite the many challenges the last two years has presented. These efforts are ongoing. Cal Water has deployed an incident reporting tool and process which is aligned with the DHS Nationwide Suspicious Activity Reporting Initiative (NSI), the National Fusion Center Network and other State and local law enforcement entities. It has initiated a Physical Security Awareness Training Program and updated its incident Response Procedure to include the deployment of an incident response team and protocol, which is regularly exercised. Representatives from Cal Water have established relationships with Department of Homeland Security (DHS), FBI and various key members of the law enforcement members across the State and the Country. Cal Water has cultivated a strong working relationship with the Water Information Sharing Analysis Center (W-ISAC) as well as with other physical security professionals from similar organizations in the water industry for the purpose of sharing best practices. As of recent Cal Water has reengaged with Navigant, which is now called Guidehouse, to continue its efforts to identify and address physical security vulnerabilities within its stations and offices.

d. Has Cal Water seen a reduction in the number of trespassing incidents or break-ins since the security improvements were implemented?
Response: Implementation of Cal Water Security improvements began in CY 2019 and are ongoing. During this timeframe the threat landscape in the majority of Cal Water Districts has significantly increased. This increase correlates with the significant rise in homelessness and homeless encampments, unemployment, reduced criminal penalties, early incarceration release program, bail reduction policies, and the significant reduction in law enforcement services and resources. With this being the case, Cal Water has actually experienced a significant spike in trespassing incidents, break-in, vandalism, theft and other criminal activity. Since the beginning of January 2021, Cal Water Districts have reported 100+ Physical Security incidents, many of which required law enforcement involvement.

Below are photos taken this year at Cal Water Facilities as recent as September 2021:

Figure 23. Homeless Encampment Near Cal Water Station

Figure 24. Closer View of Homeless Encampment

Figure 25. Trespassers Blocking the View of CCTV Cameras

Figure 26. Trespassers Damaging and Dumping Cal Water Equipment

e. For sites in which the improved security measures have already been installed, please provide the number and a description of each security incident that occurred before the measures were implemented and after.
Response: Cal Water thoroughly recognizes the need to document and track physical security incidents. As mentioned is response 3c, Cal Water has deployed an incident reporting tool and process, called "Incident Reporter" which is located on the Cal Water Intranet and is accessible to all company employees. Incident Reporter facilitates the collection of data that can be used to measure the effectiveness of its security measures, direct resources and support additional security and law enforcement efforts. This tool was not deployed until January 2021, and such prior to its activation the company did not have a formal tracking system which could be audited. Based on a lack of historical information Cal Water is unable to site specific details or statistics to address this question specifically; however, information consistent with this request is cited in question 3b, where examples of given of the effectiveness of recently implemented security measures. In closing, Cal water recognizes the importance of this element of review and has already built it into its ongoing security efforts.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **September 10, 2021**	Request Received from CPUC: **August 31, 2021**
Re: **SIB-016**	Requested Due Date: **September 8, 2021**
Subj: **Projects Below District Threshold**	**Extension Request: September 10, 2021**

Comments:

- **Full response attached.**
- **Response provided by CSS.**

- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment 1_Project Justifications**

Data Requests and Responses

1. On page 10 of its "CSS & RDOM Project Justification Book", Cal Water states "Detailed written justifications have been provided for all specific projects greater than $400,000 direct cost in order to demonstrate the necessity of the capital investment proposed for the District in the 2021 GRC." On pages v through vii Cal Water also included Table 1. Capital Budget Summary – Customer Support Services and Rancho Dominguez. Based on this table, $9,293,387 of Cal Water's total $59,618,634 budget falls below this $400,000 threshold.

   a. Please provide detailed project justifications for all CSS & RDOM projects with a proposed direct cost of greater than $100,000 included in Table 1. referenced above.
   Response: Please see Attachment 1.

   b. Please provide support to substantiate any claims or assumptions provided in response to 1.a.
   Response: Please see Attachment 1.

   c. Please provide support for the costs of each project. This includes but is not limited to detailed cost breakdown for each proposed project, vendor invoices/estimates, receipts, bid results, etc.
   Response: Please see Attachment 1.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
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Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **September 08, 2021**

Request Received from CPUC: **August 31, 2021**

Re: **SIB-018**

Requested Due Date: **September 08, 2021**

Subj: **Next Generation Data Loss Prevention**

Comments:

- **Full response attached.**
- **Response provided by IT.**

- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – SHI_Quote-1533290.pdf**
  - **Attachment #2 – 300_morelicense.pdf**
  - **Attachment #3 – IBM Cost of Data Breach Report 2021.pdf**

Data Requests and Responses

Please refer to Cal Water's "Customer Support Service and Rancho Dominguez Office Capital Projects Justifications Book".

1. On page 98 Cal Water states regarding its data loss prevention ("DLP") system "the current DLP system is now obsolete and needs a replacement."
   a. Why is Cal Water's Current DLP system now obsolete?
   Response: As recent technologies emerge, products adopt these technologies to better cover the security environment's needs. Some key technologies that new DLP system leverage are Artificial Intelligence (AI), Machine Learning (ML), and Cloud data exfiltration monitoring. The existing solution does not have these capabilities.
   b. What is the average service life of a DLP system?
   Response: There is no metric for this since it depends on the current security environment, considering threat actors, recent technologies, malware variants, etc. The existing DLP solution was put in place early 2018.
   c. What did Cal Water's current DLP system cost?
   Response: $199, 664

   $169,717.50 + $29,946.50 for annual maintenance and support
   d. Please provide documentation to substantiate each of Cal Water's responses to questions 1.a, 1.b. and 1.c. above.
   Response: Reference Attachment#1_SHI Quote-15335290" for the initial system with 1,000 users. An additional 300 users were added under Attachment#2_300_morelicense which equals the 169,717.50 in response 1c. above.
2. On page 98 Cal Water states "since Cal Water's current DLP system is over three years old, it is generating too many "false positives.""
   a. What is the industry standard number of false positives per month for a DLP system?
   Response: Unfortunately, there's no industry standard since each company's security environment is different. It depends on the number of devices (e.g. servers) being monitored and the critical infrastructure sector the company belongs to. Some sectors experience more attacks than others, which may also increase the number of false positives.
   b. Please provide the monthly number of false positives generated by Cal Water's current DLP system for each month it has been in service.
   Response: The below table are the monthly false positives, year to date for 2021. Please note that data is not available for prior years.

Month	Cases	FP	Percentage
January	13	6	46%
February	4	2	50%
March	5	3	60%

April	4	4	100%
May	3	3	100%
June	7	5	71%
July	7	7	100%
August	5	3	60%
Total	48	33	69%

c. How many false positives per month does Cal Water expect its proposed updated system to generate over its expected lifetime?
Response: We expect this number to reduce because of the Artificial Intelligence and Machine Learning capabilities of the Next Generation Data Loss Prevention system. Using AI and ML, the DLP will now be able to "learn" over time that a user regularly accesses a specific type of restricted data; therefore, it will not flag it as a policy violation.

d. Has Cal Water's current system ever failed to detect true positives?
Response: Not yet. However, false positives are timely to investigate since it takes valuable resources away from dealing with real threats and productive work.

e. Please explain whether Cal Water's current system accurately detects "true positives" i.e., reports violations of confidential data shared with unauthorized parties or whether it has ever failed to detect true positives.
Response: The current system accurately detects true positives.

f. What are the consequences of false positives?
Response: False positives can have the unintended effect of hobbling business efficiency. An example of a false positive is when an employee/contractor working in Finance copies files to an external drive to take home to work. The existing DLP will recognize those are restricted data, and it will alert the security team this is a violation of the policy. The security will follow up with the Finance team to learn this employee/contractor is authorized to access that data. The team will communicate with the Security Operations Center (SOC) that this is a regular activity, and the user is allowed to access that data. The SOC will then close the case. Time is wasted for the security team, the SOC, and the end-user to follow up on an incident that is a non-incident.

g. Please provide documentation to substantiate each of Cal Water's responses to questions 2.a through 2.g. above.
Response: Cal Water did not track the labor involved in these incidents, however, it was able to estimate an approximate impact in response 3a.

3. On page 98 Cal Water states "the latest DLP system has enhanced capabilities and will result in a lower total cost of ownership versus staying with the outdated version of the software."

a. Please provide a cost benefit analysis to substantiate the claim that switching to a new DLP system will result in financial benefits to the rate payer.

Response: Per response 2c and f, it costs approximately $45,000 per year to address false positives (see assumptions in 3b). Additionally, many regulatory laws, such as the California Consumer Privacy Act (CCPA), Health Insurance Portability and Accountability Act (HIPAA), and the Payment Card Industry Data Security Standard (PCI DSS), require the DLP to maintain compliance. The DLP will help the Company adequately protect confidential customer data against unauthorized access and leaving the Company network. The average cost of a data breach is $4.24 million according to a new report from IBM and the Ponemon Institute. That report titled "IBM Cost of Data Breach Report 2021" is attachment #3 for your reference

b. Please provide support for any assumptions or calculations used in the cost benefit analysis requested in question 3.a.
Response:

3 employees spending 2 hours each to address a false positive.

The average cost to pay these employees and the SOC is $150/hour.

33 false positives year to date averages out to 4.125 false positive per month.

4.125 x 4 more months till end of year = 16.5 more false positives, round up to 17

17 + 33 = 50 false positives per year

50 false positives per year x 6 hours spent per false positive x $150 per hour = $45,000 per year

4. On page 99 Cal Water lists "Define the Next-Generation DLP system's requirements" as one of its project implementation strategies.

   a. Has Cal Water decided on which DLP system it will install?
   Response: No

   b. What DLP systems has Cal Water explored or intends to explore?
   Response: Due to the availability of several workable solutions, we will begin exploring those in 2022.

   c. What is the service life of the DLP systems Cal Water is considering?
   Response: The service life is unknown due to the changing threat landscape, emerging technology, and malware variants. We need to continuously improve Cal Water's security posture by implementing a relevant security tool to combat the fast-evolving threat landscape.

   d. Please provide documentation to substantiate each of Cal Water's responses to questions 4.a, 4.b. and 4.c. above.
   Response: We don't have documentation now because the requirements may change.

5. Cal Water is currently requesting to encrypt its databases as part of PID#124615 as presented on pages 45 to 49.

a. How does Cal Waters encryption request affect the DLP system?
Response: Encryption and Data Loss Prevention are two different cybersecurity disciplines that will build defense in depth to protect sensitive data better. Refer to 5b for more information on how the two solutions work together to build defense in depth.

b. How do the two system relate to one another? Please explain with supporting documents.
Response: Data encryption takes place at the database level of the system architecture to protect sensitive information so that unauthorized users cannot read the content of the data if the user does not have the decryption key. Database encryption will obfuscate the data and make it meaningless and useless to the hackers. For example, suppose a hacker can download the entire database of our customer billing system that does not have encryption. In that case, they can read the data then exfiltrate that data externally if there is no Data Loss Prevention to stop that action. Both DLP and database encryption are important, but they serve different purposes as part of the larger cyber security program to build defense in depth to protect sensitive customer data.

c. Will Cal Water need to take additional steps to ensure encryption? If so, please provide details.
Response: Yes, restricted data at rest, in progress, and in transit must be encrypted.

6. On page 101 Cal Water includes a project cost estimate. On page 102 Cal Water includes a quote from Optiv as support.

   a. Please provide an itemized cost breakdown of exactly how the $500,000 will be spent, along with supporting documentation.
   Response: This is a preliminary quote based on high level requirements provided by Cal Water. The actual quote can vary quite a bit depending on the detailed needs identified by Cal Water. The itemized quote can only be obtained once we have gone through the RFP process. Most vendors will also not provide a detailed quote unless the purchase is imminent since software and labor costs can fluctuate from year to year.

   b. Please provide quotes from providers other than Optiv the quotes obtained by Cal Water.
   Response: Many vendors will not provide a detailed quote unless the purchase is imminent since software and labor costs can fluctuate from year to year. Optiv is one of the most respected cyber security firms in the market and has a great reputation for the goods and services they provide. The full RFP will involve multiple vendors.

   c. If Cal Water has not obtained any quotes other than the one from Optiv, please explain why not.
   Response: Please see explanation under item 6a and b. Optiv is an existing vendor Cal Water uses, and we are grateful they are cooperating with us to provide a high-level estimate for the project.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
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Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **September 13, 2021**	Request Received from CPUC: **August 31, 2021**
Re: **SIB-019** Subj: **Zoom Video Conference**	Requested Due Date: **September 13, 2021**

Comments:

- **Full response attached.**
- **Response provided by IT.**

- **Does not contain confidential information.**

Data Requests and Responses

Please refer to Cal Water's "Customer Support Service and Rancho Dominguez Office Capital Projects Justifications Book".

1. On page 108 Cal Water states "remote workers are also using Zoom as their primary videoconferencing system."
   a. Does every Cal Water employee currently have Zoom capabilities on their personal work devices (laptops, tablets, phones, etc.)?
   Response: Cal Water employees have Zoom capabilities on their laptops and phones. Employees with desktops require a USB camera for video and headset for mic/audio.
   b. Can Cal Water currently install Zoom on all its work devices?
   Response: Any Windows computer and Apple iOS device can be installed with Zoom software.
   c. Does Cal Water have to pay for Zoom software license per computer? If so, please provide details of the cost breakdown per licenses.
   Response: Zoom software is licensed per user/room, not per computer. The cost of a Zoom Meeting license is $12 per user/month. The cost of Zoom Rooms license is $30 per room/month.

2. On page 104 Cal Water provides a detailed project scope. This scope includes procuring and upgrading 30 small/medium rooms and procuring and upgrading six large media centers. On page 103 Cal Water states it already has Zoom Rooms installed in the CSS campus.
   a. Does Cal Water already have Zoom Room installed in any other locations? Please explain.
   Response: Zoom Rooms have been installed in two CSS conference rooms and the Bakersfield Regional Customer Center as a proof of concept. The pilot is working out really well since users are able to get together for larger regional or companywide meetings without contending for bandwidth. As an example, the Zoom room establishes one connection for 15 people versus 15 people logging in separately from their desk/cubicle.
   b. Does Cal Water currently have video conferencing equipment installed in any of its locations? Please explain whether this equipment can be adapted to Zoom Room.
   Response: We plan to re-use the display screens. The other components of the current system is outdated and uses proprietary hardware.
   c. Why does Cal Water need to purchase new equipment such as iPad and laptops for the proposed Zoom Rooms? Why can't Cal Water simply use existing hardware such as already purchased employee laptops.
   Response: iPads are used as Zoom Room controllers. Laptops are not required for Zoom Rooms, but a dedicated mini desktop computer will be. For Zoom Meetings, employees will use their existing computers; hardware is only required for Zoom Rooms.

d. Can Cal Water employees currently use Zoom using their personal and/or Cal Water issued devices?
Response: Yes, Zoom Meetings is currently being used by Cal Water employees on their company issued devices. However, it doesn't work as well when you have a companywide meeting such as our CEO's COVID update since everyone has to log in separately and it degrades the internet connection for the whole district/department location.

e. What other video conferencing options did Cal Water explore?
Response: We reviewed offerings from WebEx, GoToMeeting and Microsoft Teams.

f. Please explain why Cal Water chose Zoom Room over other alternatives.
Response: We choose Zoom Room because it works seamlessly with Zoom Meetings, which we were already using for our employees. Keeping things on the same platform makes it easy and efficient for our employees to join meetings hosted by Zoom Room or join a meeting from a Zoom Room. Zoom also offers the best user experience at a reasonable price compared to other whole conference room solutions.

g. Please provide documentation to substantiate each of Cal Water's responses to the questions above.
Response:

Vendor	Meeting	Rooms	Capacity	Recording capabilities
Cisco WebEx	$15/month - 2	$100/month	1 to 200 - 1	✓ - 10GB - 2
GotoMeeting	$19/month -1	$49/month	1 to 250 - 2.5	✓ - Unlimited - 4
Microsoft Teams	Included in E3 ($20/month) - 4	$50/month	1 to 250 - 2.5	✓ - OneDrive - 3
Zoom	$12/month - 3	$30/month	1 to 300 - 4	✓ - 1GB - 1

3. On page 103 Cal Water states "Even in a post COVID environment, the Zoom Room will help contain travel costs and increase productivity by reducing drive and flight time."

a. Please provide a cost benefit analysis that show the financial benefits to rate payers resulting from Cal Water's proposed Zoom Room installations.

Response: We expect video conferencing will continue to be used in a post pandemic environment due to the convenience of the technology. However, it's difficult to quantify the impact to travel costs since the number of in person/Zoom videos varies by the current business environment such as the adoption of a new water quality standard, federal privacy law, Department of Labor audit, etc. We can track and report the usage of the Zoom rooms as an indicator of the cost/benefit analysis, but a Zoom meeting can replace a phone call, which also doesn't have any travel costs associated with it.

b. Please provide documentation to substantiate each of Cal Water's responses to questions 3.a. above.
Response: See response 3a.

4. On page 105 Cal Water provides a proposed cost for the project.

a. Please provide a detailed cost breakdown of how Cal Water arrived at these costs. The cost breakdown should detail proposed costs for each of the 36 rooms Cal Water plans to install Zoom Room in.
Response: There are 30 small/medium conference rooms and 6 large conference rooms.

Conference Room Name	Location	Room Details	Cost Est.
antelopevalley	Antelope Valley	small size room	10,888.03
Colma Creek	Bayshore	small size room	10,888.03
Cordilleras Creek	Bayshore	medium size room	10,888.03
Polhemus Creek	Bayshore	large size room	37,492.22
beargulchcs	Bear Gulch CS	small size room	10,888.03
beargulchops	Bear Gulch Ops	small size room	10,888.03
chicomediacenter	Chico	large size room	37,492.22
chico	Chico	small size room	10,888.03
Board Room	CSS	large size room	37,492.22
Los Angeles River	CSS	medium size room	10,888.03
Kern River	CSS	small size room	10,888.03
Sacramento River	CSS	medium size room	10,888.03
Engineering Conference	CSS	small size room	10,888.03
dixon	Dixon	small size room	10,888.03
eastlacs	East LA	small size room	10,888.03
Media Center	CSS	large size room	37,492.22
guerneville	guerneville	small size room	10,888.03
kernrivervalley	Kern River Valley	small size room	10,888.03
kingcity	King City	small size room	10,888.03
livermorecs	Livermore CS	small size room	10,888.03
losaltos	Los Altos	small size room	10,888.03
lucerne	Lucerne	small size room	10,888.03
marysville	Marysville	small size room	10,888.03
oroville	Oroville	small size room	10,888.03
palosverdes	Palos Verdes	small size room	10,888.03
rdomconfroom	RDOM Conf Room	medium size room	10,888.03
Rdom	conf room	small size room	10,888.03
rdomeng	RDOM	small size room	10,888.03
rdommedia	RDOM	large size room	37,492.22
salinas	Salinas	large size room	37,492.22
selma	Selma	small size room	10,888.03
stocktoncs	Stockton Customer	small size room	10,888.03
stocktonops	Stockton Operations	medium size room	10,888.03
visalia	Visalia	medium size room	10,888.03
westlake	West Lake	small size room	10,888.03
willows	Willows	small size room	10,888.03
			$551,594.22

	Small/Medium	Large
Camera + Mic/Speaker + Install	$8,987.28	$35,591.47
PC + iPad	$1,561.75	$1,561.75
Mount + PoE	$339.00	$339.00
	$10,888.03	$37,492.22
Subtotal	$326,640.90	$224,953.32
Total	$551,594.22	

b. Please provide documentation to substantiate each of Cal Water's responses to questions 3.a, above.

Response: See attached quotes at the end of this response. The responses in 4a are estimates based on quotes we received for similar sized conference rooms. We had originally estimated the large room costing $30,000 but the actual quote came in at $35,591.47 which is why the total cost differs from the initial justifications.

c. Cal Water provides a quote from Stage 7 for the BK engineering office in the amount of $8,987.28. How many vendor quotes did Cal Water obtain in support of its proposed budget?
Response: We used quote from Stage7 as they provided the best pricing compared to other vendors on other projects we have done. This information was gathered during COVID shutdown, it was difficult to bring different vendors on site to give estimates.

d. Please provide quotes for offices other than BK engineering office obtained by Cal Water.
Response: We did not get other quotes at the time.

e. Is the BK engineering office an example of a small/medium room or a large media center? Please explain the distinction.
Response: Small/medium room

f. Cal Water provides a quote from CDW for computer equipment in the amount of $1,531.75. How many vendor quotes did Cal Water obtain in support of its proposed budget?
Response: Cal Water only received a quote from CDW. CDW regularly provides pricing for these type purchases and is a regular supplier to Cal Water.

g. Please list all vendors Cal Water obtained quotes from for both hardware's and technical services.
Response: CDW for hardware, Stage7 for audio/video

h. If Cal Water did not obtain quotes from other vendors, please explain why not.
Response: Based on previous experience and our established relationship with CDW, they typically provide us with the most competitive pricing.

i. Please provide any quotes that were not included as part of the project justification.
Response: Updated quote from CDW and new quote from PC Connection. Added quote from Stage7AV for the CSS Media Center.

QUOTE CONFIRMATION

PEOPLE WHO GET IT

DEAR TRI NGUYEN,

Thank you for considering CDW LLC for your computing needs. The details of your quote are below.
Click here to convert your quote to an order.

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
1C3WSXM	9/8/2021	GRC 2021 - CDW - ZOOM ROOM	3386799	$1,561.34

IMPORTANT – PLEASE READ
Fees applied to Item(s): 5497005

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
HP EliteDesk 800 G6 - mini desktop - Core i5 10500 3.1 GHz - vPro - 8 GB -	1	6350372	$952.53	$952.53
Mfg. Part#: 2D0N0UT#ABA				
HP Next Business Day On-Site Coverage for CPU 4-Year	1	673011	$51.99	$51.99
Mfg. Part#: U7B8TE				
UNSPSC: 81112307				
Electronic distribution - NO MEDIA				
Apple iPad mini 5 Wi-Fi - 5th generation - tablet - 64 GB - 7.9"	1	5497005	$394.71	$394.71
Mfg. Part#: MUQW2LL/A				
UNSPSC: 43211509				

RECYCLING FEE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
RECYCLING FEE 4" TO LESS THAN 15"	1	654009	$4.00	$4.00
Fee Applied to Item: 5497005				

PURCHASER BILLING INFO		
Billing Address: CALIFORNIA WATER SERVICE ACCOUNTS PAYABLE 1720 N 1ST ST SAN JOSE, CA 95112-4598 **Phone:** (408) 367-8200 **Payment Terms:**	SUBTOTAL	$1,399.23
	SHIPPING	$31.81
	RECYCLING FEE	$4.00
	SALES TAX	$126.30
	GRAND TOTAL	$1,561.34
DELIVER TO	**Please remit payments to:**	
Shipping Address: CALIFORNIA WATER SERVICE COMPANY ATTN:TRI NGUYEN 1720 N 1ST ST SAN JOSE, CA 95112 **Phone:** (408) 367-8200 **Shipping Method:** UPS Ground (2-3 days)	CDW Direct P.O. Box 75723 Chicago, IL 60675-5723	

Connection

Tri Nguyen
Cart: 1660705496

Billing Information	Shipping Information
Billing Address: Tri Nguyen California Water Service 1720 N 1st St SAN JOSE, CA 95112 Billing Method: Credit Card: Visa	Shipping Address: .

	Product	Unit Price	Qty	Total
	HP EliteDesk 800 G6 DM vPro Core i5-10500 3.1GHz 8GB 256GB SSD UHD630 ax BT USB-C MiO 90W W10P64 Temporarily Out-of-Stock Call for next available delivery Item#: 41197796 Mfg. Part#: 20J09UT#ABA	$1,031.10	1	$1,031.10
	HP 4-Year CarePack 9x5 Next Business Day Hardware Support - CPU Only In Stock Virtual delivery Item#: 4743418 Mfg. Part#: U7897E	$49.92	1	$49.92
	Apple iPad mini 64GB, WiFi, Space Gray Temporarily Out-of-Stock Call for next available delivery Item#: 36794210 Mfg. Part#: MUQW2LL/A	$399.00	1	$399.00

Subtotal:	$1,480.02
Shipping & Handling: Best Way - Ground	$0.00
Tax:	$0.00
Total:	$1,480.02

Stage 7, Inc.
3057 Teagarden St
San Leandro, CA 94577-5720 US
510-575-9902
info@stage7av.com
www.stage7av.com

Estimate 1057

STAGE 7 AV

ADDRESS	SHIP TO	DATE	TOTAL	EXPIRATION DATE
California Water Service Company PO Box 49033 San Jose, CA 95161 United States	California Water Service Company PO Box 49033 San Jose, CA 95161 United States	01/04/2021	$35,591.47	02/04/2021

SHIP VIA	CLIENT PO #	JOB #	STAGE 7 REP:
ground	Pending	1619	Enrique Ochoa

ITEM	QTY	RATE	AMOUNT
Logitech Rally Camera	3	1,244.44	3,733.32T
Vaddio - Camera Wall Mount	3	197.37	592.11T
Hall Research - USB 3.0 Extender	3	421.43	1,264.29T
Shure - MXA910W w/P300 Mixer Combo	2	4,997.44	9,994.88T
QSC - Digital Sound Processor Core 110	1	2,500.00	2,500.00T
D-Link PoE Dante Switch	1	237.96	237.96T
Extron - 2 Channel 70V Amp	1	928.57	928.57T
Crestron - Control Processor CP3N	1	1,857.14	1,857.14T
Crestron - Keypad Interface	2	500.00	1,000.00T
Crestron - Expansion Module Crestnet	1	648.86	648.86T
Crestron - Partition Sensor	1	500.00	500.00T
Heckler - iPad10.2 Wall + Network Interface PoE	2	360.00	720.00T
Rough In Cables, patch Cables, etc.	1	446.43	446.43T
Miscellaneous hardware, mounts, plates, etc.	1	982.14	982.14T
Allowance audio & video specialty cables, accessories, adapters, etc.	1	357.14	357.14T
Technical Services, Labor, PM, Engineering, CAD & Programming	1	6,320.00	6,320.00
Shipping	1	1,030.27	1,030.27T

Please send PO's to info@stage7av.com

SUBTOTAL	33,113.11
TAX	2,478.36
TOTAL	$35,591.47

THANK YOU.

Scope of Work

BK Engineering Office

This space shall consist of a single OFE Display with a Nureva Microphone/Sound Bar Installed on top and a Logitech Rally video confernecing camera installed below per CAL Water Standards for conferencing spaces.

	BK Engineering Office	
OFE 65-75" Display Setup	✓	
Dual 75" Display Setup		
Logitech Rally Camera	✓	
OFE Heckler Table Mount w/PoE	✓	
OFE iPad Mini Zoom Controller	✓	
OFE PC for Zoom Room	✓	
Wireless Presentation Only	✓	
Power Amplifier 200W 70V		
Ceiling Speakers		
Digital Sound Processor		
Dante 8 port Switch		
Dual Shure MXA Table Mics		
Single MXA Ceiling Mic		
Nureva HDL Microphone	✓	
Crestron Room Scheduler		
TOTAL Per Room	$8,987.28	$00.00

TOTAL INVESTMENT $8,987.28

Cart

Orders placed by 2 pm Eastern Standard Time for in-stock items will ship the same business day.

Gigabit Ethernet + Power Over Ethernet Upgrade Kit for Zoom Rooms Console

$150.00

1 − +	$150.00

Zoom Rooms Console for iPad mini

$189.00

1 − +	$189.00

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **September 24, 2021** Re: **SIB-023** Subj: **Customer Care and Billing Cloud Upgrade**	Request Received from CPUC: **September 08, 2021** Requested Due Date: **September 17, 2021** Requested Extension Date: **September 24, 2021**

Comments:

- **Full response attached.**
- **Response provided by IT.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – CCB Asset Listing**

- **Attachment #2 – DR SIB-023 Oracle Lifetime Support Application List**
- **Attachment #3 – DR SIB-023 Oracle Lifetime Support Summary**
- **Attachment #4 – DR SIB-023 IT Asset Management Policy**

Data Requests and Responses

Please refer to Cal Water's "Customer Support Service and Rancho Dominguez Office Capital Projects Justifications Book".

1. On page 132 Cal Water states "version of CCB 2.4 is on limited life support as Oracle has released significant upgrades and versions since original go-live in Feb 2016."

   a. When did Cal Water's current Customer Care and Billing "CCB" application go into service? **Response: The current version of CCB was put into service in 2016.**

   b. What is the expected service life of Cal Water's current CCB?
   Response: The typical life of a new software release is 3-5 years. Contingent on the PUC's approval, Cal Water is expected to launch the new version of CCB on the Cloud in 2023, which give the current version of CCB a shelf life of seven years.

   c. Is Cal Water's current CCB no longer functional? Please explain.
   Response: Cal Water is on CCB v2.4 SP2 which is several versions behind current releases. This version is functional to provide existing billing and customer account management. However, the current version does not provide support for present cyber security risks as the version and underlying technology platform cannot be patched to meet current security standards. Thus Cal Water is higher risk of potential data breach or other cyber security attacks of the CCB system which contains PII data and is required to be protected by state and federal privacy laws. A data breach could result in significant financial impact and negative public perception.

   The table below outlines additional new features or the proposed cloud upgrade and the impact to Cal Water.

New Feature	Description	Importance to CWS
Mobile Digital Self Service for Customers	Bill Notification, Usage Alerts, Data Virtualization, etc.	Delivers new functionalities to customers via mobile and desktop in the age of mega droughts and climate change.

Rate Engine and Credit Management	Sophisticated approach to calculate service and quantity charges and mange credit and collections.	Drought and COVID may force CWS to reconfigure business processes related to bill calc and credit and collections.
AMI/Smart Meter Integration	Built in integration point for Smart Meter solutions.	Assists CWS from having to purchase a 3rd party, stand-alone product. Easier and cheaper to maintain in the long run.
Improved Security and Integration	New security architecture and integration platform.	Current CCB system will be over 7 years old; helps CWS stay current on security patches and on a platform fully supported by the vendor.
The new version of CCB is on the Cloud	The Cloud version of CCB helps reduce the need for expensive, recurring software upgrades. This has proven to work based on past implementations of Kloudgin and Workday.	Reduces total cost of ownership for customers in the long run and the frustration of employees having to learn a new system.

d. What is the total cost of Cal Water's current CCB application?
Response: Based on DR SIB-023 Attachment #1 – CCB Asset Listing, $23.3M.

e. Please provide a breakdown of Cal Water's current CCB application costs and how they are included in rate base.
Response: Refer to DR SIB-023 Attachment #1 – CCB Asset Listing.

f. Please provide support to substantiate Cal Water's answers to questions 1.a., 1.b., 1.c., 1.d., and 1.e. above.
Response: Refer to DR SIB-023 Attachment #1 – CCB Asset Listing.

2. On page 132 Cal Water states "the hardware that supports the CCB system is beyond its useful life and require a replacement."

a. When was the hardware that supports the CCB application placed into service?
Response: The hardware supporting CCB was put into service 2016 along with the CCB application.

b. What is the expected life of the hardware?
Response: Cal Waters' current expected life for servers is 4 years per current IT Asset Management Policy standards. The current hardware supporting CCB is beyond expected life.

c. Please provide support to substantiate Cal Water's assertion that the hardware needs replacement.
Response: Refer to DR SIB-023 Attachment #4 – IT Asset Management Policy.

d. What was the total cost of the hardware?
Response: The cost of the current hardware supporting CCB is included in Line 2 of SIB DR-023 Attachment #1 – CCB Asset Listing as part of the overall cost of the original system implementation. Cal Water does not have the detailed breakout of these costs.

e. How much would the hardware cost to replace?
Response: The underlying physical servers are older technology that will be upgraded through support IT projects Network Hardware Replacements which are included separately as part of the 2021 GRC. The exact cost would depend on requirements to meet existing system requirements. The project proposal recommends migrating CC&B to the cloud which would eliminate the need for new hardware to support the system.

f. Please provide support to substantiate the projected hardware questions from question 2.f.
Response: See response to 2.e.

3. On page 134 Cal Water lists four alternatives for the current project.

a. Please provide a cost-benefits analysis comparing the financial aspects of the four alternatives.
Response: Reference the Oracle Presentation, pages 139 – 157 included in the project proposal.

b. Please provide support to substantiate any assumptions or calculations used in the answer to question 3.a.
Response: Costs are based on the Technology Master Plan and the Oracle presentation included in the project proposal.

c. Alternative 4 states "continue to operate with existing application framework." Why did Cal Water reject this option?
Response: Refer to 1.c. for additional reasons related to cyber security risks. The version will no longer be enhanced or updated by Oracle which will continue to hamper Cal Water's ability to meet customer demands. As an example, AMI is the

future of meter reading, and it's logical to have a billing system that can handle smart metering without customizing the system before the implementation of AMI.

4. Cal Water states on page 134 "Oracle will not provide software or security updates on the limited Software support."
   a. When will Oracle stop providing software or security update from the current CCB application?
   Response: Cal Water's current version of Customer Care and Billing is 2.4 SP2. Support for this version is categorized as Sustaining Support as of November 2020. The support category limits software and security updates to those pre-existing the November 2020 date.
   b. Please provide support from Oracle to substantiate this claim.
   Response: Attachment 2 and 3 are documents from Oracles support website. Attachment 2, page 49, identifies Cal Water's CC&B version 2.4 support status as Sustaining. Attachment 3 provides summary of Oracle support offerings as relates to Cal Waters current version.
   c. Is there any other source of software support available to Cal Water outside of Oracle?
   Response: Cal Water is not aware of any third party providers of support beyond technical and consulting resources.
5. On page 137 Cal Water provides a Capital Project Cost Estimate.
   a. For each item provided in the cost estimate, please explain in detail how Cal Water arrived at the estimated cost.
   Response: Estimated costs are based on the Technology Master Plan and the Oracle presentation included in the project proposal.
   b. Please provide support to substantiate Cal Water's estimated costs. This support includes but is not limited to, vendor quotes, invoices, etc.
   Response: The Technology Master Plan and Oracle Presentation document have been provided.
   c. Did Cal Water obtain any vendor quotes or estimates for this project? If so, please provide the quotes.
   Response: Cal Water did not obtain direct quotes as vendors do not provide quotes for a project 2-3 years out since the business environment can change rapidly as we saw with COVID-19. The estimated costs were provided by a well known consulting firm working with many utilities.
   d. If Cal Water has not obtained any quotes, please explain why not.
   Response: Actuals for this work will require issuing a Request for Proposal to get accurate cost for specific scope of work related to requirements outlined in the project proposal.
6. Cal Water includes a presentation from Oracle regarding cloud upgrade options starting on page 138. This presentation shows a total cost of over $50 million for each of the three options listed. Cal Water is proposing a much lower cost of approximately $14 million.

a. What is the total cost of the proposed cloud upgrade including costs projected to be incurred in upcoming GRCs?
Response: The $14 million estimated capital cost being proposed in thhis rate case is based on option 3 in the project proposal to move to the cloud. The project proposal only specifies that portion of the cloud migration that is to be capitalized.

b. Why is there such a substantial cost difference between Oracle's estimated cost and Cal Water's?
Response: Oracle's projected costs are for both Capital and Expense for an eight year period. The project proposal only specifies the amount to be capitalized under the upcoming rate case. The expenses are composed of internal labor and software licensing fees to Oracle. Both of these are already included in Cal Water's expenses.

c. Please provide a detailed cost breakdown of the CCB upgrade project including any costs projected to be incurred after 2024.
Response: Refer to pages 150, 152 and 154 for cost breakdown from discussion with Oracle for estimating each option. These estimates include estimates through 2027.

d. Please provide support to substantiate any assumptions or calculations made in the responses to questions 6.a., 6.b., and 6.c. above.
Response: Refer to Oracle presentation included in the project proposal – pages 139 to 157.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
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From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **September 21, 2021** Re: **SIB-025** Subj: **Customer Service Omni-Channel Solutions**	Request Received from CPUC: **September 08, 2021** Requested Due Date: **September 17, 2021** Extension Due Date: **September 21, 2021**

Comments:

- **Full response attached.**
- **Response provided by IT.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**

- **Attachment #1 – Cal Water Voice of the Customer Research Results**

Data Requests and Responses

Please refer to Cal Water's "Customer Support Service and Rancho Dominguez Office Capital Projects Justifications Book".

1. On page 158 Cal Water states regarding Omni-Channel solutions "There's an insatiable demand from our customers for this service as it relates to start/stop service and making payment arrangements"

   a. How does Cal Water define "insatiable demand"? Please explain and quantify.
   Response: A customer's experience may vary between channels and to be great at customer service, every interaction at every customer touchpoint must be excellent. Customers are requesting additional channels such as smartphone, smart device, chat and voice assistant technology to perform business transactions such as start/service and payment arrangements. Today, customers are limited to Integrated Voice Response, Web and directly contacting customer service representatives via phone for these services.

   b. How did Cal Water determine there is an "insatiable demand" for this service from its customers?
   Response: Cal Water conducts customer focus group and feedback programs through partnership with firms that specialize in this area. Another source is benchmarking with what the utility and other industries are doing to improve the customer experience and increase satisfaction. The information provided from these are used to identify programs and supporting technologies Cal Water can implement to improve our customer's experience and satisfaction.

   c. Were customers made aware, in writing or other documented methods, of the potential increase in costs associated with omni-channel services? Please explain. For example, when Cal Water was surveying customers for their desire to be able to "start service request on the phone, get distracted by a real estate agent or move, and want to complete the transaction afterhours on the internet", did Cal Water mention to the customer the cost increase required to give the customer that capability?
   Response: No. It would be very difficult for Cal Water to attempt to quantify the increase in the cost to an individual customer for a project with a relatively small budget that is allocated across all of its customers. This is complicated further by the revenue split between residential and non-residential customers, fixed and usage charges, meter size and ultimately usage per customer.

   d. Does this project only give customers the ability to start payment on one medium and finish on another? If not, what other capabilities does this proposed project provide?
   Response: The expectation of the technology is any transaction a customer initiates in one medium could be completed on another. This would include but not limited to start/stop service, payment extensions and payment arrangements, scheduling an appointment, updating emergency contact info, setting up auto pay, or selecting the

communication preferences. This seamless transition is paramount for customers in the COVID and post COVID environment as customers migrate to digital channels.

e. Please provide support included but not limited internal company correspondence, survey results, customer feedback forms, etc., to substantiate Cal Water's answers to questions 1.a., 1.b., 1.c., and 1.d. above.
Response: Refer to Cal Water's Technology Master Plan. Attachment 1 is current Voice of the Customer Research Findings.

2. On page 160 Cal Water lists three alternatives for the current project.

a. Please provide a cost-benefits analysis comparing the financial aspects of the three alternatives.
Response: Alternative 1 cost is provided in the project proposal and is based on the Technology Master Plan cost analysis included in the plan. Cal Water did not cost out Alternative 2 and 3 as cost will be based on set of specific requirements in the form of a Statement of Work. These requirements have not yet been detailed out to obtain estimates from vendors. Furthermore, vendors do not engage in detailed pricing discussions for a project that will take place in the future since the business environment (e.g. # of active projects) changes from month to month.

b. Please provide support to substantiate any assumptions or calculations used in the answer to question 2.a.
Response: The estimates are based on cost analysis performed as part of the Technology Master Plan.

c. Alternative 3 states "continue with current service and channels, making incremental improvements through upgrades and new capabilities of specific software in place for these channels." Why did Cal Water reject this option? Please explain.
Response: Cal Water is proposing Alternative 1 to build out additional channels for customers to interact. We do expect to continue to use and enhance current channels such as website and IVR within current service agreements with vendors. The main difference between these two options are the addition and integration of new channels to work with existing options available to our customers.

3. On page 162 Cal Water provides a Capital Project Cost Estimate.

a. For each item provided in the cost estimate, please explain in detail how Cal Water arrived at the estimated cost.
Response: The cost estimate is based on metrics and calculations used to produce Cal Waters Technology Master Plan.

b. Please provide support to substantiate Cal Water's estimated costs. This support includes but is not limited to, vendor quotes, invoices, etc.
Response: Cal Water's Technology Master Plan has been provided as part of other data requests for reference.

c. Did Cal Water obtain any vendor quotes or estimates for this project? If so, please provide the quotes.
Response: Cal Water did not obtain specific vendor quotes. See 2.a. for more detail.

d. If Cal Water has not obtained any quotes, please explain why not.
Response: Refer to 2.a. for response.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **September 20, 2021** Re: **SIB-028** Subj: **Water Resources Monitoring and Adaptation Plan**	Request Received from CPUC: **September 09, 2021** Requested Due Date: **September 20, 2021**

Comments:

- **Full response attached.**
- **Response provided by Water Resource Sustainability.**
- **Response 3b. contains confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – RFP**

- **Attachment #2 – Scope of Work**
- **Attachment #3 - icf_professional_services_contract_072920**
- **Attachment #3a - icf_incorporated_amendment 1**

Data Requests and Responses

Please refer to Cal Water's "Customer Support Service and Rancho Dominguez Office Capital Projects Justifications Book".

1. On page 174 Cal Water states "The Order Instituting Rulemaking (R18-04-019), initiated in May 2018, has focused its first phase on CPUC-regulated energy utilities. The ruling on Phase 1 will be released by September 2021 and will contain detailed requirements for conducting climate vulnerability assessments and designing adaptation plans."

   a. Is Cal Water participating in R.18-04-019?
   Response: Cal Water did not participate directly in Phase 1 of R.18-04-019 as it was focused on energy, but our climate change consultant tracked the process for elements that will be foreseeably applicable to regulated water utilities. We plan to participate in Phase 2 of the Rulemaking.

   b. If yes, to what extent and in what capacity?
   Response: We plan to engage in all facets of Phase 2 that are applicable to water utilities including, but not limited to, providing input and comments.

   c. If Cal Water is not participating in R.18-04-019, please explain why not.
   Response: Please see response to 1a.

2. On page 175 Cal Water Cal Water states the Phase 1 results "will also contain elements that will be taken forward to Phase 2 of the rulemaking covering CPUC-related water utilities, including Cal Water."

   a. When does Cal Water anticipate Phase 2 of the rulemaking will be complete?
   Response: Per recent CPUC communications, Phase 2 rulemaking in R.18-04-019 is scheduled to be completed by 12/31/22.

   b. Please provide support to justify Cal Water's answer to question 2.a. above.
   Response:
   https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M404/K113/404113062.PDF

3. On page 175 Cal Water lists two action items in its detailed project scope. The first is "review final CPUC rulemaking on Climate Adaptation" and "Revise Climate Change Water Resources Monitoring and Adaptation Plan to meet any CPUC requirements."

   a. Has Cal Water chosen a consultant to work on this project?
   Response: We anticipate that ICF, which is our current consultant on climate change, would continue. We will evaluate and make a final decision prior to this work being completed.

b. If yes, please identify the consultant and provide any related request(s) for proposals and resultant bids.
Response: Please reference Attachments 1 through 2 and the following tables –

*****Begin confidential**

[redacted]

*****End confidential**

c. What happens if a final CPUC rulemaking on Climate Adaptation is not available before the end of this rate case? Please explain.
Response: Given the immediate importance of Climate Change Mitigation and Adaptation, we would move forward with additional work that is needed as identified in our Climate Change Water Resources Monitoring and Adaptation Plan.

d. What if there are no additional CPUC requirements that require revisions to the Climate Change Water Resources Monitoring and Adaptation Plan? Please explain.
Response: While such a ruling is highly unlikely given the R.18-04-019 process to date, Cal Water anticipates that there would still be significant additional work necessary to plan for and mitigate against/adapt to the climate change threats identified and assessed in Cal Water's initial work.

4. On page 177 Cal Water provides a Capital Cost Estimate.

a. Given the lack of information on the exact amount of work for this project since the results of the rulemaking are not yet known, how can Cal Water provide a reasonable estimate of costs?
Response: The types of climate change threats and related potential responses are known to a great degree. The estimated costs are based foundationally on the work currently being conducted as part of the Climate Change Water Resources Monitoring and Adaptation Plan.

b. For each item provided in the worksheet, please explain in detail how Cal Water arrived at the estimated cost.
Response: Given current unknowns (e.g. final recommendations resulting from the Climate Change Water Resources Monitoring and Adaptation Plan, Phase 2 of R.18-04-019), the consultancy cost of $300,000 is based on approximately 50% of the cost of the Climate Change Water Resources Monitoring and Adaptation Plan ($99,968.82: Phase 1 + $507,347: Phase 2 = $607,315.82:Total). We expect to see direct labor cost of approximately $61,000 based on the quantity of hours and unit cost shown in the project justification estimate.

c. Please provide support to substantiate Cal Water's estimated costs. This support includes but is not limited to, vendor quotes, invoices, etc.
Response: Attachments 3 and 3a are included for current work which formed the basis for the cost estimate.

d. Did Cal Water obtain any vendor quotes or estimates for this project? If so, please provide the quotes.
Response: Please reference the response to 4c.

e. If Cal Water has not obtained any quotes, please explain why not.
Response: We will fully scope this work upon completion of the Climate Change Water Resources and Monitoring Plan with additional input from the status of R.18-04-019 at that time.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
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Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **October 1, 2021**
Re: **SIB-030**

Subj: **Energy Efficiency Improvement HVAC Optimization**

Request Received from CPUC: **September 09, 2021**

Requested Due Date: **September 17, 2021**
Partial Response #1: **September 20, 2021**
Partial Response #2 (Final): October 1, 2021

Comments:

- **Partial Response #2 (final) attached.** **Updates in blue font.**
- **Response provided by Facilities.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**

- **Attachment #1 – 2018 GRC Settlement Appx V Page 6 (CSS Net-to-Gross)**
- **Attachment #2 – CSS Depr Rates Current and Proposed 2021 GRC**
- **Attachment #3 – PG&E electricity 02 2016 to 02 2018**
- **Attachment #4 – PG&E electricity 09 2018 to 09 2020 Meter 1**
- **Attachment #5 – PG&E PG&E electricity 09 2018 to 09 2020 Meter 2**
- **Attachment #6 - Cumulative cost savings graph**

Data Requests and Responses

Please refer to Cal Water's "Customer Support Service and Rancho Dominguez Office Capital Projects Justifications Book".

1. On page 208 Cal Water states the proposed HVAC upgrades will result in a "forecasted electricity savings of $74,035 in the first year, yielding cumulative savings of $417,342 over five years." Cal Water also states "the vendor will guarantee the savings within a maximum return on investment period of eight (8) years."

   a. Please define what is meant by maximum return on investment?
   Response: The maximum period of time needed to realize energy savings equal to the total cost of the HVAC upgrades.

   b. Cal Water mentions a maximum return on investment period of eight years. The estimated yearly savings is around $75,000. The cost of the project is $756,045.84. Dividing the cost of the project by eight would mean a yearly savings of approximately $95,000 would be required for an eight-year return on investment period. Please explain this discrepancy.
   Response: The estimated yearly energy savings will cover the total cost from the vendor within a maximum of eight years. This does not include the Cal Water added contingency.

   c. What is the annual revenue requirement for the proposed project? Please show calculations.
   Response: Based on a simplified revenue requirement calculation, the annual revenue requirement for 2023 associated with this project is $113,193. This is calculated by multiplying the ~~Accumulated Depreciation~~ net plant in 2023 for this project ($835,743) by the adopted Rate of Return (7.48%), and adopted Net-to-Gross Multiplier for CSS from the 2018 GRC (1.207) and adding the Depreciation Expense ($31,400). The Depreciation Expense for this project is calculated by multiplying the Total Proposed Project Estimate ($867,043, including Construction Overhead and AFUDC) by the proposed Depreciation Rate for CSS (3.61%). The ~~Accumulated Depreciation~~ net plant in 2023 is calculated by subtracting the Depreciation Expense from the Total Proposed Project Estimate. Please keep in mind that this calculation assumes that all capital is approved in the 2021 GRC as proposed, the Depreciation Rate for CSS is approved as proposed, and the Rate of Return in 2023 remains as adopted.

   d. Please provide support to substantiate Cal Water's assumptions and calculations used in the answer to question 1.c. above.

Response: For the Total Proposed Project Estimate, please refer to page 162 of Attachment A to the RO Book for Customer Support Services. Please see Attachment 1 for a copy of the adopted Net-to-Gross Multiplier from the 2018 GRC and Attachment 2 for the Proposed Depreciation Rates for CSS in the 2021 GRC. Assumptions are listed in Cal Water's response, above.

e. On page 214 the contractor provides an estimated energy costs savings of $76,900 per year. The contractor does not explain how they arrived at this number. Please explain in detail how the estimated savings were calculated.
Partial Response #1: We have requested the details from the contractor and are anticipating a response by October 1. If the contractor is willing to share their calculations we will provide them. Please note that the contractor is guaranteeing the savings within the identified timeframe.

Update – The following information was provided by the contractor - Estimated savings for the four Cal Water buildings are based on saving 282,208 kWh at 24.8 cents/kWh and 3,558 therms at $1.15 per therm.

f. Please provide support to substantiate Cal Water's assumptions and calculations used in the answer to question 1.e. above.
Response: Please reference response in 1e. These are not Cal Water's calculations. The contractor provided them as part of their proposal.

Update: The following information was provided by the contractor - The savings estimates were calculated using industry assumptions applied to the various building systems:

i. kWh per ton for adding an integrated economizer to an office AC unit that now has fixed outside air intake, in San Jose.

ii. Percent saving for adding a variable fan drive (VFD) to a chilled water pump (to vary flow with load, following the pump affinity laws)

iii. kWh savings per square foot for full direct digital controls (DDC) optimization (optimum start-stop, grouping rooftop units to reduce heat-cool fighting over set-point conflicts, morning pre-cool, etc.).

iv. PG&E along with the other utilizes will have rate increases of 6-7+ percent for the foreseeable future due to their extensive infrastructure upgrades and the State of California commitment to Zero net.

g. The contractor's guarantee is based on a proposed project with total cost of $592,276 and not Cal Water's proposed project costing $756,045.84. Will the contractor guarantee apply to the project contemplated by Cal Water's full requested amount of $756,045.84? Please explain.
Response: The return on investment guarantee is based on the contractor project cost and resulting projected energy savings.

h. Are the projected electrical costs savings currently reflected in the rate case? If not, why not?

Response: The approximate annual cost savings of $75K were inadvertently not included in the RO model. Since the project is anticipated to be in service at the end of 2022, the annual savings would begin in 2023. Given it's a CSS item, the savings would then get allocated to the various rate making areas at that time. If the project is accepted, Cal Water will include the savings in the RO Model.

i. If these savings are reflected in the current rate case, please indicate where in the RO model and testimony these savings are shown.
Response: Please refer to response 1h.

2. On page 121 Cal Water includes a table showing building utilities total electricity usage and costs. This table is dated 2016.

   a. Please provide a similar table for the years 2017, 2018, 2019, and 2020.
   Response: The table was created by Impact Group as part of an energy study performed for Cal Water. Cal Water does not have a similar table for the requested years. However, please refer to the following attachments that contain usage and cost information for those years.

   Attachment #3 – PG&E electricity 02 2016 to 02 2018

   Attachment #4 – PG&E electricity 09 2018 to 09 2020 Meter 1

   Attachment #5 – PG&E electricity 09 2018 to 09 2020 Meter 2

   b. Has Cal Water seen a reduction in its energy usage as a result of work from home activity? If not, please provide specific reasons.
   Response: No, the majority of staff remained working on-site.

3. On page 213 Cal Water provides a cumulative cost savings graph comparing current annual costs and projected baseline costs.

   a. Please provide this graph in Microsoft Excel format.
   Response: Refer to response to question #1f.

   Update: Please refer to Attachment #6 – Cumulative cost savings graph.

   b. Please include the raw data used to prepare the graph.
   Response: Refer to response to question #1 f

   Update: Please refer to Attachment #6 – Cumulative cost savings graph.

   c. Please provide an explanation for how Cal Water calculated these numbers.
   Response: The contractor calculated these numbers. Refer to response to question #1 f.

   d. Please provide support to substantiate any assumptions or calculations used in the answer to question 3.c.
   Response: Refer to response to question #1 f

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **October 05, 2021**

Re: **SIB-031**

Subj: **RDOM Second Floor Improvements**

Request Received from CPUC: **September 24, 2021**

Requested Due Date: **October 01, 2021**
Extended Due Date: **October 05, 2021**

Comments:

- **Full response attached.**
- **Response provided by Facilities and Engineering.**

- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **DR SIB-031 Attachment #1 – RDOM Second Floor Clean Floorplan**
  - **DR SIB-031 Attachment #2 – RDOM Second Floor HR Offices**
  - **DR SIB-031 Attachment #3 – Area listing 2780 Skypark Dr Torrance, CA 90505**
  - **DR SIB-031 Attachment #4 - Area Listing 3701 Skypark Dr Torrance, CA 90505**

Data Requests and Responses

Please refer to Cal Water's "Customer Support Service and Rancho Dominguez Office Capital Projects Justifications Book".

1. On page 220 Cal Water states "the Cal Water Human Resources (HR) department staff in southern California does not have an appropriate area for confidential discussions and interviews. There is also not enough meeting space to accommodate the needs of various corporate departments in the building."

   a. How many corporate departments are located in the building?
   Response: 8

   b. What are the departments?
   Response: Engineering, Employee Relations & Development (HR), Conservation, Corporate Communications, Supplier Diversity, Community Affairs & Government Relations, Water Quality, and Safety occupy the second floor.

   c. How many employees work out of the building?
   Response: 143

      i. RDOM District Operations 96

      ii. CSS – Engineering (31), Employee Relations & Development (HR) (3), Conservation (5), Corporate Communications (4), Supplier Diversity (1), Community Affairs & Government Relations (1), Water Quality (1), Safety (1)

   d. Will all these employees be permanent reporting or are some teleworking? Please provide the number of permanent reporting and teleworking employees.
   Response: All corporate employees report to the site.

   e. Does Cal Water have plans to establish or retain a hybrid workforce as a result of its experiences during the COVID-19 pandemic?
   Response: No current plans.

   f. Has Cal Water explored or does Cal Water have any plan to use office or desk sharing?
   Response: No, with all corporate employees reporting to the site, there is no opportunity for desk sharing.

   g. Please provide support to show there is not enough meeting space to accommodate employee needs.
   Response:

      i. First floor - two meeting rooms seating 10 and 6, Media Center seats 75

      ii. Second floor – one meeting room seats 10

   h. Where are employees currently meeting?
   Response: Currently employees are meeting online from their desks, or if necessary socially distanced in meeting rooms.

   i. What are the closest Cal Water facilities in the vicinity of the building? Please list facilities by distance for a 20-mile radius.

Response: All these facilities are located in metropolitan area that are heavily congested with traffic that Cal PA would have experienced during the tours. For example, ELA is only 17 miles, but it could easily take anywhere from 30 to 90 minutes depending on the time of day.

i.	**17.3 miles**	**ELA District Office 2000 S Tubeway Avenue, Commerce, CA**
ii.	**5.4 miles**	**PV 5837 Crest Road West, Ranch Palos Verdes , CA**
iii.	**10.1 miles**	**Hawthorne 12540 Ramona Avenue, Hawthorne, CA**

j. Do any of these facilities have meeting space available?
Response: ELA has only one meeting room, PV has one small meeting/file room, HAW does not have any meeting spaces

2. On page 220 Cal Water states "the company also needs to build a space for a second Emergency Response Center "EOC"."

a. Does Cal Water currently have an EOC in Southern California?
Response: There is a District EOC in RDOM.

b. When an emergency occurs in Southern California, where does Cal Water currently conduct emergency operations?
Response: San Jose EOC.

The current District EOC set-up can only support the RDOM District and commandeers a conference room for the duration of the event, impacting normal daily operations. This is particularly challenging during long term emergency events that do not impact all 3 districts or only a portion of one district.

c. Can Cal Water manage emergency operations from the San Jose EOC? If not, why not? Please explain in detail.
Response: Cal Water has been managing emergency operations from the San Jose EOC, however, if there was an event that disabled the San Jose location, there is no back-up that could support California. Additionally, with increasing frequency of events in California (fire and drought) a second EOC in Southern California could be used to provide support throughout the state, as necessary.

d. Does Cal Water have any alternative spaces for a secondary EOC in Southern California? Please list.
Response: No. The RDOM site is logical due to the proximity of critical corporate functions – Engineering, Human Resources, and Corporate Communications.

e. Are these potential spaces owned or leased? Please list.
Response: Cal Water only considered this location due to co-location with critical corporate departments.

f. Do any of these potential alternative spaces require renovation? Please list.
Response: N/A

g. What are the estimated costs for renovating each of these potential spaces?
Response: N/A

3. On page 220 Cal Water states "the vacated tenant space previously occupied by JCC."

   a. Please provide a brief description of this building history including ownership, use, renovations, etc.
   Response: The operational and administrative consolidation of Dominguez So. Bay, Hermosa Redondo and Palos Verdes was authorized in D. 00-05-047 (merger of California Water Service Company, Dominguez Water Company, Kern River Valley Water Company and Antelope Valley Water Company).

   Section 2.22 of the 2012 GRC Settlement Agreement (D. 04-04-041) had the following discussion –

   "In connection with the merger, Cal Water transferred properties which it claims are no longer used and useful to its affiliate CWS (Relinquished Properties). CWS exchanged the Relinquished Properties tax-free with a real estate developer, JCC Holmes Inc. for a build-to-suit office center which currently houses the combined district operations of Palos Verdes, Hermosa Redondo and Dominguez districts.

   The office center is owned and operated by CWS Utilities Inc., a non-regulated affiliate of Cal Water. Cal Water leases approximately 60% of the office and 75% of the land for use as its Regional office. The remainder of the office center leased to a third party (JCC Holmes, Inc.)."

   Renovations related to the Regional Office were proposed and authorized in subsequent GRCs. Renovations related to the districts were proposed and authorized as Rancho Dominguez capital additions (allocated to Dominguez, Hermosa Redondo and Palos Verdes based on four-factor methodology) and renovations related to Corporate Departments were proposed and authorized as CSS/GO capital additions.

   b. How long was JCC a tenant?
   Response: January 2005 – August 2019

   c. What was JCC's monthly rent?
   Response:

Date	Description	SF	Monthy Rent	Annual Rent
Jan-05	Lease	6085	$ 9,639	$ 115,668
Dec-09	First Amendment	4156	$ 5,687	$ 68,244
Sep-12	Second Amendment	4156	$ 2,500	$ 30,000
May-16	Third Amendment	3844	$ 2,313	$ 27,754

   d. Why did JCC vacate the space?
   Response: JCC was winding down their business and no longer had need for the space.

   e. Has the space been listed for rent since JCC vacated?
   Response: No.

4. On pages 220 and 221 Cal Water provides three alternative options to the current project.

a. Please provide a cost-benefits analysis comparing the financial aspects of the three alternatives.

Response: The first alternative, Re-Arrange to Use As-Is, was not estimated since it did not meet the criteria for new Human Resource (HR) offices to allow confidential discussions and interviews. Additionally, the current HVAC system cannot handle any additional zones.

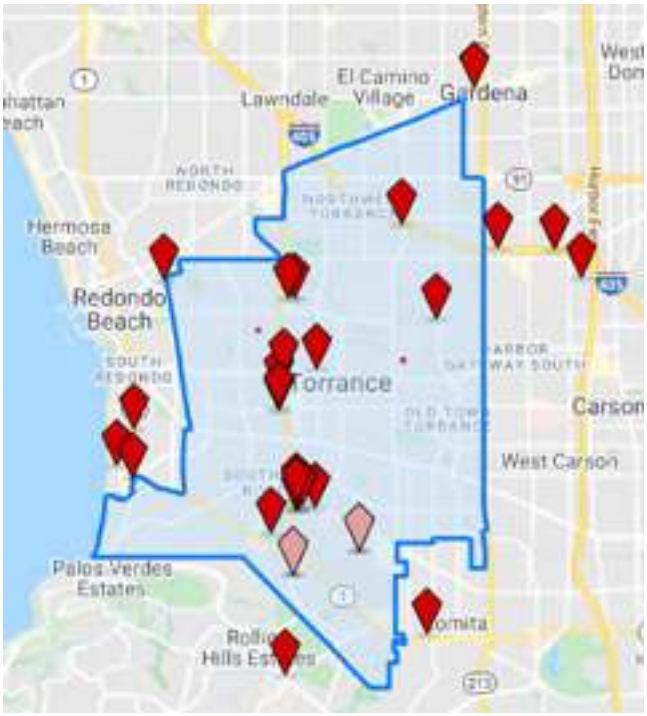
For the second alternative, Lease Space, this was not estimated because of the reduced available square footage and limited window line, the appeal to tenants of this location in this market would be reduced. Parking on the site is also limited with the increase of employees reporting to this site. Moreover, two corporate real estate brokers indicated the market was flooded with similarly sized suites that have been improved, are in more desirable locations, have available parking, offer on-site property management services, and are available immediately.

In doing nothing, Cal Water is not addressing the undesirable dynamics that currently exist for employees and applicants interacting with HR at this location. The current central location of the HR offices does not afford any privacy for meetings or interviews in these offices. Further, with a recent expansion of the engineering team, there are now desks situated immediately adjacent to the Director, Employee Relations & Development's office. Developing a long term vision for the second floor enables Cal Water to more efficiently and accurately plan, schedule, and budget changes going forward.

The initial investment requested for the project will enable Cal Water to meet the needs of employees and applicants interacting with HR, address EOC reliability, and develop a long-term use plan for the second floor. These actions will also enable the design of a new HVAC mechanical system that will more effectively and efficiently support the current and future developments within the building. The replacement of the HVAC is a future project as the current system is approaching the end of its useful life.

b. Please provide support to substantiate any assumptions or calculations used in the answer to question 3.a.

Response: The map below shows the current listing for spaces in the Torrance area similar in size to the JCC space. Additionally, the examples of local listings and features shown in Attachment #3 and Attachment #4 are within 1. 5 miles of the Cal Water location. These are comparably sized spaces, both have been on the market for almost a year, have been updated, and offer substantial parking, onsite property management, and views.



c. Alternative 3 states "continuing to use the space as-is will result in inefficient use of the building." What financial impact does this inefficient use have on Cal Water? Please explain.
Response: There are no tangible financial impacts as the question is stated, however, one could assume a level of lower productivity under the current configuration. As mentioned in the project justification, the project provides an opportunity to effectively meet needs of the HR department, while not disrupting the day-to-day activities of others.

d. Cal Water states in alternative 2 "discussions with realtors identified that the cost of tenant fit-out would essentially negate the value of the likely rentable income." Please provide support to substantiate this statement.
Response: Cal Water spoke with two corporate real estate brokers over the telephone who indicated the market was flooded with suites similar in size to the JCC space in more desirable locations with more parking. They indicated Cal Water would need to offer tenant improvement funds to update this space for an incoming tenant, with lower rents due to the volume of space on the market. Also, with growth in the District and corporate presence, the site is not able to offer an attractive parking spot to square foot ratio.

e. If leasing the space provides no financial benefit, why did Cal Water previously lease the space? Please explain.
Response: It was part of the initial agreement with JCC and Cal Water did not have a need for this particular space at that time.

5. On page 221 Cal Water includes figure 1 – Second floorplan for 2632 W 237th Street.

a. Please provide a clean (unmarked) copy of the plan.
Response: Attachment #1 – RDOM Second Floor Clean Floorplan

b. Please provide another copy of the plan with the current location of the HR offices marked.
Response: Attachment #2 – RDOM Second Floor HR Offices

c. What will the current HR offices be used for when they are moved?
Response: Initial use is expected to meet private office needs for other departments.

d. Please provide a description of what the space directly under the area labeled "develop HR suite and multipurpose room" is currently used for.
Response: The offices are currently used by employees for individual meeting spaces and break/lunch areas due to current COVID protocols. Some of the open rooms are used for storage.

6. During Southern California Field visits on Cal Water discussed its camera monitoring program at several sites. Cal Water indicated the properties are monitored by camera by Cal Water employees 24/7. Cal Water also stated one of the properties is equipped with a speaker that allows the operator to communicate with any trespassers.

a. Please provide a description of Cal Water's camera monitoring program.
Response: There are two existing methods in which Cal Water monitors closed caption TV (CCTV) These methods include using Cal Water Staff employees as a collateral duty during business hours and the use of a third party provider which can include 24/7 services based on the terms of the contract.

b. Who monitors Cal Water's cameras?
Response: In some cases, CCTVs are monitored by CWS employees during business hours as a collateral duty. In most cases this is tied to SCADA monitoring responsibilities. IF CCTVs are monitored after hours it is normally done by a third party provider. The exception would be the ELA district where we have an around the clock Pump Operator who monitors SCADA along with a number of other collateral duties, one of which is to occasionally observe the CCTVs for several ELA facilities. The ELA program is not operated as a "Security Operations Center" (SOC), where the total focus is directly on physical and cyber security, rather it is a collateral responsibility.

c. Do employees monitoring cameras have other duties?
Response: Yes, there are no CWS employees whose sole responsibility is to monitor security CCTV.

The ELA staff that monitors the CCTV operates the SCADA for ELA and Westlake, answer all after-hour phone calls, assist with production reporting, calibration of water quality equipment, various inputting of programmatic data, drawings and other duties as assigned.

d. Please provide a list of all Cal Water properties that currently have a camera monitoring system in place.
Response: Currently Cal Water does not have a formal inventory available on which

Districts or stations have camera monitoring systems. In addition to ELA, Salinas and Los Altos have third party contracts for CCTV monitoring, with other districts considering this option.

7. On page 223 Cal Water provides a Cost Estimate. This cost estimate estimates the improvements costing $456,665. On page 224 Cal Water provides a cost basis worksheet. The sum of the costs included in this worksheet total $480,700.
   a. Please explain the difference in total prices.
   Response: A location factor of -5% was originally applied, reducing the subtotal of Direct Costs from $480,700 to $465,665. However based on quote received, the higher cost estimate is accurate.
   b. What is the correct total price?
   Response: $480,700
8. On page 225 Cal Water provides a quote from Nelson Architecture.
   a. Did Cal Water obtain any additional architectural vendor quotes or estimates for this project? If so, please provide the quotes.
   Response: No.
   b. If Cal Water has not obtained any quotes, please explain why not.
   Response: This proposal was obtained for budgetary purposes. Cal Water will follow procurement requirements for competitive bids once this project is ready to move forward.
9. On page 235 Cal Water provides a quote from Roebbelen.
   a. Did Cal Water obtain any additional construction vendor quotes or estimates for this project? If so, please provide the quotes.
   Response: No.
   b. If Cal Water has not obtained any quotes, please explain why not.
   Response: This quote was requested as an initial rough order of magnitude construction budget based on the initial design. Following completion of architectural drawings, Cal Water would begin a competitive RFP process for construction services.
10. On page 236 Cal Water provides a quote from Resource Design Interiors.
   a. Did Cal Water obtain any additional furniture quotes or estimates for this project? If so, please provide the quotes.
   Response: No.
   b. If Cal Water has not obtained any quotes, please explain why not.
   Response: RDI is our current designated furniture vendor.
   c. The total order cost listed in the quote is $82,736.82 for furniture. Cal Water is estimating $130,000 cost for furniture. Please explain the discrepancy.
   Response: The original rough order of magnitude budget was estimated at $130K, which included both furniture and audio visual equipment. The furniture plan was

refined and quoted in the amount of $82,736.82. The remainder is an estimate for audio visual equipment and installation, for which the design has yet to be developed.

d. If the $130,000 is the correct cost, please provide additional support to substantiate the estimated cost.
Response: Please refer to 10c.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **October 01, 2021**

Re: **SIB-032**

Subj: **Water Quality Satellite Drinking Water Lab ELA**

Request Received from CPUC: **September 24, 2021**

Requested Due Date: **October 01, 2021**

Comments:

- **Full response attached.**

- **Response provided by Water Quality.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
    - **Attachment #1 – CSS Depr Rates Current and Proposed 2021 GRC**
    - **Attachment #2 – Ricoh Copier**
    - **Attachment #3 – WQ Lab Architectural Proposal**
    - **Attachment #4 – ROM WQ Infrastructure Update**
    - **Attachment #5 – INORG_IC MS**
    - **Attachment #6 – INORG_IC System**
    - **Attachment #7 – ORG_Solid Phase Extractor**
    - **Attachment #8 – Micro Autoclave**
    - **Attachment #9 – ORG_GC MS MS**

Data Requests and Responses

Please refer to Cal Water's "Customer Support Service and Rancho Dominguez Office Capital Projects Justifications Book".

1. On page 248 Cal Water states it "has identified an opportunity to reconfigure 4499 square feet (SF) of an existing property into a satellite laboratory located in Cal Water's East Los Angeles district to increase capacity."

   a. What is the building currently used for?
   Response: The 3.8-acre Cal Water property includes a 32,000-square-foot commercial office building and two producing groundwater wells. The East Los Angeles (ELA) district operations team and Southern Regional Customer Center co-locate in this facility.

   b. Will whatever function the building is currently being used for no longer be necessary once the building is converted?
   Response: No, this is an active district operations site with ongoing regional service functions. The proposed Water Quality satellite lab would be developed in approximately 4,500 SF of undeveloped, unused available space within the existing warehouse that was observed by Cal PA during the district tour.

   c. Can Cal Water lease out the current building? Please explain.
   Response: No, this site is an active district office and regional customer center. Existing open warehouse space is currently in development under approved GRC project 116988 to consolidate operations, regional customer service, field operations, and management in this location.

   d. What is the current lease cost per square foot of a comparable space?
   Response: Please note that leases are generally expensed and not capitalized. Expensing would have a negative effect on customer rates since expenses are included dollar for dollar in the revenue requirement, whereas capital costs are included based on the rate of return grossed up for taxes. Additionally, this site was selected for it's good location, Cal Water's ownership of the property, it has suitable available space for a satellite lab, there is infrastructure to support back-up power and access control system, and perimeter security are already in place. If Cal Water were to lease another property, these capital improvements would likely be needed on top of incurring the lease expense.

2. On page 248 Cal Water states it will be developing the project in two phases.

   a. Please provide a detailed explanation of what each phase will entail.
   Response: Phase I will include separating the lab space from the warehouse space, constructing the Microbiology Lab, Inorganics Lab, Shipping & Receiving, Glass Wash area, Storage Room, Cubicle Work area, a Private Office and exterior access doors.

   Phase II would include the build out of an extraction room, and expansion of lab space (organic lab), glass wash, and shipping and receiving areas.

b. When is Phase II scheduled for development?
Response: The development would be predicated upon the increase in volume of currently outsourced testing brought in-house, business growth in Southern California, and new regulatory developments.

c. On page 248 Cal Water states it anticipates saving $794,535 annually in reduced lab costs. Will these savings be achieved as a result of the work done in Phase I or both Phases? Please explain.
Response: Both. Phase 1 annual savings are expected to be $658,410, and Phase 2 $136,125

d. Are the $794,535 savings currently reflected in the RO model? Please explain.
Response: Yes, Cal Water made an adjustment to reduce outside services by $802,000 in the CH05_OM_FDR_Purchased Services file (tab: Purch Services Adj WS-1) to reflect savings for work that would be done in-house as a result of the water quality lab. Additionally, there are some expenses that offset these savings, specifically a transfer of $65K from ELA to CSS for implied rent and three new proposed complements which total $333,000 in payroll. Details for the proposed complements can be found in chapter 8 and attachment C of the General Report. If this capital project and related complement are not approved, the $802,000 of expenses removed from the revenue requirement will need to be added back to expenses to fund these critical water quality tests.

e. What is the anticipated approximate cost of Phase II?
Response: Estimated $260K to complete.

f. What savings are expected as a result of Phase II?
Response: Initial expected annual savings of $136,125, however new regulatory requirements could increase these savings.

g. Please provide support to substantiate Cal Water's responses to the questions above.
Response: For the $802,000, please refer to Table 1 in the project justification. In addition to the amount in Table 1, $7,067 is included for reduced overtime of a lab tech (95.5 hours x $74/hour). For the complement, please refer to response 1d.

3. On page 249 Cal Water lists three alternatives for the current project.
   a. Please provide a cost-benefit analysis comparing the financial aspects of the three alternatives.
   Response: Although there are reductions in expenses as explained above, the benefits are less cost-based and more focused on mitigating compliance risk, reliability, and maintaining high level of customer service.
   For alternative 1, the expansion of the current WQ lab in San Jose is not possible due to space constraints at this location. Therefore, no financial comparison can be applied. For alternative 2, relocating the current lab off the current campus to allow for growth was not extensively explored. As mentioned in the project justification, the investment to construct a lab and add additional infrastructure elements such as security and back-up power would be cost prohibitive in a separate stand-alone location when a lab already exists. It also does not address business continuity

concerns. Alternative 3, doing nothing, will not provide the necessary capacity for increased sample load due to growth or regulatory requirements and may require additional outsourcing of sample testing versus the reduction in outsourcing outlined in the project justification.

b. Please provide support to substantiate any assumptions or calculations used in the answer to question 3.a.
Response: Please refer to response in 3a.

4. What is the annual revenue requirement for the proposed project? Please include detailed calculations. This revenue requirement should include all costs associated with this project including labor, overhead, construction, consumables, depreciation, etc.

Response: Based on a simplified revenue requirement calculation, the annual revenue requirement for 2024 associated with this project is $510,606. This is calculated by multiplying the net plant in 2024 for this project ($3,944,469) by the adopted Rate of Return (7.48%), and adopted Net-to-Gross Multiplier for CSS from the 2018 GRC (1.207) and adding the Depreciation Expense ($154,338). The Depreciation Expense for this project is calculated by multiplying the Total Proposed Project Estimate ($3,030,099, including Construction Overhead and AFUDC) for the structure by the proposed CSS Depreciation Rate (3.61%) and $1,068,707 (including Construction Overhead and AFUDC) for the equipment by the proposed CSS Depreciation Rate (5.00%). The net plant in 2023 is calculated by subtracting the Depreciation Expense from the Total Proposed Project Estimate. Please keep in mind that this calculation assumes that all capital is approved in the 2021 GRC as proposed, the Depreciation Rate for CSS is approved as proposed, and the Rate of Return in 2024 remains as adopted. Please refer to Attachment 1 for the Proposed CSS Depreciation Rates in the 2021 GRC. The expense reductions noted in response 2d will also reduce the revenue requirement dollar for dollar.

5. On page 253 Cal Water provides a Capital Project Cost Estimate.

a. For each item provided in the estimate, please explain in detail how Cal Water arrived at the estimated cost.
Response: Cost Table Items

Line 1 Lab Generator

Attachment #2 – Ricoh Copier

Generator estimate based on recent similar work by engineering

Access Control estimate based on recent similar work

Line 2 Lab Construction

Attachment #3 – WQ Lab Architectural Proposal Phase 1

Attachment #4 – ROM WQ Infrastructure Update

Line 3 Lab Furniture - Estimates based on recent similar purchases.

Line 4 Lab Equipment – Quotes for equipment received

Attachment #5 – INORG_IC MS

Attachment #6 – INORG_IC System

Attachment #7 – ORG_Solid Phase Extractor

Attachment #8 – Micro Autoclave

Attachment #9 – ORG_GC MS MS

Estimates for Refrigerators and incubators based on similar recent purchases.

Line 5 Contingency standard percentage for type of project

b. Please provide support to substantiate Cal Water's estimated costs. This support includes but is not limited to, vendor quotes, invoices, etc.
Response: Attachments noted above include vendor quotes.

c. Did Cal Water obtain any vendor quotes or estimates for this project? If so, please provide the quotes.
Response: See attachments.

d. If Cal Water has not obtained any quotes, please explain why not.
Response: N/A.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **October 14, 2021** Re: **CWS Follow-Up Response to SIB-033** Subj: **Affiliate Allocations**	Request Received from CPUC: **September 24, 2021** Requested Due Date: **October 01, 2021**

Comments:

- **This follow-up expands upon the response to Question 3.d by providing the following attachment included separately:**
  - **Attachment 3 – Modified Four Fact Calc_2021 (with TSWC).xls**
- **The response dated October 1, 2021 referred to the following attachments included separately:**
  - **Attachment 1 – Affiliate Allocation_2021 GRC v2.xls**
  - **Attachment 2 - 2021 PubCo Allocation & Modified Four Factor Rates Memo.pdf**

Data Requests and Responses

1. On page 128 of the California Water Services General Report, Cal Water states it estimates the full allocation of general expenses to out-of-state affiliates based on a modified four-factor approach. In response to Cal Advocates deficiency review request, Cal Water provided an "Affiliate Allocation_2021 GRC.xlsx" file showing how Cal Water calculates its affiliate Allocations. Cal Water also provided its "Enterprise Allocations Policy v4_01518.pdf" in response to a Cal Advocates request.

   a. Is the enterprise allocations policy document Cal Water provided in email the most up to date version of the document? If not please provide the most up to date version.
   Response: Yes.

   b. Please provide a written explanation that explains in detail the methods used to calculate the 2020 expense factor as shown in "Affiliate Allocation_2021 GRC.xlsx".
   Response: Cal Water uses its 'Allocation of Common Costs structure" adopted in D.97-12-011 and discussed in D.03-09-021 that also incorporates the CPUC's affiliate rules and guidelines to calculate affiliate expense and ratebase factors. As many of CSS expenses may or may not fall into 'Common Cost Categories,' Cal Water uses the average of the last 2 years' allocation percentages to allocate eligible recorded direct and indirect expenses of Customer Support Services in the 2021 GRC.

   c. On page 11 of the Enterprise Allocations Policy, Cal Water provides an example modified four factor method ("FFM") expense pool allocation calculation. This calculation shows Cal Water's FFM as 94.50%. In this rate case Cal Water is allocating 1.92% of its Customer Support Services ("CSS") expenses to out of state affiliates leaving Cal Water customers to pay for 98.08% of the CSS expenses. Please explain this discrepancy in detail.
   Response: As discussed in Response 1b, affiliate allocation factors are only for common general and administrative activities related expenses of total Customer Support Service expenses. In the 2021 GRC, Customer Support Services ("CSS") includes various departments that may or may not support the common admin/general activities of the affiliates. Therefore, Cal Water incorporated a weighted average allocation factor into the four-factor calculation for its ratemaking areas.

   d. How is the 94.50% FFM used in determining Cal Water's out of state affiliate expense allocations?
   Response: For the 2021 GRC, Cal Water erroneously included capital cost-related journal entries in the affiliate expense allocation factor calculation. Please see the revised calculation provided in "Attachment 1 – Affiliate Allocation_2021 GRC v2." The Expense Allocation data shows that 94.5% of all eligible CSS common administrative and general expenses for the years 2019 and 2020 were allocated to Cal Water's ratemaking areas.

2. On page 128 of the California Water Services General Report, Cal Water states it "applies the same modified four-factor methodology to calculate the value of Customer Support Services plant to out-of-state affiliates. In response to Cal Advocates deficiency review

request, Cal Water provided an "Affiliate Allocation_2021 GRC.xlsx" file showing how Cal Water calculates its affiliate Allocations. Cal Water also provided its "Enterprise Allocations Policy v4_01518.pdf" in response to a Cal Advocates request.

a. Please provide a written explanation that explains in detail the methods used to calculate the 2020 rate base factor as shown in "Affiliate Allocation_2021 GRC.xlsx".
Response: To calculate 2020 Ratebase factor, Cal Water uses only allocable plant pool for affiliates from CSS 2020 EOY total plant balances because not all CSS plant is eligible for affiliate allocation based on their use in affiliate operations. Then Cal Water calculates Allocable pool ratio to the total plant, and multiplies it by total of affiliates' gross factor for weighting affiliate allocation to use in Cal Water's four factor calculation for total CSS Ratebase. This methodology has been used by Cal Water in multiple past GRCs.

b. On page 11 of the Enterprise Allocations Policy, Cal Water provides an example modified four factor method ("FFM") expense pool allocation calculation. This calculation shows Cal Water's FFM as 94.50%. In this rate case Cal Water is allocating 0.70% of its Customer Support Services ("CSS") rate base to out of state affiliates leaving Cal Water customers to pay for 99.3% of the CSS expenses. Please explain this discrepancy in detail.
Response: As stated in response 2b, not all CSS plant is eligible for the affiliate allocation based on its use in affiliate operations. Cal Water calculates the weighted affiliate allocation factor for Ratebase so that fair shares of CSS total ratebase are allocated to the affiliates.

c. When calculating its modified four factor, Cal Water uses net plant as opposed to gross plant. Standard Practice U-6-W states "the gross plant factor appears more appropriate than net plant as general office activities are considered more closely related to total plant." Please explain in detail why Cal Water is deviating from the standard practice in its calculations.
Response: In the Enterprise Allocation Policy, Cal Water stated that the modified four factor methodology includes net plant. For the 2021 GRC, however, the four-factor calculation in the RO Model and the affiliate allocation factor calculation, Cal Water uses gross plant consistent with the methodology described in CPUC Standard Practice U-6-W to calculate the four factor for the 2021 GRC.

d. How is the 94.50% FFM used in determining Cal Water's out of state affiliate rate base allocations?
Response: Cal Water's out of state affiliate' rate bases allocation factor of 94.5% was based on the 2017 Cal Water total net plant ratio to CWS Group total plant in the Enterprise Allocation Policy, but in the 2021 GRC, Cal Water's out of state affiliate rate base allocation is 94.2% based on 2021 capital spending. Please see "Attachment 2 - 2021 PubCo Allocation & Modified Four Factor Rates Memo." Also, the Ratebase allocation factor has been calculated based on gross plant in the Version 2 of the Affiliate Allocation spreadsheet. Please refer to "Attachment 1 - Affiliate Allocation_2021 GRC v2."

3. On page 129, Cal Water states it anticipates costs attributed to its newly acquired affiliates, Texas Water Service Company ("TWSCO") and BVRT Holding Utility Company ("BVRT") to be de minimis. As a consequence, Cal Water states it did not include either affiliate in its allocation calculations.

   a. Please provide support to substantiate Cal Water assertion that "any costs attributable to TWSC and BVRT in the near future are likely to be de minimis."
   Response: BVRT's reported full year revenues for calendar year 2020 were $433,009 with operating expenses of $2,193,962. This represents 0.05% of CWS Group's operating revenues and 0.33% of operating expenses for 2020. For 2021, Cal Water estimates BVRT's full year operating revenues will be about $1.2 million, with operating expenses of $4.2 million. As TWSC currently owns only 55% of BVRT, BVRT's costs attributable to CWS Group are even less. Cal Water expects 2022 operating revenues and expenses for BVRT to be similar to 2021 levels.

   b. What time frame does Cal Water actually mean when it says, "near future." Provide and approximation or approximate range.
   Response: 2021 and 2022.

   c. For both TWSC and BVRT provide the following:

      i. Active Meter Service Size Equivalence,
      Response: approximately 2,500 sewer connections.

      ii. Budget Op Revenues,
      Response: $433,009.

      iii. Net Utility Plant, and
      Response: $7,072,983

      iv. Budgeted Direct Operating Expenses.
      Response: $2,193,962

   d. Page 11 of the Enterprise Allocation Policy shows an example of Cal Water's FFM calculation that excludes both BVRT and TWSC. Provide a similar calculation that includes both TWSC and BVRT in Microsoft Excel format.
   Response: The Enterprise Allocation Policy report is based on 2018 data for the existing four affiliates at the time: Cal Water, Hawaii Water, New Mexico Water, and Washington Water. And for 2021 GRC, we used the 2021 PubCo Allocation & FFM Rates Memo based on 2020 data to calculate affiliate allocations. In 2020, neither TWSC nor BVRT were affiliates of CWS Group; hence their omission from the FFM calculation.

   Cal Water believes it is improper to add TWSC / BVRT to this calculation. While Cal Water has estimates of BVRT's operating expenses, revenues, and plant as listed above, these amounts are provided to Cal Water from BVRT and likely differ from how Cal Water calculates these amounts for its other affiliates. Another factor is that TWSC owns only 55% of BVRT and any attempt to estimate BVRT revenues / expenses based on this ownership stake will not be accurate. Not to mention, given the small

size of BVRT with about 2,500 connections of the more than 500,000 connections served by Cal Water, any attempted calculation will yield de minimis results. For these reasons, Cal Water is unable to provide the requested calculation.

Response 10/14/21: See "Attachment 3 – Modified Four Fact Calc_2021 (with TSWC).xls."

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **October 22, 2021**

Request Received from CPUC: **October 15, 2021**

Re: **SIB-036**

Requested Due Date: **October 22, 2021**

Subj: **Water Quality Satellite Drinking Water Lab– ELA ii**

Comments:

- **Full response attached.**

- **Does not contain confidential information.**
- **There are no attachments for this response.**

Data Requests and Responses

Please refer to Cal Water's "Customer Support Service and Rancho Dominguez Office Capital Projects Justifications Book".

1. SIB-032 question 4 requested Cal Water provide the annual revenue requirement associated with the proposed lab project. Cal Water stated this number is $510,606.

   a. The DR requested Cal Water provide the complete annual revenue requirement associated with the proposed lab project. Cal Water's response only included the plant related revenue requirement and failed to include costs associated with additional staffing and consumables. On page 251 Cal Water estimates annual operating costs at $574,200. Please update Cal Water's response to reflect these operating costs in the total revenue requirement resulting from the proposed project.
   Response: Taking the simplified revenue requirement from SIB-032 of $510,606 and adding the annual operating cost of $574,200 results in a requirement of $1,084,806. With the expense reductions referenced in DR SIB-032 Question 2.d, the requirement would be $282,806. Please note the project has non-financial customer benefits which are listed in the project justification on pages 249-250.

   b. In its response, Cal Water explains in detail how it calculated the revenue requirement numbers. Cal Water lists deprecation expense at $154,338 and states it is the result of adding $3,030,099 multiplied with 3.61% and $1,068,707 multiplied by 5.00%. Following Cal Water's instructions, Public Advocates gets $162,822 and not $154,388. Please explain this discrepancy.
   Response: The 3.61% listed in the response is a typo. The correct rate is 3.33% which was highlighted in DR SIB-032 Attachment #1.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

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Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **October 22, 2021**	Request Received from CPUC: **October 15, 2021**
Re: **SIB-038**	Requested Due Date: **October 22, 2021**
Subj: **IDAM, DLP, Campus Security Fencing**	

Comments:

- **Full response attached.**
- **Response provided by Facilities and Rates.**

- **Response #1 contains confidential information.**
- **This response does not contain attachments.**

Data Requests and Responses

1. Regarding Cal Water's proposed Campus Security Fencing project:

   a. Does Cal Water currently have camera monitoring at this facility?
   *****Begin confidential**

   [redacted]

   *****End confidential**

   b. If Cal Water does have monitoring setup, who does the monitoring?
   *****Begin confidential**

   [redacted]

   *****End confidential**

   c. If Cal Water does not have monitoring setup, please explain why not.
   *****Begin confidential**

   [redacted]

   *****End confidential**

   d. If Cal Water does not have monitoring setup, does Cal Water intend to add cameras to this facility? What would be the timeline?
   *****Begin confidential**

   [redacted]

   *****End confidential**

2. Regarding Cal Water's proposed Identity Access Management System:

   a. What is the annual revenue requirement for the proposed project? Please show calculations.
   Response: Based on a simplified revenue requirement calculation, the annual revenue requirement for 2025 associated with this project is $100,924. This is calculated by multiplying the net plant in 2025 for this project ($705,999) by the adopted Rate of Return (7.48%), and adopted Net-to-Gross Multiplier for CSS from the 2018 GRC (1.207) and adding the Depreciation Expense ($37,158). The Depreciation Expense for this project is calculated by multiplying the Total Proposed Project Estimate ($743,156, including Construction Overhead and AFUDC) by the proposed CSS Depreciation Rate (5.00%). The net plant in 2025 is calculated by subtracting the Depreciation Expense

from the Total Proposed Project Estimate. Please keep in mind that this calculation assumes that all capital is approved in the 2021 GRC as proposed, the Depreciation Rate for CSS is approved as proposed, and the Rate of Return remains as adopted.

b. Please provide support to substantiate Cal Water's assumptions and calculations used in the answer to question 2.a. above.
Response: Please refer to response in 2a.

3. Regarding Cal Water's proposed Next Generation Data Loss Prevention project:

a. What is the annual revenue requirement for the proposed project? Please show calculations.
Response: Based on a simplified revenue requirement calculation, the annual revenue requirement for 2025 associated with this project is $84,104. This is calculated by multiplying the net plant in 2025 for this project ($588,332) by the adopted Rate of Return (7.48%), and adopted Net-to-Gross Multiplier for CSS from the 2018 GRC (1.207) and adding the Depreciation Expense ($30,965). The Depreciation Expense for this project is calculated by multiplying the Total Proposed Project Estimate ($619,297, including Construction Overhead and AFUDC) by the proposed CSS Depreciation Rate (5.00%). The net plant in 2025 is calculated by subtracting the Depreciation Expense from the Total Proposed Project Estimate. Please keep in mind that this calculation assumes that all capital is approved in the 2021 GRC as proposed, the Depreciation Rate for CSS is approved as proposed, and the Rate of Return remains as adopted.

b. Please provide support to substantiate Cal Water's assumptions and calculations used in the answer to question 3.a. above.
Response: Please refer to response in 3a.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu
Project Coordinator
Phone: (213) 576-7075
Email: byu@cpuc.ca.gov

Suliman Ibrahim
Utilities Engineer
Phone: (213) 266-4714
Email: suliman.ibrahim@cpuc.ca.gov

Marybelle Ang
Attorney
Phone: (415) 696-7329
Email: marybelle.ang@cpuc.ca.gov

Caryn L. Mandelbaum
Attorney
Phone: (213) 620-6456
Email: caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman
Vice President, California Rates
Phone: (408) 367-8498
Email: gmilleman@calwater.com

Natalie D. Wales
Director, Regulatory Policy & Compliance
Phone: (408) 367-8566
Email: nwales@calwater.com

Patrick Alexander
General Rate Case Manager
Phone: (408) 367-8230 ext.78230
Email: palexander@calwater.com

Date: **November 29, 2021**

Re: **SIB-039**

Subj: **Projects Below 100k**

Request Received from CPUC: **November 18, 2021**

Requested Due Date: **November 29, 2021**

Comments:

- **Full response attached.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**

- **Attachment #1 – DR SIB-039 Attachment #1_Cost estimates under 100K**

Data Requests and Responses

1. On page 10 of its "CSS & RDOM Project Justification Book", Cal Water states "Detailed written justifications have been provided for all specific projects greater than $400,000 in direct cost in order to demonstrate the necessity of the capital investment proposed for the District in the 2021 GRC." On pages v through vii Cal Water also included Table 1. Capital Budget Summary – Customer Support Services and Rancho Dominguez. Based on this table, $9,293,387 of Cal Water's total $59,618,634 budget fall below this $400,000 threshold.

   a. Please provide a detailed cost breakdown for all CSS & RDOM projects with a proposed direct cost of less than $100,000 included in Table 1 referenced above. The requested cost breakdown should include the proposed contingency for each project.
   Response: Please see Attachment #1 which includes the specific cost estimates requested.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

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Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **December 15, 2021**	Request Received from CPUC: **December 02, 2021**
Re: **SIB-040**	Requested Due Date: **December 09, 2021**
Subj: **CCB and Other Previous Projects**	

Comments:

- **Full response attached.**
- **Response provided by Rates**

- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **DR SIB-040 Attachment #1 - NBV**

Data Requests and Responses

1. In response to SIB-023 Q.1.d, CWS stated that its current CCB application has a total cost of $23.3M.

   a. What is the current net book value of the CCB application included in revenue requirement?
   Response: Cal Water, as is the case with standard utility practice, uses Group Depreciation with annual depreciation rates being based upon the Straight-Line method, Broad Group Procedure, and Average Remaining Life technique. Under Group Deprecation annual depreciation is the product of the current gross plant investment multiplied times the approved depreciation rate. Therefore, Cal Water does not track the amount of net book value on individual property units because, when retired, it has no bearing on the occurrence of the retirement and/or how the property is retired.

   With regard to property retirements, when a property unit is physically taken out of operational service, a retirement is booked on the Company's books and records. The retirement of the property unit's Original Cost investment is recorded by crediting the applicable plant in service property account in the amount of the property unit's original cost investment, with a corresponding like debit amount being recorded to the applicable book depreciation reserve (accumulated depreciation reserve) account. Under group accounting no gain or loss is recorded, irrespective of the property group's average service and age of the property being retired.

   If there is any "implicit" under or over recovery of the individual item of plant's original cost, the residual amount is retained in the Company's book depreciation (accumulated depreciation) account as is the case with any and all other property retirements. The property account continues to be depreciation with the current depreciation rate until the preparation of the next comprehensive depreciation study. In performance of the next subsequent depreciation study, the Company's gross plant, net salvage factor, and then book depreciation reserve (accumulated depreciation) will be used with the Straight Line, Broad Group, Average Remaining Life method, procedure, and technique to develop an updated annual depreciation rate for the property group.

   From a theoretical basis, if Cal Water were to depreciate assets at an individual level, using a standard straight-line methodology and Cal Water's adopted and proposed depreciation rates, the current net book value at the end of 2021 would be $11,595,704. Please see the CC&B tab in Attachment #1 for the calculation of this number.

   b. What will the future net book value be in the year 2024 (when the CCB will be replaced)?
   Response: From a theoretical basis, if Cal Water were to depreciate this project at an individual level, the net book value in 2024 would be $2,956,224.

2. Please provide, in Microsoft Excel Format, a list of all CSS and RDOM projects booked to rates between the years 2010 and 2015. The list should include the following:
    - Project Name and a brief description.
    - The date the project was booked into rates.
    - The original project cost included in rates.
    - The current net book value of the project.

RESPONSE: Please refer to Attachment 1 for a theoretical exercise of what the NBV calculation of the requested assets would be, if Cal Water were to depreciate them on an individual level. For this exercise, Cal Water is using the actual date that the company closed the respective project. Please also note that some of these projects may have been retired since they were placed into service.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

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Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **December 20, 2021**	Request Received from CPUC: **December 13, 2021**
Re: **SIB-042**	Requested Due Date: **December 20, 2021**
Subj: **Affiliate Allocations ii.**	

Comments:

- **Full response attached.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – CWSCO & All Affiliates Data 10_2021**

Data Requests and Responses

1. Please provide, in Microsoft Excel Format, for California Water Service ***and*** each of its regulated affiliates the following information:

    1. Direct operating expenses, excluding uncollectibles, general expenses, depreciation and taxes,
    2. Gross plant,
    3. Number of employees (using direct operating payroll and excluding general office payroll), and
    4. Number of customers.

    For Cal Water, plus affiliates:

    1. Washington Water Service Company,
    2. Hawaii Water Service Company,
    3. New Mexico Water Service Company,
    4. Texas Water Service Company, and
    5. BVRT Holding Company

    Response: Please see "Attachment # 1 CWSCO & All Affiliates Data 10_2021". Please also note that BVRT Holding Company is part of Texas Water Service Company, not a separate affiliate of Cal Water.

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**

Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
Suliman Ibrahim Utilities Engineer	Phone: Email:	(213) 266-4714 suliman.ibrahim@cpuc.ca.gov
Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov

From: **California Water Service Company**

Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **December 28, 2021** Re: **SIB-043** Subj: **Construction Management and Special Inspection.**	Request Received from CPUC: **December 20, 2021** Requested Due Date: **December 28, 2021**

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – CM-SI Projects**

Data Requests and Responses

1. Please provide, in Microsoft Excel Format, a list of all capital projects CWS is proposing in A2107002. The list should include the following:
    - District Project is located in
    - Project Name and a brief description.
    - The date the project is scheduled to be completed.
    - The total project cost in dollars.
    - The total project Construction Management and Special Inspection Cost in dollars.
    - The Construction Management and Special Inspection factor in percent.

    Response: Please see Attachment #1. Projects listed in Attachment #1 are only new Advanced Capital Projects (2022, 2023, or 2024 projects). Construction Management (CM) and Special Inspection (SI) Costs were not listed out as separate line items in Prior GRCs, so Carryover Projects do not have a separate line item for CM and SI.

2. On page 124 of its Common Plant Justification Book CWS states "this has resulted in variable construction quality."
    a. What exactly does CWS mean by this statement? Please provide examples.
    Response: The "variable construction quality," referenced in the Common Plant Justification book was intended to describe the potential variability in scope, schedule, budget, and quality outcome that could result from Cal Water's historic construction management (CM) approach. This past approach was described by Jacobs Engineering in their technical memorandum as "cradle-to-grave" CM and presents many challenges and risks that can be mitigated with current industry best management practices.[1]

    b. Are there currently assets in CWS's inventory that were inadequately constructed? Please explain.
    Response: Cal Water does not have assets or facilities that were inadequately constructed. While Cal Water's construction management program is requested to be improved and adequately funded to bring this program up to current industry standards, Cal Water has always had a construction phase management process in place and have sought to diligently manage scope, schedule, budget and quality as best possible. For each and every project delivered, a post construction inspection is conducted to ensure the projects and assets meets its intended purpose before it is considered in service and accepted by Cal Water.

[1] **2021 General Rate Case Cal Water's Common Plant Justification Book, Attachment B, PJ-153 to PJ-158, October 2021.**

3. On pages 125 and 126 of its Common Plant Justification Book CWS provides a table listing various Construction Management and Special Inspection factors for different projects.

   a. How did CWS arrive at these factors? Please explain thoroughly.

   Response: As part of Cal Water's effort to determine an appropriate CM and special inspection (SI) level of effort to the various types of projects proposed for the 2021 GRC, a list of common project types that Cal Water executes was created and presented in the Common Plant Justification Book.[2] Cal Water then evaluated the complexity of each type of project and determined the level of effort necessary to complete CM and SI. Some project types, like Hydro-Pneumatic Tanks, were determined to be typical and straight forward projects; essentially a slab on grade, a tank, and minimal tie-in piping. For this type of project, Cal Water is confident in the current project delivery practice, and therefore, feel that CM services support is generally not needed, although there may be some specific project exceptions. Conversely, projects like, Well Equipping, Water Treatment, Station Upgrades, and Storage Tank Replacement projects are generally more complex and require significantly more coordination and management during the construction phase, and therefore, full 10% CM support was applied to these projects. This type of evaluation was applied for all typical project types and is how the CM and SI percentages were generally determined as presented in Table 1 on the following page. Additional detail on how these percentages were determined is presented in the response to Question 3b.

   As the construction phase project delivery program continues to be implemented, Cal Water will be tracking these costs and may update future GRC budgets with revised percentages.

Table 1: Explanation of how Cal Water determined the CM/SI factors for each project type

Project Type	Approach	Explanation
New/Upgrade Station	• CM and SI estimated at 10% of total construction costs	• Due to the complexity of the project full CM and inspection support has been applied to this type of project
Chloramination Treatment	• For projects greater than $500k, CM & SI estimated at 10% of total construction costs • All other, SI estimated at 5% of total construction costs	• Due to the complexity of the project full CM and inspection support has been applied to this type of project • Special Inspections due to the varied work that will require SI per CBC requirements.
Control Valve Install	• SI estimated at 5% of total construction costs	• Special Inspections due to the varied work including work in the public ROW that will require SI per CBC requirements.

[2] **2021 General Rate Case Cal Water's Common Plant Justification Book, PJ-125 to PJ-126, October 2021.**

Project Type	Approach	Explanation
Transmission Main	• CM and SI estimated at 10% of total construction costs	• Due to the complexity of the project including work in the public ROW, full CM and inspection support has been applied to this type of project
Distribution Main	• CM and SI included in unit costs ($/LF)	• Due to the complexity of the project including work in the public ROW, full CM and inspection support has been applied as a unit cost to this type of project
GAC Treatment	• CM and SI estimated at 5% of total construction costs	• Due to the medium complexity of the project limited CM and inspection support has been applied to this type of project
Back Up Generator	• For projects over $75K ($100K in the Bay Area), CM and SI estimated at 5% of total construction costs • All other projects SI estimates at 2.5% of total construction costs	• Projects with a higher cost are more complex therefore limited CM support has been applied to this type of project. • All projects have 2.5% costs for Special Inspections applied due to CBC requirements
Hydropneumatic Tank	• SI estimated at 2.5% of total construction costs	• These types of tank projects are simple in scope therefore CM support has not been applied to this type of project • All projects have 2.5% costs for Special Inspections applied due to CBC requirements
Panelboard Project	• For projects over $75K ($100K in the Bay Area), CM and SI estimated at 5% of total construction costs • All other projects SI estimates at 2.5% of total construction costs	• Projects with a higher cost are more complex therefore limited CM support has been applied to this type of project. • All projects have costs for Special Inspections applied
Storage Tanks	• CM and SI estimated at 10% of total construction costs	• Due to the complexity of the project full CM and inspection support has been applied to this type of project
Well Drill	• SI estimated at 5% of total construction costs	• Specialty contractors are used on this type of project so CM support has not been applied to this type of project • Additional percentages for Special Inspections due to the varied work that will require SI per CBC requirements.

Project Type	Approach	Explanation
Well Equip	• CM and SI estimated at 10% of total construction co	• Due to the complexity of the project full CM and inspection support has been applied to this type of project

b. Please provide support to justify CWS's answer to question 3.a. above and show in detail how CWS arrived at these factors. This support includes but is not limited to vendor invoices, bids, etc.
Response: In order to determine current industry best practice and recommended steps to implement this, Cal Water engaged Jacobs Engineering to prepare a technical memorandum on this topic. Jacobs Engineer is an internationally recognized professional engineering and technical services firm with extensive experience in construction management. The Jacobs Engineering technical memorandum cited the latest industry standards from multiple references, including the Construction Management Association of America (CMAA), "California Multi-Agency CIP Benchmarking Study – 2020 Update", and California Department of Transportation, as well as actual project statistics from Jacobs experience.[3] These references provide a wealth of information from multiple public and private agencies and construction firms across California and the nation. In reviewing these references, and considering the typical size of projects at Cal Water, it was Jacobs Engineering's recommendation that Cal Water budget its CM and SI services from 5% to 15% of the project construction costs, with an average of 10% on a programmatic basis. As discussed in the response to Questions 3a, Cal Water took the recommendations by Jacobs Engineering and developed conservative factors for CM and SI based on the complexity of the project. In addition, it was Jacob Engineer's further recommendation that Cal Water develop a database on data from actual projects to provide a more refined cost basis for CM and SI targets moving forward. Cal Water is preparing to develop such a database which provide greater confidence and accuracy in the percentages proposed in future GRCs.

Given that there are a large number of projects that require CM and SI services, Cal Water intends to bid these projects out through Cal Water's master supply agreement (MSA) contracts. The MSA suppliers were vetted through a request for proposal/bidding process and have set contractor/consultant labor rates that were negotiated to bring the best value for the CM and SI support for the projects. Using this strategy, Cal Water bundled projects to achieve efficiencies with CM and SI professionals and employ professionals to support our projects on a consistent basis so that they are familiarized with the facilities and the O&M personnel associated with those facilities.

[3] **2021 General Rate Case Cal Water's Common Plant Justification Book, Attachment B, PJ-153 to PJ-158, October 2021.**

Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	Lauren Cunningham
Witness(es)	:	

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

REPORT ON OPERATIONS AND MAINTENANCE EXPENSES, SUPPLY COSTS, AND SPECIAL REQUEST #10 FOR ALL DISTRICTS

California Water Service Company

Test Year 2023 General Rate Case

A.21-07-002

San Francisco, California
February 4, 2022

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MEMORANDUM

This Report on Plant for California Water Service Company ("Cal Water") General Rate Case (GRC) A.21-07-002 is prepared by Lauren Cunningham of the *Cal Advocates ("Cal Advocates") - Water Branch,* and under the general supervision of Program Manager Richard Rauschmeier, and Program & Project Supervisors Syreeta Gibbs and Project Lead Brian Yu. Ms. Cunningham's Statement of Qualifications is in Attachment 2-1 of this report. Marybelle Ang and Caryn Mandelbaum serve as Legal Counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any issue connotes neither agreement nor disagreement with the underlying request, methodology, or policy position related to that issue.

CHAPTER 1 EXECUTIVE SUMMARY

I. INTRODUCTION

This report presents Operation & Maintenance ("O&M") expenses, Supply costs, and Special Request ("SR") #10: Memorandum ("Memo") Account for Groundwater Charges in General Rate Case ("GRC") Application ("A") 21-07-002 filed by California Water Service Company ("Cal Water" or "CWS"). O&M expenses and Supply costs are referred herein as "operating expenses" and exclude labor and benefits expenses, income taxes and taxes other than income. Recommendations regarding labor and benefits expenses, and taxes are presented in the Andrew Sweeney's Report on Administrative and General Expenses, and Prashanta Adhikari's Report and Recommendations on Taxes and Special Requests 7 & 8, respectively.

This chapter includes key recommendations, describes general approaches, and proposes forecasting adjustments in Test Year ("TY") 2023 operating expenses. In developing its recommendations, Cal Advocates reviewed Cal Water's General Report including Direct Testimony, discovery responses and the District Results of Operations for each of the districts.

Chapter 2 of this report covers O&M expenses, Chapter 3 covers Supply Costs, and Chapter 4 covers Special Request #10: Memorandum Account for Groundwater Charges. Adjustments presented herein are reflected in Executive Summary and Results of Operations Tables, Appendix RO Tables, O&M Expenses, for each respective ratemaking area.

II. SUMMARY OF RECOMMENDATIONS

(1) The Commission should adopt O&M and Supply forecasts using the most recent purveyor rates available.

(2) The Commission should deny Cal Water's request to recover from ratepayers the cost of a failed capital project that is not used or useful.

(3) The Commission should remove O&M expenses from the forecast relating to certain capital projects and staffing requests.

(4) The Commission should remove Cal Water's proposed additional vehicle expenses for specific Districts from the forecast relating to Transportation expense.

(5) The Commission should deny Special Request #10 to open a memorandum account for groundwater charges.

CHAPTER 2 OPERATIONS & MAINTENANCE EXPENSES

I. INTRODUCTION

This chapter addresses Cal Water's O&M expense budgets for all Districts and presents Cal Advocates' analysis and recommendations.

II. SUMMARY OF RECOMMENDATIONS

The Commission should adopt the following recommendations regarding Cal Water's requested O&M budgets:

(1) Adopt Postage forecasts using the most recent rates available because they are more accurate;
(2) Remove proposed additional vehicle expenses from the forecasts relating to Transportation expense;
(3) Adopt Uncollectibles ratio calculations which exclude outliers that skew the four-year average;
(4) Correct an inconsistency regarding Sustainable Groundwater Management Act fees in King City District, adjust the methodology for amortization in Chico and East Los Angeles Districts, and remove non-recurring expenses from the Source of Supply forecast;
(5) Deny Cal Water's request to amortize the failed capital project in Hermosa Redondo District that is not used or useful;
(6) Exclude a non-recurring expense from East Los Angeles District's historical five-year average calculation and cost savings from the proposed East Los Angeles Water Quality Lab relating to Water Treatment expense;
(7) Exclude non-recurring expenses related to Transmission and Distribution expense;
(8) Exclude cost savings from the proposed East Los Angeles Water Quality Lab related to Customer Accounting expense; and
(9) Exclude certain tanking painting expenses related to Contracted Maintenance expense.

III. ANALYSIS

A. Postage

The Commission should adopt Postage forecast of $1,569,785 using the most recent USPS rates because it appropriately captures the rate increase and bulk mailing discounts.

1. First-Class Mail Rate Increase

Cal Water utilizes an outdated USPS rate which does not consider the Postal Regulatory Commission approved rate changes, effective August 29th, 2021, for first-class mail, increasing the cost of a stamp from $0.55 to $0.58.[1] In response to discovery,[2] Cal Water stated that roughly 98% of its bills enjoy discounted postage rates, and that bulk mail meeting specific criteria is discounted by 5 cents.

This is an approximate increase of 6% from the 2020 postage rate.[3] This new rate reflects the rate increase and bulk mailing discounts, and therefore, is more accurate. This increases the TY 2023 postage expense by approximately $83,573.

Table 2-1: Test Year 2023 Postage Expense ($1,582,176)

District/Region	CWS Proposed[4]	Cal Advocates Recommended	Recommended > proposed	% Difference
Bakersfield	$226,095	$239,661	$13,566	106%
Bay Area Region	$172,849	$176,875	$4,026	102%
Bear Gulch	$58,727	$62,251	$3,524	106%
Chico	$95,201	$100,913	$5,712	106%
Dixon	$9,249	$9,804	$555	106%
Dominguez	$105,713	$112,056	$6,343	106%
East Los Angeles	$83,826	$88,855	$5,029	106%
Hermosa Redondo	$83,528	$88,539	$5,011	106%
Kern River Valley	$13,209	$14,002	$793	106%

[1] Attachment 1-1: https://www.usps.com/business/prices.htm

[2] Attachment 1-2: Cal Water Response to Cal Advocates DR LCN-001, #2c.

[3] $0.58 new rate - $0.05 bulk mail discount = $0.53. $0.53 - $0.50 previous rate = $0.03 increase. ($0.03/$0.53) = 6% rate increase.

[4] CH05_OM_FDR_Postage, tab Postage Exp WS-1.

Livermore	$58,784	$62,311	$3,527	106%
Los Altos	$58,816	$62,345	$3,529	106%
Los Angeles Co. Region	$79,334	$84,094	$4,760	106%
Marysville	$11,828	$12,538	$710	106%
Salinas Valley Region	$98,820	$104,749	$5,929	106%
Oroville	$11,048	$11,711	$663	106%
Selma	$20,752	$21,998	$1,246	106%
Stockton	$137,697	$145,958	$8,261	106%
Travis	$320	$339	$19	106%
Visalia	$143,241	$151,836	$8,595	106%
Westlake	$21,806	$23,115	$1,309	106%
Willows	$7,760	$8,226	$466	106%
Customer Support Services	$0	$0	$0	0%
Total	**$1,498,603**[5]	**$1,582,176**	**$83,573**	**106%**

B. Transportation

The Commission should adopt $6,917,002 for Transportation forecast which removes additional O&M expenses associated with cancelled vehicle requests and new vehicles that Cal Water requests in this GRC. Incremental O&M expenses associated with new vehicles are excluded from this amount because the Commission should deny Cal Water's request for new employee positions and new vehicles associated with the new positions proposed.[6]

Transportation expenses are related to the company's fleet of vehicles, and includes depreciation, fuel, vehicle registration, repairs, and maintenance.[7] Cal Water uses a standard five-year inflation-adjusted average to forecast Transportation expenses which is reasonable.

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[5] The table in Cal Water General Report, PDF page 45, line 3 has a total of $1,498,604, which calculations show to be inaccurate by $1.

[6] Andrew Sweeney's Report on Administrative and General Expenses discusses its recommendation concerning Cal Water's proposed new positions.

[7] Cal Water General Report, PDF page 44, lines 4-5.

1. Vehicle Requests Related to Cal Water's Proposed Staff Positions

Transportation expenses totaling $138,484 pertaining to denied staff positions should be removed from the forecast. For more information on Cal Water's proposed staff positions, please refer to Andrew Sweeney's Report on Administrative and General Expenses.

C. Uncollectibles

The Commission should adopt $1,870,808 for Uncollectibles forecast which adjusts for Cal Water inadvertently utilizing a five-year average in its Regions and excludes historical outliers which raise rate base unnecessarily.

Uncollectibles are outstanding balances that Cal Water determines cannot be collected from customers. To forecast TY 2023 Uncollectible expenses, Cal Water uses a four-year (2016-2019) average of the annual uncollectible rate and multiplies that average by forecasted revenues.[8]

1. Regional Uncollectible Ratios

Cal Water inadvertently utilized a five-year average to calculate its Regions' Uncollectibles ratios instead of the four-year average stated in the Application. In response to discovery,[9] Cal Water acknowledged this error.

2. Outliers

Typically, Cal Water would utilize the standard five-year inflation-adjusted forecast. However, the arrearage amounts in 2020 were impacted by the COVID-19 pandemic,[10] where customer protections, such as ceasing all disconnections for

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[8] Cal Water General Report, PDF page 46, lines 11-12; PDG page 47, lines 1-2.

[9] Attachment 1-3: Cal Water Response to Cal Advocates DR LCN-014, #1a.

[10] CPUC Rulemakings: Resolution M-4842, Resolution M-4849, D.21-06-036.

nonpayment, resulted in higher than usual Uncollectibles amounts.[11] Therefore, it is reasonable to use the 2016-2019 four-year inflation-adjusted average to forecast test year revenue requirements.

Although, Cal Water's methodology here is reasonable, including outliers skews the four-year averages. Please see Table 2-2 and 2-3 below, which show Cal Water's proposed vs. Cal Advocates' recommended Uncollectibles ratios and Cal Water's proposed vs. Cal Advocates' recommended Uncollectibles expenses in terms of Cal Water's original proposed revenues below.

Table 2-2: Test Year 2023 Uncollectibles Expense Ratios

District/Region	CWS Proposed[12]	Cal Advocates Recommended	Proposed vs. Recommended
Bakersfield	0.7283%	0.6461%	0.0822%
Bay Area Region	0.1390%	0.0826%	0.0564%
Bear Gulch	0.0567%	0.0567%	0.0000%
Chico	0.1788%	0.1788%	0.0000%
Dixon	0.2744%	0.3409%	-0.0665%
Dominguez	0.1476%	0.1476%	0.0000%
East Los Angeles	0.1637%	0.1637%	0.0000%
Hermosa Redondo	0.1456%	0.0756%	0.0700%
Kern River Valley	1.5192%	1.3574%	0.1618%
Livermore	0.0720%	0.0720%	0.0000%
Los Altos	0.0334%	0.0195%	0.0139%
Los Angeles Co. Region	0.1892%	0.1399%	0.0654%
Marysville	0.3703%	0.3703%	0.0000%
Salinas Valley Region	0.2977%	0.1519%	0.1458%
Oroville	0.3316%	0.2687%	0.0629%
Selma	0.3641%	0.3641%	0.0000%
Stockton	0.6992%	0.6030%	0.0962%
Travis	0.0000%	0.0000%	0.0000%
Visalia	0.3105%	0.3327%	-0.0222%
Westlake	0.0676%	0.0412%	0.0264%
Willows	0.6373%	0.6373%	0.0000%
Customer Support Services	0.0000%	0.0000%	0.0000%

[11] Cal Water General Report, PDF page 47, lines 4-6.

[12] CH05_OM_FDR_Uncollectibles, tab Uncollectible % WS-1; Uncollectible amounts for Regions are correct in W_Reports_SOE All.

1 **Table 2-3: Test Year 2023 Uncollectibles Expenses[13] ($1,870,808)**

District/Region	CWS Proposed[14]	Cal Advocates Recommended	Proposed vs. Recommended	% Difference
Bakersfield	$655,875	$581,849	$74,026	89%
Bay Area Region	$149,359	$88,756	$60,603	59%
Bear Gulch	$38,132	$38,132	$-	100%
Chico	$52,495	$52,495	$-	100%
Dixon	$18,365	$22,816	$(4,451)	124%
Dominguez	$122,596	$122,596	$-	100%
East Los Angeles	$69,943	$69,943	$-	100%
Hermosa Redondo	$54,047	$28,063	$25,984	52%
Kern River Valley	$120,849	$107,978	$12,871	89%
Livermore	$21,420	$21,420	$-	100%
Los Altos	$15,143	$8,841	$6,302	58%
Los Angeles Co. Region	$103,877	$67,970	$35,907	65%
Marysville	$17,939	$17,939	$-	100%
Salinas Valley Region	$130,279	$66,474	$63,805	51%
Oroville	$20,671	$16,750	$3,921	81%
Selma	$20,206	$20,206	$-	100%
Stockton	$455,934	$393,204	$62,730	86%
Travis	$-	$-	$-	-
Visalia	$102,264	$109,576	$(7,312)	107%
Westlake	$15,247	$9,293	$5,954	61%
Willows	$26,507	$26,507	$-	100%
Customer Support Services	$-	$-	$-	-
TOTALS	**$2,211,148**	**$1,870,808**	**$340,340**	**85%**

2

3 **D. Source of Supply**

4 The Commission should adopt $916,637 for Source of Supply. This forecast
5 corrects an inconsistency regarding Sustainable Groundwater Management Act
6 ("SGMA") fees in King City District, adjusts the methodology for amortization in Chico
7 and East Los Angeles Districts, and removes non-recurring expenses.

8 Source of Supply expenses are incurred in the operation of source of supply
9 facilities including, but not limited to, supplies and supply mains, removing sediment and

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[13] Figures calculated utilizing Cal Water's original proposed revenues. For comparison purposes only.

[14] CH11_SOE_RevReq_RO_DRRS, District tabs; Line 106 Revenues x CWS Proposed Uncol Ratios.

organic growth, patrolling and inspection, compilation of records and reports including water level reports.[15] Cal Water uses an inflation-adjusted five-year average to estimate the TY Source of Supply expense. Additionally, Cal Water includes SGMA fees for certain Districts.

1. Sustainable Groundwater Management Act Fees

Cal Water includes expenses related to SGMA activities for its Dixon, King City, Salinas, Stockton, and Visalia Districts in its forecast.[16] These expenses are annual membership fees paid to local Groundwater Sustainability Agencies (GSAs) for the purpose of serving on local GSAs' Boards of Directors, operating the GSA, and implementing a Groundwater Sustainability Plan ("GSP") for the groundwater basins affected by the SGMA. Cal Water's methodology is reasonable, however in response to discovery, Cal Water confirmed that the estimated fees for King City District were inadvertently excluded in the projection.[17] To correct this error, the SGMA fees should be increased by $7,704 per year for King City District to be consistent with Cal Water's stated methodology and testimony.

2. Amortization and the Five-Year Average

In the East Los Angeles District, Extra-Ordinary Property Loss treatment has previously been approved and is in the process of being amortized.[18] The amortization figure should be excluded from the historical five-year average calculation altogether. Instead, the amortization figure should solely be added to the forecast after calculating the average. This approach improves the forecast accuracy by preventing the amortization figure from unnecessarily skewing the five-year averages upward.

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[15] Cal Water General Report, PDF page 48, lines 1-4.

[16] Cal Water General Report, PDF page 48, lines 6-8.

[17] Attachment 1-4: Cal Water Response to Cal Advocates DR LCN-003, #4.b.i.

[18] Cal Water General Report, PDF page 49, lines 9-22 – $300,000/yr.

3. Antelope Valley District

Historical expenses totaling $3,431 in 2018 for an administrative assessment paid to Antelope Valley Watermaster should be excluded from Antelope Valley District's Source of Supply account. In response to discovery,[19] Cal Water stated that the payment was booked to Source of Supply (account 703002) in error and that previous payments were booked to Purchased Water (account 704000).

4. Dominguez District

Historical expenses totaling $47,109 in 2018 for payment to the Water Replenishment District of Southern California for the Central Basin Watermaster and West Basin Watermaster should be excluded from Dominguez District's Source of Supply account. In response to discovery,[20] Cal Water stated that the expenses are part of the Purchased Water forecast and should not have been included in Source of Supply.

5. Kern River Valley

Historical expenses totaling $1,515 in 2017 for Cal Water's employee's expense report[21] should be excluded from Kern River Valley's Source of Supply account. Since there were no employee expenses tracked for 2015-16 and subsequently in 2018-2020, it is more accurate to exclude these expenses from the forecast as they are unlikely to reoccur.

6. Livermore District

Historical expenses totaling $160,129.30[22] in 2018 for the Potable Reuse Feasibility Study should be excluded from Livermore District's Source of Supply account. In response to discovery, Cal Water stated that this was the only time this type

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[19] Attachment 1-5: Cal Water Response to Cal Advocates DR LCN-015, #3.a.i.ii.1.

[20] Attachment 1-6: Cal Water Response to Cal Advocates DR LCN-015, #3.a.iv.i.1.

[21] Attachment 1-7: Cal Water Response to Cal Advocates DR LCN-003, #5f.

[22] Attachment 1-8: Cal Water Response to Cal Advocates DR LCN-015, #3.a.vi.i.1.

of study was ever attempted by Cal Water.[23] It is unreasonable to include a one-time study in the forecast because it is unlikely to reoccur before the next GRC cycle.

7. Customer Support Services

Historical expenses totaling $9,000 in 2018 for consulting services associated with assessing value of Individual Supply Guarantees from EKI Environment & Water[24] should be excluded from Customer Support Services' Source of Supply Account. It is unreasonable to forecast these expenses as they are, in Cal Water's words, "extremely rare"[25] and therefore highly unlikely to reoccur before the next GRC cycle.

Historical expenses totaling $25,000 in 2020 for a SGMA Research Project should be excluded. It is unreasonable to forecast this payment now that the research project has been completed and is unlikely to reoccur before the next GRC cycle.[26]

E. Pumping – Hermosa Redondo EPL

The Commission should adopt $2,674,530 for Pumping forecast which excludes expenses associated with a failed project for which Cal Water is seeking Extra Ordinary Property Loss ("EPL") treatment. Customers should not pay for projects from which they have not received benefit.

Pumping expenses cover non-labor expenses incurred in the operation of pumping equipment including operating pumps, oiling, testing, checking and adjusting meters and gauges, cleaning pumps and motors, supplies such as lubricants, fuses, waste, gaskets, and charts. Pumping expenses also cover DMV fees on portable booster pumps, radio data channel applications and telephone lines from operations computer to pump sites.[27]

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[23] Attachment 1-9: Cal Water Response to Cal Advocates DR LCN-015, #3.a.vi.i.4.

[24] Attachment 1-10: Cal Water Response to Cal Advocates DR LCN-003, #5.k.i.

[25] Attachment 1-11: Cal Water Response to Cal Advocates DR LCN-019 #1.b.i.

[26] Attachment 1-11: Cal Water Response to Cal Advocates DR LCN-019 #1.b.i.

[27] Cal Water General Report, PDF page 49, lines 5-9.

Cal Water utilizes an inflation adjusted five-year average (2016-2020) to forecast Pumping expenses.

Cal Water is requesting EPL treatment for one failed project in Hermosa Redondo. Cal Advocates' analysis follows.

1. Hermosa Redondo – Unsuccessful Attempt to Add Water Supply from MWD (PID 00101730)

The Commission should deny Cal Water's request for EPL treatment for an unsuccessful attempt to create an additional purchased water connection, identified as the WB-41 connection, with the Metropolitan Water District ("MWD") (PID 00101730) in Hermosa Redondo District. Ratepayers should not be responsible for the costs of a failed project that is neither used nor useful. This reduces Hermosa Redondo District's Pumping expenses by $179,304 starting in TY 2023.[28]

2. Lack of Proactivity in Requesting Preliminary Drawings

The Commission should deny this EPL request in Hermosa Redondo District for several reasons. First, Cal Water failed to seek MWD's preliminary design to review. In July 2016, Cal Water submitted a payment of $351,500 to fund the MWD connection, meter and vault design.[29] Between the payment in July 2016 and when MWD provided 30% drawings in December 2017 for Cal Water's review,[30] Cal Water only followed up to check on the status of the drawings twice: February and July of 2017.[31] In response to discovery,[32] Cal Water claims it made "continual inquiries regarding preliminary design

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[28] Cal Water requests to amortize $1,071,080 for "extra ordinary property loss treatment" of the failed WB-41 connection (PID 00101730). Cal Water proposes amortizing the actual costs incurred over 9 years starting in 2023. This would add $179,304 to Hermosa Redondo's expenses in TY 2023.

[29] HR RO2021-July v2 AJ.pdf, PDF page 219.

[30] HR RO2021-July v2 AJ.pdf, PDF page 219.

[31] Attachment 1-12: Cal Water Response to Cal Advocates DR LCN-004, Attachment B.

[32] Attachment 1-13: Cal Water's Response to Cal Advocates DR LCN-004, #1a.

30%," which implies that Cal Water was frequently inquiring, but response to discovery[33] reveals a misleading description of events.

3. Continued Lack of Initiative in Requesting Second Set of Drawings

Cal Water's lack of adequate follow-up continued when it came time to review the 60% drawings. According to February 2019 meeting notes,[34] MWD provided 60% drawings in roughly September/October of 2018, but Cal Water did not receive them. As such, one of the action items for the meeting was for MWD to resend the 60% drawings. When asked, Cal Water indicated that it had made "multiple inquiries regarding the status of the 60% drawings."[35] Upon review of the evidence presented,[36] Cal Water did inquire about the status of the drawings, but only twice until the meeting in February of 2019: April and June of 2018.

4. Cal Water Agrees to Combine WB-41 with an Internal MWD Project

The same aforementioned February 2019 meeting[37] was where MWD also proposed a pre-approved organizational decision to combine Cal Water's WB-41 connection project with MWD's second lower feeder ("SLF") Pre-stressed Concrete Cylinder Pipe ("PCCP") relining project,[38] conceived due to the proposed location of the WB-41 connection. Benefits, cited by MWD, included only a single shutdown, MWD's assumption of all permitted, construction work, which was expected to be less impactful to local residents, and an updated construction cost estimate reflecting $600k in cost

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[33] Attachment 1-14: Cal Water Response to Cal Advocates DR LCN-004, Attachment D.

[34] HR RO Book Attachment H, Attachment 2.

[35] Attachment 1-15: Cal Water Response to Cal Advocates DR LCN-004, #1bi.

[36] Attachment 1-14: Cal Water Response to Cal Advocates DR LCN-004, Attachment D.

[37] HR RO Book Attachment H, Attachment 2.

[38] HR RO2021 - July v2 AJ.pdf, PDF page 2019.

savings. Cal Water had ample opportunity to call off the WB-41 connection project altogether due to slow progression, delays, and lack of concrete schedules before accepting the proposal and committing more funds.

5. CWS Did Not Strongly Consider Consolidation as a Solution until 2018

Cal Water's long-term solution to provide Hermosa Redondo District with the proper additional water supply is to combine Hermosa Redondo and Dominguez Districts,[39] a venture which Cal Water claims will provide the same reliability as the proposed WB-41 connection.[40] In response to discovery,[41] Cal Water states that it wasn't until 2018, when they were obligated under the American Water Infrastructure Act ("AWIA") to develop and perform strict risk and resilience assessments and update the emergency response plans for Hermosa Redondo and Dominguez Districts, that Cal Water strongly considered hydraulically connecting the two systems. Cal Water attributes significant costs and feasibility as a motivation for this choice. Significant costs and feasibility are what Cal Water should have thoroughly considered as early as 2015, after the planned MWD shutdown in January of that same year triggered Cal Water to propose the WB-41 project in the first place.[42]

6. Ratepayers Should Not Be Held Responsible for Failed Projects

In conclusion, ratepayers should not be responsible for project costs that are neither used nor useful. Cal Water's request shifts project risk away from shareholders by requiring ratepayers to pay for failed projects for which ratepayers derive no benefit. Therefore, the Commission should deny Cal Water's request to recover the costs of the

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[39] HR RO2021 – July v2 AJ.pdf, PDF page 221.

[40] Attachment 1-16: Cal Water Response to Cal Advocates DR LCN-004, #1di.

[41] Attachment 1-17: Cal Water Response to Cal Advocates DR EDW-001, #4.

[42] Attachment 1-16: Cal Water Response to Cal Advocates DR LCN-004, #1di.

unsuccessful attempt to create an additional purchased water connection in Hermosa Redondo District.

F. Water Treatment

The Commission should adopt $6,650,092 for Water Treatment forecast, which excludes cost savings from Cal Water's proposed East Los Angeles Water Quality Lab because the Commission should deny this request.[43]

Water Treatment expenses include the cost of operating water treatment plants, chlorination equipment, water sampling at wells, outside laboratory expense, in-house laboratory expenses, and other miscellaneous treatment costs.[44] Cal Water uses an inflation-adjusted five-year average of historical expenses to forecast TY 2023 Water Treatment expenses.

Recommended adjustments to this account are detailed below.

1. East Los Angeles District Water Quality Lab (PID 124910) Water Treatment Savings

The Commission should deny Cal Water's request to subtract savings from Customer Support Services Water Treatment expenses in 2023-2025.[45] This recommendation is consistent with Cal Advocates' recommendation to deny Cal Water's proposal to construct a water quality lab in East Los Angeles District. Please see Suliman Ibrahim's Report on Allocations, Plant for CSS & RDOM District, Pipeline Replacement, and Physical Security for additional information.

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[43] Suliman Ibrahim's Report on Allocations, Plant for CSS & RDOM District, Pipeline Replacement, and Physical Security discusses its recommendation concerning Cal Water's proposed water quality lab in East Los Angeles District.

[44] Cal Water General Report, PDF page 52, lines 4-6.

[45] CH05_OM_FDR_Purchased Services, tab "Purch Services Adj WS-1," line 130 utilizes savings of $802k annually.

G. Transmission & Distribution

The Commission should adopt $5,259,988 for Transmission and Distribution forecast, which adjusts for non-recurring expenses, because it improves forecasting accuracy.

Transmission and Distribution expenses cover supervision and engineering, lushing, transmission and distribution lines, turn-on and turn-off for services, installation, and miscellaneous expenses.[46] Cal Water uses an inflation-adjusted five-year average of historical expenses to forecast TY 2023 expenses.[47]

For forecasting purposes, Cal Water excludes Drought Recovery Memorandum Account ("DRMA") expenses for 2016 from historical expenses before calculating the inflation-adjusted five-year average in its Bay Area Region, Chico, Hermosa Redondo, Oroville, Palos Verdes, Monterey Region, Stockton, Visalia and Willows Districts.[48]

Cal Water also excludes CEMA expenses relating to the July 2016 Erskine Fire from its historical expenses in its Kern River Valley District.[49]

Furthermore, Cal Water excludes expenses incurred in 2019 related to the Public Safety Power Shut Off ("PSPS") in the calculation of the standard inflation-adjusted five-year average estimate for Bakersfield, Bear Gulch, Oroville, Salinas, and Redwood Valley Districts.[50] The expenses are tracked in the PSPS Memo Account.

Lastly, Cal Water excludes the non-recurring expenses incurred in 2020 related to COVID-19 in the calculation of the standard inflation-adjusted five-year average estimate for Bakersfield, Bayshore, Bear Gulch, Chico, Coast Springs, Dominguez, East Los Angeles, King City, Livermore, Los Altos, Lucerne, Rancho Dominguez, Redwood

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[46] Cal Water General Report, PDF page 55, lines 5-7.

[47] Cal Water General Report, PDF page 55, lines 7-8.

[48] Cal Water General Report, PDF page 55, lines 12-13; PDF page 56, lines 1-2.

[49] Cal Water General Report, PDF page 56, lines 10-12.

[50] Cal Water General Report, PDF page 56, lines 26-28.

Valley, Salinas, Stockton, Unified Area, Visalia and Westlake Districts.[51] The expenses are tracked in the CEMA. These three exclusions to the standard forecasting methodology are reasonable, with exceptions detailed below.

1. Customer Support Services

Historical expenses totaling $149,331.32 in 2017 and $15,727.25 in 2018 for janitorial service payments made to Customized Performance, Inc. should be excluded and re-classed to the correct account. In response to discovery,[52] Cal Water stated that the payment was booked to account 75600 in error and that the correct account should be account 792700.

H. Customer Accounting

The Commission should adopt $5,921,942 Customer Accounting forecast which excludes cost savings from Cal Water's proposed East Los Angeles Water Quality Lab because the Commission should deny this request.[53]

Customer Accounting expenses cover customer records maintenance, meter reading expenses, billing expenses, telephone service, supplies and equipment, and other miscellaneous expenses related to customer service.[54] Cal Water uses an inflation-adjusted five-year average of historical expenses to forecast TY 2023 Customer Accounting expenses.[55]

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[51] Cal Water General Report, PDF page 57, lines 3-8.

[52] Attachment 1-18: Cal Water Response to Cal Advocates DR LCN-015, #4.a.viii.i.1.

[53] Suliman Ibrahim's Report on Allocations, Plant for CSS & RDOM District, Pipeline Replacement, and Physical Security discusses its recommendation concerning Cal Water's proposed water quality lab in East Los Angeles District.

[54] Cal Water General Report, PDF page 58, lines 5-7.

[55] Cal Water General Report, PDF page 58, lines 7-8.

1. East Los Angeles Water Quality Lab (PID 124910) Customer Accounting Savings

The Commission should deny Cal Water's request to reduce Customer Support Services Customer Accounting expenses in 2023-2025 by $65k.[56] This recommendation is consistent with Cal Advocates' recommendation to deny Cal Water's proposal to construct a water quality lab in East Los Angeles District. Please see Suliman Ibrahim's Report on Allocations, Plant for CSS & RDOM District, Pipeline Replacement, and Physical Security for additional information.

I. Contracted Maintenance

The Commission should adopt a Contracted Maintenance expense of $15,003,971, which excludes savings from denied positions and is further reduced as a result of flow-through adjustments to tank painting and tank coating projects.

Cal Water uses an inflation-adjusted five-year average of historical expenses to forecast TY 2023 Contracted Maintenance expenses. In addition to contracted maintenance, this account includes amortization for tank painting projects and well rehabilitation projects, whose expenses are normalized over three years.[57]

1. Tank Painting and Tank Coating

The Commission should deny Cal Water's requests for certain tank painting projects, which are amortized in the Contracted Maintenance account. For Cal Advocates' analysis with regards to these tank painting projects, please see Tank Coatings Chapter of Cal Advocates' Report on Common Plant Issues. Adjustments to Contracted Maintenance expenses will flow through from the aforementioned report.

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[56] Cal Water General Report, PDF page 59, line 29; PDF page 60, lines 1-2. RO Model only adjusted 2023.

[57] Cal Water General Report, PDF page 63, lines 4-8.

2. CSS Building Maintenance

The Commission should approve Cal Water's requests for Customer Support Services building improvements, which are normalized over the GRC cycle in the Contracted Maintenance account. Cal Advocates reviewed Cal Water's supporting documentation and do not contest the expenses.

3. Customer Support Services

The Commission should deny the $193,000 in savings associated with Cal Water's three proposed Generator Technician positions. For Cal Advocate' analysis with regards to these positions, please see Andrew Sweeney's Report on Administrative and General Expenses.

IV. CONCLUSION

The Commission should adopt recommendations detailed above as they reflect a more reasonable and accurate forecast for TY 2023 O&M expenses. Table 2-4 below presents a summary of Cal Water's proposed and Cal Advocates' recommended O&M expenses at the district level.

Table 2-4: Test Year 2023 O&M Expenses

District/Region	CWS Proposed[58]	Cal Advocates Recommended	Recommended > proposed	% Difference
Bakersfield	$7,308,520	$7,239,405	$69,115	99%
Bay Area Region	$5,472,473	$5,475,125	$(2,652)	100%
Bear Gulch	$3,405,706	$3,409,230	$(3,524)	100%
Chico	$1,962,811	$1,951,212	$11,599	99%
Dixon	$650,724	$655,729	$(5,006)	101%
Dominguez	$847,390	$843,336	$4,053	100%
East Los Angeles	$3,335,896	$3,275,247	$60,650	98%
Hermosa Redondo	$2,082,851	$1,882,574	$200,277	90%
Kern River Valley	$1,021,162	$1,008,740	$12,423	99%
Livermore	$1,328,315	$1,295,978	$32,337	98%
Los Altos	$2,355,342	$2,343,915	$11,427	100%

[58] W_Reports_SOE All, SOE-All 2023 tab; sum of Uncollectibles (same figures calculated in Table 2-2), all Oper Exp. all Maint Exp, A&G Exp Transportation, and Acquisition Synergies.

Los Angeles Co. Region	$2,624,619	$2,621,831	$2,788	100%
Marysville	$350,584	$351,294	$(710)	100%
Salinas Valley Region	$4,031,711	$4,027,912	$3,800	100%
Oroville	$447,664	$444,406	$3,258	99%
Selma	$653,985	$655,230	$(1,246)	100%
Stockton	$3,627,938	$3,573,469	$54,469	98%
Travis	$152,274	$152,293	$(19)	100%
Visalia	$2,569,974	$2,585,881	$(15,907)	101%
Westlake	$713,324	$708,678	$4,645	99%
Willows	$341,416	$341,882	$(466)	100%
Customer Support Services	$6,769,312	$7,689,131	$(919,819)	114%
Total	**$52,053,992**	**$52,532,498**	**$(478,506)**	**101%**

1

CHAPTER 3 SUPPLY COSTS

I. INTRODUCTION

This chapter addresses Cal Water's requested Supply cost budgets for all Districts and presents analysis and recommendations based on Cal Advocates' review of Cal Water's Supply cost expense forecasts, including the methodologies used, inputs including rates, historical data, inflation, and the inclusion of any new expenses.

II. SUMMARY OF RECOMMENDATIONS

(1) The Commission should adopt Purchased Water, Pump Tax, and Purchased Power forecasts using the most recent purveyor rates available because they are more accurate.

III. ANALYSIS

A. Purchased Water

The Commission should adopt Cal Advocates' Purchased Water forecast, which corrects an input error in Cal Water's original RO Model. The final Decision in this proceeding should require Cal Water to utilize the most recent purveyor rates in the forecast in order to improve forecast accuracy.

Cal Water purchases treated and untreated water for all Districts except for Chico, Dixon, King City, Marysville, Salinas, Selma, Visalia, Willows, Travis, Rancho Dominguez, and Redwood Valley.[59] To forecast Purchased Water expenses, Cal Water generally multiplies the wholesaler's rate per acre foot by the estimated Purchased Water amounts and adds any service charges.[60] An exception to this standard methodology is

[59] CH05_OM_FDR_Purchased Water, tab "Final Purch Wtr w-Adj WS-2."

[60] BAR RO2021 – July v2 AJ.pdf, PDF page 23, lines 15-17.

the Stockton District, where Cal Water has a take-or-pay contract with the Stockton East Water District.[61]

Upon review of Cal Water's supporting documentation for the rates and services charges used in the calculation of the Purchased Water forecast, its Purchased Water forecasts are reasonable, with the exceptions detailed below:

1. Los Altos District

The SJ Water Service Charge should be reduced from $356.73 to $335.19 in the Los Altos District forecast because Cal Water states that it made a typo when inputting the figure.[62]

B. Pump Taxes

The Commission should adopt Cal Water's Pump Tax forecast and the final Decision in this proceeding should require Cal Water to utilize the most recent purveyor rates in the forecast in order to improve forecast accuracy. Pump Tax expenses cover pump taxes and water replenishment fees assessed by local water agencies. Pump Taxes are incurred in Cal Water's Bakersfield, Chico, Dominguez, East Los Angeles, Hermosa Redondo, Los Altos, Salinas, Stockton, and Visalia Districts. Cal Water forecasts Pump Tax expenses by multiplying the estimated amount of groundwater pumped by the current assessment rate. Any annual fees are also included in the TY 2023 forecast.

Cal Water's supporting documentation and the company's forecasted Pump Tax expenses are reasonable.

C. Purchased Power

The Commission should adopt Cal Water's Purchased Power forecast and the final Decision in this proceeding should require Cal Water to utilize the most recent purveyor rates in the forecast in order to improve forecast accuracy.

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[61] STK RO2021 Final.pdf, PDF page 15, line 25.

[62] Attachment 1-19: Cal Water Response to Cal Advocates DR Response LCN-011, #1a.

Purchased Power expenses include the cost for pumping, boosting, treating, and distributing water throughout a system.[63] Cal Water uses the standard methodology for forecasting Purchased Power by multiplying a composite of most recent rates charged by the power providers by the estimated KwH/kccf (kilowatt-hours used per 100,000 cubic feet of water).

Cal Water's supporting documentation and the company's forecasted Purchased Power expenses are reasonable.

IV. CONCLUSION

The Commission should adopt the above-detailed recommendations as they reflect a more reasonable and accurate forecast for TY 2023 Supply costs.

[63] BAR RO2021 – July v2 AJ.pdf, PDF page 23, lines25-26.

CHAPTER 4 SPECIAL REQUEST #10: GROUNDWATER MANAGEMENT MEMO ACCOUNT

I. INTRODUCTION

This chapter addresses Cal Water's Special Request #10 to establish a Memorandum ("Memo") Account in the event groundwater sustainability agencies (" GSAs") implement significant assessments to fund region wide large capital projects to meet sustainability goals imposed by the state.

II. SUMMARY OF RECOMMENDATIONS

The Commission should deny Cal Water's request to open a groundwater management memo account because major expenses and projects should be processed through GRC mechanisms, which provides transparency for ratepayers.

III. ANALYSIS

Cal Water requests authority to open a Sustainable Groundwater Management Act Memorandum Account ("SGMA MA"). On September 16th, 2014, the Governor signed Assembly Bill 1739, together with Senate Bills 1168 and 1319 establishing the SGMA, which set the framework to comprehensively regulate groundwater in California. SGMA applies to all California groundwater basins, except adjudicated basins managed by the courts, and requires that high- and medium-priority groundwater basins form Groundwater Sustainability Agencies ("GSAs") and be managed in accordance with locally developed Groundwater Sustainability Plans ("GSPs") or Alternatives to GSPs for those basins identified as part of the legislation.

A. GSPs

The purpose of a GSP is to set a basin on a course toward "sustainable management" in order to eliminate adverse groundwater conditions specified as

"undesirable results" within 20 years.[64] The Bills passed require that all high- and medium-priority groundwater basins, as designated by the California Department of Water Resources ("DWR"), be governed by one of more GSAs by June 30, 2017. Even pre-pandemic, GSPs were not progressing in accordance with set timelines. Combined with a more detailed planning process, it is unlikely that major assessments will arise before the next GRC cycle.

1. GSPs for Basins Subject to Critical Overdraft Conditions are Already Off to a Slow Start

GSAs for basins subject to critical overdraft conditions were required to have adopted a GSP by January 31st, 2020.[65] Discovery[66] revealed two of the total four critical basins had submitted their GSP to the Division of Drinking Water ("DWR") 20 days past the set deadline. In response to discovery regarding high- and medium-priority basins,[67] Cal Water stated that other GSP projects will be started once the GSPs are approved, and the GSA Boards select the proposed activities/projects.

Table 4-1: GSP Approval Status

District	GSP	DWR Submittal	DWR Status
Bakersfield	Kern County Subbasin KRGSA GSP	2/19/2020	Review in Progress
Salinas/King City	180/400 Foot Aquifer[68]	1/31/2020	Approved June 3rd, 2020
Stockton	Eastern San Joaquin	1/31/2020	Review in Progress
Visalia	Mis-Kaweah GSA (Greater Kaweah GSA)	2/19/2020	Review in Progress

[64] Sustainable Groundwater Management Act (SGMA) (ca.gov).

[65] https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Groundwater-Sustainable-Agencies.

[66] Attachment 1-20: Cal Water response to Cal Advocates DR LCN-010, #1b.

[67] Attachment 1-21: Cal Water response to Cal Advocates DR LCN-010, #1c.

[68] Cal Water Note: Salinas District Covers Additional Basins Whose Plans Are Still Being Developed.

B. Significant Assessments and Capital Projects Should Be Approved Through GRCs

The "significant assessments" that GSAs may implement in order to "fund region wide large capital projects to meet sustainability goals imposed by the state"[69] are precisely the types of major expenses and associated capital projects which the GRC process is designed to approve. Such a process increases transparency for ratepayers regarding projects being done for relevant basins. Cal Water is currently being assessed minor administrative fees in a few of its Districts (Salinas Valley Region, Visalia District, Stockton District, and Dixon District)[70] which are generally included in base rates.

IV. CONCLUSION

The Commission should deny Cal Water's request to open a groundwater management memo account because major expenses and projects should be processed through GRC mechanisms. Such mechanisms ensure and improve transparency regarding the use of ratepayer funds.

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[69] Cal Water General Report, PDF page 27, lines 13-19

[70] Additional Testimony Book (Final for July), PDF page 61, line 2.

Attachment 1-1:
https://www.usps.com/business/prices.htm

Cost of First-Class™ Stamps

Letter Stamps

Standard-sized, rectangular envelopes
From $0.50

Square, Oversized, or Unusual Envelopes
From $0.60

Postcard Stamps

Standard-sized, rectangular postcards
From $0.40

Global Forever® (International)

Standard-sized, rectangular envelopes
From $1.30

Attachment 1-2: Cal Water Response to Cal Advocates DR LCN-001, #2.c

c. Please provide the percentages of "bulk mail" out of all mails sent. Also provide the bulk mail postage rate for CWS.

Response: Roughly, 98% of Cal Water's bills get some level of a discounted postage rate and the remainder go at full price. The bulk mail postage rate is discounted five cents for companies who send out enough mail pieces and when the addresses are formatted a certain way through Cal Water's bill mailing provider.

Attachment 1-3: Cal Water Response to Cal Advocates DR LCN-014, #1.a

1. Please refer to the Workpaper CH11_SOE_RevReq_RO_DRRS, Cell L180 ("Uncollectibles Expense Ratio") of the individual District/Region tabs.

   a. Please explain why the Uncollectibles expense ratios for Cal Water's Regions are calculated utilizing a 5-year average as opposed to the 4-year average stated in the testimony (Workpaper GR2021-Final+Attachments.pdf, PDF pg. 46).
   Response: Cal Water inadvertently did not update the formulas in cells E126 to E131 in the "Uncollectible % WS-1" tab of "CH05_OM_FDR_Uncollectibles." Cal Water will make these adjustments to change the collectible expense ratios to a 4-year average at the earliest opportunity.

Attachment 1-4: Cal Water Response to Cal Advocates DR LCN-003, #4.b.i

b. Please also refer to CH05_OM_RO, tab Rec-Proj O&M WS-7 (SOE01-10). King Valley has a projected 2023 Source of Supply expense of $0.

   i. Please explain why King City's projected Source of Supply expense in GR2021-Final + Attachments.pdf and CH05_OM_RO, tab Rec-Proj O&M WS-7 (SOE01-10) do not match.

      Response: The estimated fees for King City were inadvertently excluded in the projection. This item was not picked up in the "Purch Services Adj WS-1" tab from the "IN_Misc Adjustments" tab in the CH05_OM_FDR_Purchased Services file.

Attachment 1-5: Cal Water Response to Cal Advocates DR LCN-015, #3.a.i.ii.1

ii. 2018 ($3,431)

1. Please indicate which of the listed expenses are related to the administrative assessment paid to Antelope Valley Watermaster. **Response: This is the only payment booked to Source of Supply (account 703002) in error. Previous payments were booked to Purchased Water (account 704000) as shown below.**

Account	Year	Period	Transaction	Supplier	Reference	Note	Base Amount	Fund	Payee	Record Date	Detail
704000	2017	1	3,1200016	0000040000	ANTELOPE VALLEY WATERMASTER	ADMIN ASSESSMENTS	345.14	120	ANTELOPE VALLEY WATER COMPANY	JAV	Purchased Water
704000	2018	5	5,1210411	0000040000	ANTELOPE VALLEY WATERMASTER	2017 BALANCE ADMIN ASSMT 2018	3,431.40	120	Lancaster	JAV	Misc Exp Other
704000	2018	5	5,1217007	0000040000	ANTELOPE VALLEY WATERMASTER	INVOICE PAYMENT	11.06	120	ANTELOPE VALLEY WATER COMPANY	JAV	Purchased Water
704000	2018	5	5,1218862	0000040000	ANTELOPE VALLEY WATERMASTER	INVOICE PAYMENT	1,731.30	120	ANTELOPE VALLEY WATER COMPANY	JAV	Purchased Water
704000	2020	5	5,1308718	0000040000	ANTELOPE VALLEY WATERMASTER	PRODUCTION REPORTING	1,722.30	120	Lancaster	JAV	Purchased Water
704000	2021	5	5,1511707	0000040000	ANTELOPE VALLEY WATERMASTER	Watermaster Admin Assessments	1,581.15	120	Lancaster	JAV	Purchased Water
704000	2021	6	6,1601183	0000040000	ANTELOPE VALLEY WATERMASTER	ANNUAL PRODUCTION REPORT	147.30	120	Lancaster	JAV	Purchased Water

Attachment 1-6: Cal Water Response to Cal Advocates DR LCN-015, #3.a.iv.i.1

iv. Dominguez District

i. 2018 ($47,109)

1. Please indicate how much of the listed expenses are related to a payment to the Water Replenishment District of Southern California for the Central Basin Watermaster and West Basin Watermaster. **Response: Below is the list of payments to the Water Replenishment District.** Partial Response #2 Update: These expenses are part of the purchased water forecast and should be removed from the Source of Supply SOE key.

Attachment 1-7: Cal Water Response to Cal Advocates DR LCN-003, #5.f

f. Please explain $1,515 in recorded Source of Supply expenses in Kern River Valley District in 2017.

Response: The full amount is for Source of Supply related items charged to account 70200 from an employee's expense report.

Attachment 1-8: Cal Water Response to Cal Advocates DR LCN-015, #3.a.vi.i.1

vi. Livermore District

i. 2018 ($160,137)

1. Please indicate which of the listed expenses are related to the Potable Reuse Feasibility Study performed in Livermore District.
Response: The following charges relate to the Potable Reuse Feasibility Study with Zone 7 in 2018.

Attachment 1-9: Cal Water Response to Cal Advocates DR LCN-015, #3.a.vi.i.4

4. How many times has Cal Water performed a Potable Reuse Feasibility Study in Livermore District in the past 10 years? Please provide supporting documentation.
   Response: This was the only time this type of study was attempted by Cal Water.

Attachment 1-10: Cal Water Response to Cal Advocates DR LCN-003, #5.k.i

i. Please explain the 367% increase in recorded Source of Supply expenses in Customer Support Services from 2019 to 2020 ($23,770 to $111,104).

Response: The recorded amounts for 2017 and 2018 are for services provided by M.Cubed. 2018 also includes $9,000 for consulting services associated with assessing value of Individual Supply Guarantees from EKI Environment & Water, and $7,000 for reviews of SWRCB Water Quality Control Plans by Provost & Pritchard.

Attachment 1-11: Cal Water Response to Cal Advocates DR LCN-019 #1.b.i

b. Customer Support Services

i. In the past 10 years (2011-2021), how often has Cal Water required consulting services associated with assessing the value of supply guarantees, such as Individual Supply Guarantees from EKI Environment & Water? Please provide supporting documentation.

Response: Individual supply guarantees are extremely rare, so this may be Cal Water's first such study regarding the value of such guarantees. This work compared the level of service (i.e., reliability level) afforded by the SFPUC's ISG commitment with the level of service commitments of Cal Water's other wholesale water providers in the area.

Attachment 1-12: Cal Water Response to Cal Advocates DR LCN-004, Attachment B

ATTACHMENT B

Serna, Abraham (Michael)

From: Christiana Daisy <ChristianaD@westbasin.org>
Sent: Friday, February 3, 2017 6:00 AM
To: Bonaparte,Patricia L (pbonaparte@mwdh2o.com); Spradling,Cash
Cc: Serna, Abraham (Michael); Collazo, John; Sorensen, Ronald
Subject: FW: Preliminary Design for new service connection WB-41

This is an EXTERNAL EMAIL. Stop and think before clicking a link or opening attachments.
Pat,

Can you please provide an update?

Thank you,

Christiana Daisy
Operations Manager
West Basin MWD
17140 South Avalon Blvd. Suite 210
Carson, CA 90746-1296
(310) 660-6233 (office)
(310) 292-6961
christianad@westbasin.org
www.westbasin.org

From: Serna, Abraham (Michael) [mailto:Aserna@calwater.com]
Sent: Thursday, February 02, 2017 3:10 PM
To: Christiana Daisy
Cc: Collazo, John; Sorensen, Ronald
Subject: Preliminary Design for new service connection WB-41

Christiana,

Just wanted to check in and see if you heard anything from Pat regarding the MWD preliminary design. Last time we talked Pat mentioned she was working with the survey crews to pothole and confirm the existing features. If there's a large back log for that department Cal Water would be willing to hire an outside surveyor (with MWD's approval) to perform the potholing as needed.

Have a good evening.

ATTACHMENT B - CONT.

Serna, Abraham (Michael)

From: Christiana Daisy <ChristianaD@westbasin.org>
Sent: Monday, July 10, 2017 12:11 PM
To: Bonaparte,Patricia L (pbonaparte@mwdh2o.com)
Cc: Serna, Abraham (Michael)
Subject: FW: 2nd Lower Feed Connection

This is an EXTERNAL EMAIL. Stop and think before clicking a link or opening attachments.
Hi Pat,

Can you respond to this e-mail?

Thanks.

From: Serna, Abraham (Michael) [mailto:Aserna@calwater.com]
Sent: Monday, July 10, 2017 9:21 AM
To: Christiana Daisy
Subject: RE: 2nd Lower Feed Connection

Good morning Christiana,

Just checking in to see if you have heard anything from Pat. I know last week was a short week, but can you check to see if the surveyors were able to get the permit?

Have a good Monday,

Mike

From: Christiana Daisy [mailto:ChristianaD@westbasin.org]
Sent: Monday, June 12, 2017 9:17 AM
To: Serna, Abraham (Michael) <Aserna@calwater.com>
Subject: FW: 2nd Lower Feed Connection

This is an EXTERNAL EMAIL. Stop and think before clicking a link or opening attachments.
Please see Pat's e-mail below.

From: Bonaparte,Patricia L [mailto:pbonaparte@mwdh2o.com]
Sent: Monday, June 12, 2017 9:08 AM
To: Christiana Daisy
Cc: Barrera,Annie Q; Spradling,Cash
Subject: RE: 2nd Lower Feed Connection

Hi Christiana,
We are still having problems with CalTrans and our contractor re the potholing permits. The last update we had was last week: CalTrans has the paperwork needed for the permit, they said they would try to get the permits by June 26th.

ATTACHMENT B - CONT.

We'll keep you posted.

Thanks,
Pat

From: Christiana Daisy [mailto:ChristianaD@westbasin.org]
Sent: Monday, June 12, 2017 7:35 AM
To: Bonaparte,Patricia L
Subject: FW: 2nd Lower Feed Connection

Any update Pat?

From: Serna, Abraham (Michael) [mailto:Aserna@calwater.com]
Sent: Monday, June 12, 2017 7:31 AM
To: Christiana Daisy
Subject: 2nd Lower Feed Connection

Good morning Christiana,

Could you please check in with Pat and see where we are on the preliminary design? The last meeting we had their surveyor, John West mentioned they were just about ready to receive the Cal Trans permit to perform the pot holing.

Thank you and have a nice Monday,

Michael Serna
P-2 Associate Engineer
CALIFORNIA WATER SERVICE
310-257-1453

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Attachment 1-13: Cal Water's Response to Cal Advocates DR LCN-004, #1.a

a. In addition to timelines included in Attachments 1-5 of Attachment H, did Cal Water request a schedule, including start and end dates, from MWD for the WB-41 connection and/or the combined relining project at any time between June 2016 and when Cal Water canceled the WB-41 connection project? If so, please provide supporting documentation, including MWD's response(s).

RESPONSE: Cal Water never received an official MS Project schedule from MWD. Dates were provided as requested. From the initial meeting, Cal Water's intention was to perform design and permitting in one year and construction the next, see Attachment A. The project was moving progressively but slowly. See Attachment B [showing?] the continual inquiries regarding preliminary design 30%. In June 2019, MWD presented CWS with a presentation regarding Reach 3 of the PCCP Rehabilitation Program. The proposed WB-41 connection is located in Reach 3. The dates provided in the presentation indicate construction of the relining project was to begin in Q2 2020 and end in Q3 2021. See Attachment C.

Attachment 1-14: Cal Water Response to Cal Advocates DR LCN-004, Attachment D

ATTACHMENT D

Serna, Abraham (Michael)

From: Christiana Daisy <ChristianaD@westbasin.org>
Sent: Tuesday, June 12, 2018 1:28 PM
To: Serna, Abraham (Michael)
Subject: FW: April 18, 2018 Meeting Action Items - service connection WB-41
Attachments: April 18, 2018 Meeting Action Items - service connection WB-41

This is an EXTERNAL EMAIL. Stop and think before clicking a link or opening attachments.
FYI.

From: Ceballos,Laura [mailto:LCeballos@mwdh2o.com]
Sent: Monday, June 11, 2018 5:14 PM
To: Christiana Daisy
Cc: Bonaparte,Patricia L; Escalante,Sergio
Subject: RE: April 18, 2018 Meeting Action Items - service connection WB-41

Hi Christiana,
We were able to contact a person at LA County Flood Control, we will go ahead and proceed with the project, but will let you know if we need your assistance with coordinating with them. Also, attached are our responses to Cal Water's questions.

Thank you,
Laura

From: Serna, Abraham (Michael) [mailto:Aserna@calwater.com]
Sent: Monday, June 11, 2018 1:27 PM
To: 'Christiana Daisy'; Bonaparte,Patricia L; Ceballos,Laura; Escalante,Sergio
Subject: RE: WB-41 Status Report - Costs for July 2015 through February 2018

Hi Pat and Laura,

Just checking to see if we had any updates on the project. Any progress to my original set of questions?

Thanks,

Mike

From: Christiana Daisy [mailto:ChristianaD@westbasin.org]
Sent: Tuesday, May 01, 2018 7:33 AM
To: Bonaparte,Patricia L (pbonaparte@mwdh2o.com) <pbonaparte@mwdh2o.com>; Ceballos,Laura (LCeballos@mwdh2o.com) <LCeballos@mwdh2o.com>; Escalante,Sergio (sescalante@mwdh2o.com) <sescalante@mwdh2o.com>
Cc: Serna, Abraham (Michael) <Aserna@calwater.com>
Subject: FW: WB-41 Status Report - Costs for July 2015 through February 2018

This is an EXTERNAL EMAIL. Stop and think before clicking a link or opening attachments.

ATTACHMENT D - CONT.

Pat and Laura,

Can you please provide responses to Mike's questions below?

Thanks,

Christiana Daisy, P.E.
Operations Manager
West Basin MWD
17140 S. Avalon Blvd. Ste 210
Carson, CA 90746-1296

310-660-6233 (office)
310-292-6961 (cell)
christianad@westbasin.org

From: Serna, Abraham (Michael) [mailto:Aserna@calwater.com]
Sent: Monday, April 30, 2018 1:38 PM
To: Christiana Daisy
Subject: RE: WB-41 Status Report - Costs for July 2015 through February 2018

Hi Christiana,

I'm just checking in on some of the action items from the meeting with MET on 4/18.

I didn't see any meeting minutes from MET, but I have a few action items that I would like to check on:

- Has meeting with LA County Flood Control /Sanitation District(?) been set up regarding relocation of storm drain?
- MET to provide a date with anticipated competition date of 60% drawings and updated schedule
- MET to provide Traffic Control contact information for MET projects
- MET to provide inspection date schedule. If possible to make a connection with the main half full or less than half full, Cal Water would like to set a "target date" when the connection should be made

Could you please forward to Pat and Laura accordingly.

Thanks,

Michael Serna
P-2 Associate Engineer
CALIFORNIA WATER SERVICE
310-257-1453

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ATTACHMENT D - CONT.

Serna, Abraham (Michael)

From: Ceballos,Laura <LCeballos@mwdh2o.com>
Sent: Thursday, May 24, 2018 3:46 PM
To: Christiana Daisy (ChristianaD@westbasin.org)
Cc: Bonaparte,Patricia L
Subject: April 18, 2018 Meeting Action Items - service connection WB-41

Hi Christiana,
Please see our responses to Cal Water's questions in red.

Please let me know if you have any questions.
Thank you,
Laura

From: Christiana Daisy [mailto:ChristianaD@westbasin.org]
Sent: Tuesday, May 01, 2018 7:45 AM
To: Bonaparte,Patricia L; Ceballos,Laura; Escalante,Sergio
Cc: Serna, Abraham (Aserna@calwater.com)
Subject: FW: WB-41 Status Report - Costs for July 2015 through February 2018

Pat and Laura,

Can you please provide responses to Mike's questions below?

Thanks,

Christiana Daisy, P.E.
Operations Manager
West Basin MWD
17140 S. Avalon Blvd. Ste 210
Carson, CA 90746-1296

310-660-6233 (office)
310-292-6961 (cell)
christianad@westbasin.org

From: Serna, Abraham (Michael) [mailto:Aserna@calwater.com]
Sent: Monday, April 30, 2018 1:38 PM
To: Christiana Daisy
Subject: RE: WB-41 Status Report - Costs for July 2015 through February 2018

Hi Christiana,

I'm just checking in on some of the action items from the meeting with MET on 4/18.

ATTACHMENT D - CONT.

I didn't see any meeting minutes from MET, but I have a few action items that I would like to check on:

- Has meeting with LA County Flood Control /Sanitation District(?) been set up regarding relocation of storm drain? To clarify, the issue is with the catch basin—which belongs to LA County Public Works/LA County Flood Control. The catch basin is directly over our manhole and requires relocation. We haven't had any luck with making contact with someone from LA County Flood Control. We have left a few voicemails Eduardo at 323-776-1610, but no returned calls. Do you or Cal Water have a contact person at LA County Flood Control? Can you please set up a meeting to discuss the project?
- MET to provide a date with anticipated competition date of 60% drawings and updated schedule. After resolving the issue with the catch basin, we will need two months to provide 100% final design drawings.
- MET to provide Traffic Control contact information for MET projects We have two contacts:
  Angela Santa Maria - Project Manager
  Traffic Management, Inc.
  Office: 951-750-1812
  Cell: 951-892-8224
  OR
  Luis
  Hi-Way Safety, Inc.
  1-800-228-1701
- MET to provide inspection date schedule. If possible to make a connection with the main half full or less than half full, Cal Water would like to set a "target date" when the connection should be made. Our proposed location for the connection is at a low point in the main/feeder. In order to dewater the main to get to this low point, half full or less than half full main is not feasible. We essentially require the same amount of dewatering as for a full shutdown. At this time we do not have a scheduled shutdown date.

Could you please forward to Pat and Laura accordingly.

Thanks,

Michael Serna
P-2 Associate Engineer
California Water Service
310-257-1453

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Attachment 1-15: Cal Water Response to Cal Advocates DR LCN-004, #1.b.i

b. According to the February 2019 meeting notes in Attachment 2, MWD provided 60% drawings in September/October of 2018, but Cal Water did not receive them. One of the action items was for MWD to resend 60% drawings.

   i. Between December 2017, when MWD provided 30% drawings, and the February 2019 meeting, did Cal Water request or inquire about the status of the 60% drawings? If so, please provide documentation, including MWD's responses. If not, please explain why not.

      RESPONSE: Please see Attachment D, an email thread in which Cal Water made multiple inquires regarding the status of the 60% drawings.

Attachment 1-16: Cal Water Response to Cal Advocates DR LCN-004, #1.d.i

d. With the absence of the WB-41 project, what mitigation measure(s) does Cal Water currently have in place to provide Hermosa Redondo District with the proper additional water supply?

   i. For how long is this mitigation measure sustainable?

   RESPONSE: With the current infrastructure in place, Cal Water would be able to provide water to the Southern HR district for approximately two days. As noted in the original approved justification for P!D 101730 a planned shutdown of the main HR feeder, WB-16, showed the vulnerability of the Southern HR District and resulted in the proposed WB-41 connection. With advance notice, CWS took measures (opened all interconnections and filled tanks to 100%) to provide supply to the Southern HR District. Even during low demand usage (winter months, when the test was performed), the supply only lasted two days. This mitigation method is short term solution as two days of supply is not adequate for extended emergencies. The long term solution to address this issue, is an interconnection between our Hermosa/Redondo and Dominguez systems. This interconnection will provide the same reliability as the proposed WB-41 connection (PID 101730).

Attachment 1-17: Cal Water Response to Cal Advocates DR EDW-001, #4

4. When did Cal Water first consider consolidating the Hermosa Redondo and Dominguez Districts?

Response: Historically, Cal Water has considered various rate consolidation possibilities when feasible but did not begin to strongly consider consolidating the HR and DOM Districts until 2018 when the American Water Infrastructure Act (AWIA) was passed. Under AWIA, Cal Water was required to develop and perform strict risk and resilience assessments (RRAs) and update the emergency response plans (ERPs) for all applicable districts, which included HR and DOM. The results of the RRAs identified vulnerabilities of both systems. The costs of the solutions to solve the system vulnerabilities are significant. With the systems being contiguous, Cal Water looked to the feasibility of addressing the vulnerabilities in a more cost efficient manner by hydraulically connecting the two systems.

Attachment 1-18: Cal Water Response to Cal Advocates DR LCN-015, #4.a.viii.i.1

viii. Customer Support Services

i. 2017 ($340,462)

1. Please explain the $115k increase in janitorial services in 2017.

Response: Janitorial services for 2017 was booked to account 75600 in error. The correct account should be 792700. Account 75600 is for field office expenses while account 792700 is for General Office Building expenses per the CPUC's Uniform System of Accounts. See payments to Customized Performance, Inc. Cal Water requests to re-class the erroneous charge to the correct account.

Sum of Sum Amount	Column Labels			
Row Labels	2016	2017	2018	2019
CUSTOMIZED PERFORMANCE, INC.	170,860.67	149,331.32	118,877.33	143,889.15
755000		149,331.32	15,727.55	
792700	170,860.67		103,149.78	143,889.15
Grand Total	170,860.67	149,331.32	118,877.33	143,889.15

Attachment 1-19: Cal Water Response to Cal Advocates DR Response LCN-011, #1.a

1. Please refer to the Workpaper CH05_OM_FDR_Purchased Water.

   a. For all Districts in which Cal Water purchases water, provide supporting documentation for all unit costs and all charges referenced in the District tabs. In each case, indicate the location of the rate or charge within the document.
   Response: Please see Attachment #1. Attachment #1 contains supporting documentation for the unit costs and charges referenced in the District tabs. Please refer to the Attachment #2 – P. Water Charges Excel spreadsheet which points to the relevant documents and page number for each rate/charge.

   Note: For Los Altos, Cal Water inadvertently used "$356.73" as the SJ Water Service Charge due to an input typo. This charge consists of the average of the invoiced service charge, PRVMA surcharge, and PUC Fees between January-February and September-October billing periods (see LOS tab for the calculation). The correct value should be "$335.19."

Attachment 1-20: Cal Water response to Cal Advocates DR LCN-010, #1.b

b. Of the provided list of Cal Water Districts subject to SGMA, indicate which Districts are subject to critical overdraft conditions and whose plans were adopted by January 31st, 2020.

Response: The following table lists the Districts subject to critical overdraft conditions and whose plans have been submitted at this time.

District	GSP	DWR Submittal	DWR Status
Bakersfield	Kern County Subbasin KRGSA GSP	2/19/2020	Review in progress
Salinas/ King City	180/400 Foot Aquifer Note: Salinas District Covers Additional Basins Whose Plans Are Still Being Developed.	1/31/2020	Approved on June 3, 2020
Stockton	Eastern San Joaquin	1/31/2020	Review in progress
Visalia	Mid-Kaweah GSA (Greater Kaweah GSA)	2/19/2020	Review in progress

Attachment 1-21: Cal Water response to Cal Advocates DR LCN-010, #1.c

c. Cal Water states that, "GSAs for high and medium priority basins must adopt a groundwater sustainability plan by January 31, 2022." Of the provided list of Cal Water Districts subject to SGMA and utilize high or medium priority basins, indicate which listed "Activities" have been adopted.

Response: At this time, only the Deep Water Study for Salinas has been agreed upon by the GSA Board to move forward. Other GSP projects will be started once the GSP are approved and the GSA Boards select the proposed activities/projects.

Attachment 2-1: Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY

OF

LAUREN CUNNINGHAM

Q.1 Please state your name and address.

A.1 Lauren Cunningham. 505 Van Ness Ave, San Francisco, California, 94201.

Q.2 By whom are you employed and what is your job title?

A.2 I am employed by the California Public Utilities Commission's Public Advocates Office as a Public Utilities Regulatory Analyst.

Q.3 Please describe your educational and professional experience.

A.3 I graduated from Sacramento State University with a Bachelor's degree in Economics and minors in Spanish and Mandarin Chinese. I have been in this position since July 2020.

Q.4 What is your area of responsibility in this proceeding?

A.4 My areas of responsibility in this proceeding include Operations and Maintenance Expenses, Supply Costs, and Special Request #10.

Q.5 Does that complete your prepared testimony?

A.5 Yes, that completes my prepared testimony.

Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie Houck
Administrative Law Judge	:	Charles Ferguson
Cal Advocates	:	
Witness(es)	:	Justin Menda

CAL ADVOCATES
CALIFORNIA PUBLIC UTILITIES COMMISSION

PUBLIC
REPORT ON PLANT FOR
BAYSHORE, BEAR GULCH, LOS ALTOS, REDWOOD VALLEY, SALINAS, & KING CITY DISTRICTS

CALIFORNIA WATER SERVICE COMPANY

TEST YEAR 2023 GENERAL RATE CASE

A.21-07-002

San Francisco, California
FEBRUARY 4, 2022

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MEMORANDUM

The Public Advocates Office at the California Public Utilities Commission ("Cal Advocates") examined application material, data request responses, and other information presented by California Water Service Company ("CWS") in Application ("A.") 21-07-002 to provide the California Public Utilities Commission ("Commission" or "CPUC") with recommendations in the interests of ratepayers for safe and reliable service at the lowest cost. Justin Menda prepared this testimony under the general supervision of Program Manager Richard Rauschmeier, and Program & Project Supervisor Syreeta Gibbs and Project Lead Brian Yu. His qualifications can be found in Attachment 1-1 of this report. Marybelle Ang and Caryn Mandelbaum are the legal counsel for Cal Advocates.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any particular issue connotes neither agreement nor disagreement of the underlying request, methodology, or policy position related to that issue.

CHAPTER 1 PLANT – BAYSHORE DISTRICT

I. INTRODUCTION

CWS requests approximately $30 million annually for 2022-2024 in the Bayshore District.[1] This amount is approximately 27% higher than CWS' average annual plant additions from 2015-2020 in the same district.[2] For 2022, approximately 30% of the proposed budget includes projects that were previously funded but are not yet in service.

II. SUMMARY OF RECOMMENDATIONS

The Commission should adopt the capital budget summary presented in Table 1-1 below. The Commission should also deny funding for Land Purchase for Recycled Water Storage Tank (PID 125813). Recommendations on plant additions also reflect the recommendations in its Common Plant Issues testimony regarding Meter Replacement Program, flowmeter replacement projects, control valve replacement, pump and motor replacement projects, control valve overhaul, sample sites, physical security upgrades, Main Replacement Program, cathodic protection (CP) upgrades, unscheduled replacement project contingency, construction management and special inspection, design and permitting only projects, projects proposed under Special Request 5, non-specific budget, and previously funded but not in service projects.[3] Attachment 1-2 presents Cal Advocates' project-specific adjustments.[4]

---

[1] The Bayshore District includes the Mid-Peninsula (San Mateo and San Carlos) and South San Francisco subareas.

[2] Attachment 1-3 (Bayshore District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

[3] Public Advocates Office Report on Common Plant Issues.

[4] Attachment 1-2 (Capital Budget Details – Bayshore District).

Table 1-1: Capital Budget Summary – Bayshore District

Bayshore	2022	2023	2024	Annual Average
Cal Advocates	$ 12,443,004	$ 15,066,209	$ 12,016,944	$ 13,175,385
CWS	$ 36,075,197	$ 28,508,563	$ 23,970,737	$ 29,518,166
CWS > Cal Advocates	$ 23,632,193	$ 13,442,355	$ 11,953,792	$ 16,342,780
Cal Advocates as % CWS	34%	53%	50%	45%

III. ANALYSIS

The Bayshore District recorded $23,224,769,[5] in annual average gross plant additions for 2015-2020.[6] Attachment 1-3 compares CWS' and Cal Advocates' estimates for the test years with the recorded annual average gross plant additions.[7]

A. Individual Proposed Projects

1. Land Purchase for Recycled Water Storage Tank (PID 125813)

The Commission should reject CWS' request of $1,155,687 in 2022 to purchase land for a future recycled water storage tank in the South San Francisco service area because: [8] 1) the project scope is not fully defined; 2) the final costs borne to ratepayers are unknown; and 3) a cost-benefit analysis has not been conducted.[9] The Commission should require CWS to complete its cost-benefit and cost-share analyses to determine whether the project is cost-effective. The Commission can then determine if the project

[5] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

[6] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

[7] Attachment 1-3 (Bayshore District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

[8] Bayshore District Capital Project Justification, p. 197.

[9] Bayshore District Capital Project Justification, p. 195. CWS plans to request the construction of the recycled water tank in the 2024 rate case.

is necessary, prudent, and used and useful before granting cost recovery. The Commission should reject the requested funds for this project.

The costs borne to CWS ratepayers for this project is currently unknown because San Francisco Public Utilities Commission (SFPUC), who will provide the recycled water, is still considering project alternatives and the involved parties are still negotiating cost share and title.[10] The project alternatives costs range from $72 million to $147 million.[11] Given the wide range, the cost borne to CWS ratepayers is uncertain.

CWS is currently conducting cost-benefit and cost share analyses, as part of the Bay Area Regional Water Supply Reliability Study.[12] The study's completion was postponed and now anticipated in 2022.[13] However, without SFPUC's decision on the project alternative, CWS' project cost information used in the analyses wouldn't be accurate.

CWS' land purchase project (PID 125813) cost estimate is uncertain. CWS requests $1 million for the land purchase,[14] but acknowledges that it is a high-level cost estimate and the site size for the recycled water storage tank has not yet been determined.[15] Although CWS has met with Holy Cross Cemetery to discuss potential tank sites on its property, CWS still needs to conduct pre-feasibility, geotechnical investigation, and preliminary piping infrastructure studies as well.[16]

---

[10] CWS Response to Public Advocates Office Data Request JMI-011 (Recycled Water – Bayshore), #1.b.ii.

[11] CWS Response to Public Advocates Office Data Request JMI-011 (Recycled Water – Bayshore), #1.b.ii.

[12] Bayshore District Capital Project Justification, p. 195. The Bay Area Regional Water Supply Reliability Study was approved in the 2018 rate case (A.18-07-001) as PID 116850.

[13] CWS Bay Area RO Report, Attachment A, p. 183.

[14] Bayshore District Capital Project Justification, p. 197.

[15] CWS Response to Public Advocates Office Data Request JMI-011 (Recycled Water – Bayshore), #1.f.ii.

[16] CWS Response to Public Advocates Office Data Request JMI-011 (Recycled Water – Bayshore), #1.f.ii.

There is no recycled water in the South San Francisco service area currently. It is important to know the total cost of the overall recycled water project and for how much CWS is responsible before determining the reasonableness of CWS's request. Given the considerable uncertainty surrounding the recycled water tank project, it seems premature to comment on its reasonableness. Nonetheless, it does not prevent CWS from pursuing this project without prior authorization from the Commission and seeking recovery in a future rate case. CWS has recently demonstrated its willingness to pursue and purchase land for other projects prior to receiving authority from the Commission. For example, CWS purchased a property in 2020 for their Los Altos District for a project being proposed in this rate case for a new operation center building (PID 124733).[17]

B. Common Plant Issue Projects

1. Meter Replacement Program – Mid-Peninsula (SMD 0900)

The Commission should adopt $312,187 in 2022 for the proposed Meter Replacement Program budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[18]

2. Flowmeter Replacement Projects (PID123794, PID123903, and PID 123906)

The Commission should reject funding for the proposed flowmeter replacement project in 2022, adopt $40,933 in 2023, and $82,873 in 2024. These amounts are consistent with recommendations in Cal Advocates' Common Plant Issues Report.[19]

---

[17] Los Altos District Capital Project Justification, p. 148.

[18] Public Advocates Office Report on Common Plant Issues.

[19] Public Advocates Office Report on Common Plant Issues.

3. Vehicle Replacement Program (PID 123284, PID 123292, and PID 123702)

The Commission should adopt $134,391 in 2022, $137,336 in 2023, and $94,130 in 2024 for the Vehicle Replacement Program, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[20]

4. Control Valve Replacement (PID 123297 and PID 123564)

The Commission should adopt $259,139 in 2022 and $311,864 in 2023 for the control valve replacement budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[21]

5. Pump and Motor Replacement Projects

Table 1-2 shows the pump and motor replacement projects CWS proposes in the Bayshore District. The Commission should adopt the project budgets shown in Table 1-2, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[22]

---

[20] Public Advocates Office Report on Common Plant Issues.

[21] Public Advocates Office Report on Common Plant Issues.

[22] Public Advocates Office Report on Common Plant Issues.

Table 1-2: Pump and Motor Replacement Projects – Bayshore District

Year	PID	Project Description	Direct Project Cost	
			CWS	Cal Advocates
2022	123830	SSF 006-D - Replace Pump & Motor	$ 49,639	$ 35,039
2022	124001	MPS 106-B - Replace Pump & Motor	$ 70,087	$ 63,715
2023	123852	SSF 006-F Replace Pump & Motor	$ 50,880	$ 35,915
2023	123854	SSF 013-A Replace Pump & Motor	$ 36,191	$ 25,547
2023	124073	MPS 107-C - Replace Pump & Motor	$ 90,496	$ 82,269
2023	124075	MPS 112-A Replace Pump & Motor	$ 50,948	$ 36,127
2024	123856	SSF 101-A Replace Pump & Motor	$ 49,961	$ 35,267
2024	123858	SSF 101-B Replace Pump & Motor	$ 49,961	$ 35,267
2024	124081	MPS 114-B Replace Pump & Motor	$ 38,774	$ 27,494
2024	124085	MPS 118-A Replace Pump & Motor	$ 78,048	$ 55,343
2024	124090	MPS 120-B Replace Pump & Motor	$ 38,996	$ 27,652

6. Control Valve Overhaul – Mid-Peninsula (PID 124160, PID 124170, and PID 124171) and South San Francisco (PID 124192, PID 124194, and PID 124199)

The Commission should adopt $79,077 in 2022, $81,054 in 2023, and $83,081 in 2024 for the control valve overhaul budget in Mid-Peninsula, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[23] The Commission should also adopt $25,533 in 2022, $26,172 in 2023, and $26,826 in 2024 for the control valve overhaul budget in South San Francisco, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[24]

7. Sample Sites – San Mateo, San Carlos, and South San Francisco

The Commission should adopt $57,825 in 2022 for sample site budget in San Mateo and $74,470 in 2022 for sample site budget in San Carlos. The Commission should also adopt $34,371 in 2022 and $29,358 in 2023 for sample site budget in South San Francisco. These amounts are consistent with recommendations in Cal Advocates' Common Plant Issues Report.[25]

8. Physical Security Upgrades – Mid- Peninsula (PID 125510) and South San Francisco (PID 125511, PID 125512, and PID 125513)

The Commission should adopt $71,223 in 2022 for the physical security upgrades projects in Mid-Peninsula, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[26] The Commission should also adopt $71,223 in 2022, $83,433 in 2023, and $81,631 in 2024 for the physical security upgrades projects in South San

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[23] Public Advocates Office Report on Common Plant Issues.

[24] Public Advocates Office Report on Common Plant Issues.

[25] Public Advocates Office Report on Common Plant Issues.

[26] Public Advocates Office Report on Common Plant Issues.

Francisco, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[27]

9. Main Replacement Program (PID 152MRP22, PID 152MRP23, and PID 152MRP24)

The Commission should adopt $3,926,505 in 2022, $4,024,668 in 2023, and $4,125,284 in 2024 for the Main Replacement Program, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[28]

10. CP Upgrades (PID 123606)

The Commission should adopt $11,063 in 2024 for the CP upgrades budget in South San Francisco, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[29]

11. Unscheduled Replacement – Mid-Peninsula (116UNSCH) and South San Francisco (118UNSCH)

The Commission should deny funding in 2022-2024 for the unscheduled replacement budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[30]

12. Project Contingency

The Commission should remove the project contingency from the proposed project costs, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[31]

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[27] Public Advocates Office Report on Common Plant Issues.

[28] Public Advocates Office Report on Common Plant Issues.

[29] Public Advocates Office Report on Common Plant Issues.

[30] Public Advocates Office Report on Common Plant Issues.

[31] Public Advocates Office Report on Common Plant Issues.

13. Construction Management and Special Inspection

The Commission should remove the construction management and special inspection project costs from the proposed project costs, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[32]

14. Design and Permitting Only Projects

Table 1-3 shows the projects CWS proposes in the Bayshore District where it only requests funding in this rate case for design and permitting.[33] No funding should be granted for these projects. CWS may pursue the design and permitting for these projects and present these projects in a future rate case with a more defined project scope and cost, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[34]

Table 1-3: Design and Permitting Only Projects – Bayshore District[35]

PID	Project Description	Year	Direct Project Cost in 2021 Rate Case
124424	Station SC-117 Rebuild	2023	$ 234,960
124427	Station SM-17 Rebuild	2023	$ 99,043

15. Projects Proposed Under Special Request 5

CWS proposes the Brackish Aquifer Conductivity Test project in the Bayshore District,[36] for which CWS requests preapproval but does not expect to it be in service during this rate case.[37] No project preapproval should be granted. CWS may pursue the

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[32] Public Advocates Office Report on Common Plant Issues.

[33] Common Plant Issues Capital Project Justification, pp. 160-161.

[34] Public Advocates Office Report on Common Plant Issues.

[35] Common Plant Issues Capital Project Justification, pp. 160-161.

[36] CWS allocates the project costs of the Brackish Aquifer Conductivity Test into three projects. The project cost is allocated to Mid-Peninsula (PID 126241), South San Francisco (PID 126230), and Bear Gulch (PID 126224).

[37] Common Plant Issues Capital Project Justification, p. 163. CWS requests preapproval for PID 124241 and PID 126230 under Special Request 5.

projects and propose to recover all prudent costs when the projects are in service, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[38]

C. Non-Specific Budget

The Commission should adopt $754,038 in 2022, $772,881 in 2023, and $792,180 in 2024 for the non-specific budget in Mid-Peninsula (116-NON-SP). The Commission should adopt $102,299 in 2022, $104,842 in 2023, and $107,450 in 2024 for the non-specific budget in South San Francisco (118-NON-SP). The Commission should adopt $24,254 in 2022, $24,841 in 2023, and $25,558 in 2024 for the non-specific budget in Bayshore (152-NON-SP). These amounts are consistent with recommendations in Cal Advocates' Common Plant Issues Report.[39]

D. Previously Funded but Not in Service Projects

The Commission should reduce CWS' proposed budget by $10,818,397 in 2022, $1,133,489 in 2023, and $921,000 in 2024 for projects that were previously funded but are not yet in service.[40] CWS may request to recover all prudent project costs once the projects are complete and providing a benefit to ratepayers. Refer to the recommendations in Cal Advocates' Common Plant Issues Report.[41] A list of these projects is shown in Attachment 1-5.[42]

IV. CONCLUSION

The Commission should reject CWS' funding requests for projects that are uncertain in project scope or cost: Land Purchase for Recycled Water Storage Tank (PID 125813). The Commission should reject CWS' request for design and permitting only

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[38] Public Advocates Office Report on Common Plant Issues.

[39] Public Advocates Office Report on Common Plant Issues.

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

[41] Public Advocates Office Report on Common Plant Issues.

[42] Attachment 1-5 (Previously Funded but Not Complete Projects – Bayshore District).

projects: San Carlos (SC) Station 117 Rebuild (PID 124424) and San Mateo (SM) Station 17 (PID 124427). The Commission should deny CWS' request for preapproval of a project that will be built in a future rate case: Brackish Aquifer Conductivity Test (PID 126241 and PID 126230). These projects ask for funding in this rate case but would not provide any service to the ratepayers until the project is constructed or completed in the future

The Commission should adopt Cal Advocates recommended budget including the Common Plant Issues recommendations.

CHAPTER 2 PLANT – BEAR GULCH DISTRICT

I. INTRODUCTION

CWS requests approximately $34 million annually for 2022-2024 in the Bear Gulch District. [43] This amount is approximately 83% higher than CWS' average annual plant additions from 2015-2020 in the same district.[44] For 2022 and 2023, approximately 57% and 26% of the proposed respective budgets includes projects that were previously funded but are not yet in service.

II. SUMMARY OF RECOMMENDATIONS

The Commission should adopt the capital budget summary presented in Table 2-1 below. The Commission should reject CWS' requests to recover the cost of the land purchase for the proposed Wildfire New Station Kings Mountain Road project (PID 124437) until Bear Gulch Wildfire New Station Kings Mountain Road project (PID 124399) is in service. At this time, funding should not be granted for PID 124399. Instead, CWS may pursue the design and permitting of PID 124399 and propose this project in the next rate case with a more defined project cost and scope. Recommendations on plant additions also reflect the recommendations in its Common Plant Issues testimony regarding flowmeter replacement projects, control valve replacement, Vehicle Replacement Program, pump and motor replacement projects, control valve overhaul, sample sites, physical security upgrades, Main Replacement Program, unscheduled replacement, contingency, construction management and special inspection, design and permitting only projects, projects proposed under Special Request

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[43] Direct project cost.

[44] Attachment 2-2 (Bear Gulch District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

5, non-specific budget, and previously funded but not in service projects.[45] Attachment 2-1 presents Cal Advocates' project-specific adjustments.[46]

Table 2-1: Capital Budget Summary – Bear Gulch District

Bear Gulch	2022	2023	2024	Annual Average
Cal Advocates	$ 10,153,125	$ 19,000,149	$ 17,227,861	$ 15,460,379
CWS	$ 38,576,862	$ 39,215,208	$ 25,700,032	$ 34,497,367
CWS > Cal Advocates	$ 28,423,737	$ 20,215,059	$ 8,472,170	$ 19,036,989
Cal Advocates as % CWS	26.32%	48.45%	67.03%	44.82%

III. ANALYSIS

The Bear Gulch District recorded $18,841,916,[47] in average annual gross plant additions, for 2015-2020.[48] Attachment 2-2 compares CWS' and Cal Advocates' estimates to recorded annual average gross plant additions.[49]

A. Common Plant Issue Projects

1. Flowmeter Replacement Projects (PID 123914)

The Commission should adopt $38,977 in 2022 for the proposed flowmeter replacement project budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[50]

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[45] Public Advocates Office Report on Common Plant Issues.

[46] Attachment 2-1 (Capital Budget Details – Bear Gulch District).

[47] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

[48] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

[49] Attachment 2-2 (Bear Gulch District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

[50] Public Advocates Office Report on Common Plant Issues.

2. Control Valve Replacement (PID 123574, PID 123578, and PID 123580)

The Commission should adopt $52,865 in 2022, $29,998 in 2023, and $32,226 in 2024 for the control valve replacement budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[51]

3. Vehicle Replacement Program (PID 123716 and PID 123720)

The Commission should adopt $44,797 in 2022 and $47,569 in 2024 for the Vehicle Replacement Program, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[52]

4. Pump and Motor Replacement Projects

Table 2-2 shows the pump and motor replacement projects CWS proposes in the Bear Gulch District. The Commission should adopt the project budgets shown in Table 2-2, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[53]

Table 2-2: Pump and Motor Replacement Projects – Bear Gulch District

Year	PID	Project Description	Direct Project Cost	
			CWS	Cal Advocates
2022	123814	BG 005-K Replace Pump & Motor	$ 140,442	$ 99,586
2024	123820	BG 019-B Replace Pump & Motor	$ 38,774	$ 27,494

[51] Public Advocates Office Report on Common Plant Issues.

[52] Public Advocates Office Report on Common Plant Issues.

[53] Public Advocates Office Report on Common Plant Issues.

5. Control Valve Overhaul (PID 124203, PID 124204, and PID 124205)

The Commission should adopt $70,041 in 2022, $71,792 in 2023, and $73,587 in 2024 for the control valve overhaul budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[54]

6. Sample Sites (PID 125130 and PID 125132)

The Commission should adopt $57,285 in 2022 and $52,845 in 2023for the sample sites budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[55]

7. Physical Security Upgrades (PID 125414, PID 125415, and PID 125419)

The Commission should adopt $71,223 in 2022, $83,433 in 2023, and $81,631 in 2024 for the physical security upgrades projects, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[56]

8. Main Replacement Program (PID 102MRP22, PID 102MRP23, and PID 102MRP24)

The Commission should adopt $7,729,420 in 2022 $7,922,655 in 2023, and $8,120,722 in 2024 for the Main Replacement Program, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[57]

9. Unscheduled Replacement (PID 102UNSCH)

The Commission should deny funding in 2022-2024 for the unscheduled replacement budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[58]

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[54] Public Advocates Office Report on Common Plant Issues.

[55] Public Advocates Office Report on Common Plant Issues.

[56] Public Advocates Office Report on Common Plant Issues.

[57] Public Advocates Office Report on Common Plant Issues.

10. Project Contingency

The Commission should remove the project contingency from the proposed project costs, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[59]

11. Construction Management and Special Inspection

The Commission should remove the construction management and special inspection project costs from the proposed project costs, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[60]

12. Design and Permitting Only Projects

CWS proposes one project in the Bear Gulch District, specifically Bear Gulch Wildfire New Station Kings Mountain Road project (PID 124399) (Bear Gulch New Station) for design and permitting funding.[61] Funding should not be granted for this project. CWS may pursue the design and permitting of this project and present the project in the next rate case with a more defined project scope and cost, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[62]

CWS also requests funding in this rate case to purchase land for the Bear Gulch New Station (PID 124437).[63] However, the proposed Bear Gulch New Station project (PID124399), for which CWS requests funding only design and permitting in this rate case, would not be completed until the 2024 rate case, at the earliest.[64] This means that

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[58] Public Advocates Office Report on Common Plant Issues.

[59] Public Advocates Office Report on Common Plant Issues.

[60] Public Advocates Office Report on Common Plant Issues.

[61] Common Plant Issues Capital Project Justification, pp. 160-161.

[62] Public Advocates Office Report on Common Plant Issues.

[63] Bear Gulch District Capital Project Justification, p. 69. CWS requests $1,105,358 in 2023 for PID 124437.

[64] Common Plant Issues Capital Project Justification, p. 160.

the proposed land purchase would not provide a benefit to ratepayers at least until the next rate case cycle. Thus, CWS should not be allowed to recover costs from the PID 124437 until PID 124399 is placed into service and providing a benefit to ratepayers.

13. Projects Proposed Under Special Request 5

CWS proposes the Brackish Aquifer Conductivity Test in the Bear Gulch District,[65] and requests preapproval for a project it does not expect to be in service during this rate case.[66] Preapproval should not be granted for this project. CWS may pursue the project and propose to recover all prudent costs when the project is in service, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[67]

B. Non-Specific Budget

The Commission should adopt $676,320 in 2022, $693,206 in 2023, and $710,615 in 2024 for the non-specific budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[68]

C. Previously Funded but not in Service Projects

The Commission should reduce CWS' proposed budget by $22,033,971 in 2022, $10,269,729 in 2023, and $40,650 in 2024 for projects that were previously funded but are not yet in service.[69] CWS may request to recover the prudent project costs once the projects are complete and providing a benefit to ratepayers. Refer to the

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[65] CWS allocates the project costs of the Brackish Aquifer Conductivity Test into three projects. The project cost is allocated to Mid-Peninsula (PID 126241), South San Francisco (PID 126230), and Bear Gulch (PID 126224).

[66] Common Plant Issues Capital Project Justification, p. 163. CWS requests preapproval for PID 126224 under Special Request 5.

[67] Public Advocates Office Report on Common Plant Issues.

[68] Public Advocates Office Report on Common Plant Issues.

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

recommendations in Cal Advocates' Common Plant Issues Report.[70] A list of these projects is shown in Attachment 2-3.[71]

IV. CONCLUSION

The Commission should reject CWS' funding requests for projects that are uncertain in project scope or cost: land purchase for the proposed Bear Gulch New Station (PID 124437). The Commission should reject CWS' request for design and permitting only project: Bear Gulch New Station (PID 124399). The Commission should deny CWS' request for preapproval of a project that will be built in a future rate case: Brackish Aquifer Conductivity Test (PID 126224). These projects ask for funding in this rate case but would not provide any service to the ratepayers until the project is constructed or completed in the future.

The Commission should adopt Cal Advocates recommended budget including the Common Plant Issues recommendations.

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[70] Public Advocates Office Report on Common Plant Issues.

[71] Attachment 2-3 (Previously Funded but Not Complete Projects – Bear Gulch District).

CHAPTER 3 PLANT – LOS ALTOS DISTRICT

I. INTRODUCTION

CWS requests approximately $27 million annually, [72] for 2022-2024 in the Los Altos District. This amount is approximately 145% higher than CWS' average annual plant additions from 2015-2020 in the same district.[73] For 2022 and 2024 respectively, approximately 24% and 14% of the proposed budget includes projects that were previously funded but are not yet in service.

II. SUMMARY OF RECOMMENDATIONS

The Commission should adopt the capital budget summary presented in Table 3-1 below. The Commission should adjust CWS' requests for individual proposed projects in the Los Altos District, as follows:

- The Commission should reject the Los Altos (LAS) 42 Tank Mixing and Dosing project (PID 125120) because it would not be operational in this rate case cycle.
- The Commission should reject the redwood tank replacement projects (PID 124598, PID 124619, PID 124621, and PID 125008) because there is sufficient storage in the **<<BEGIN CONFIDENTIAL>>** [redacted] **<<END CONFIDENTIAL>>** Pressure Zone based on the **<<BEGIN CONFIDENTIAL>>** [redacted] **<<END CONFIDENTIAL>>** demand.
- No project preapproval should be granted for the new well in Zone 375 (PID 124239). CWS may pursue the project and propose to recover all prudent costs when the projects are in service, including the proposed land for the proposed well (PID 124334).

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[72] Direct project cost.

[73] Attachment 3-2 (Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

Recommendations on plant additions also reflect the recommendations in its Common Plant Issues testimony regarding flowmeter replacement projects, pressure vessel project, physical security upgrades, CP upgrades, control valve replacement, control valve overhaul, pump and motor replacement, Vehicle Replacement Program, Main Replacement Program, sample sites, unscheduled replacement, project contingency, construction management and special inspection, design and permitting only projects, projects proposed under Special Request 5, non-specific budget, and previously funded but not in service projects. Attachment 3-1 presents Cal Advocates' project-specific adjustments.

Table 3-1: Capital Budget Summary – Los Altos District

Los Altos	2022	2023	2024	Annual Average
Cal Advocates	$ 6,503,678	$17,735,862	$22,909,470	$15,716,337
CWS	$ 18,775,282	$25,232,228	$37,045,494	$27,017,668
CWS > Cal Advocates	$ 12,271,604	$ 7,496,366	$14,136,024	$11,301,331
Cal Advocates as % CWS	34.64%	70.29%	61.84%	58.17%

III. ANALYSIS

The Los Altos District recorded $11,046,398,[74] in annual average gross plant additions, for 2015-2020.[75] Attachment 3-2 compares CWS' and Cal Advocates' proposed budgets to recorded average annual gross plant additions.[76]

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[74] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

[75] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

[76] Attachment 3-2 (Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

A. Specific Projects

1. Los Altos (LAS) 42 Tank Mixing and Dosing (PID 125120)

The Commission should not allow $625,108 in 2024 for the installation of the tank mixing and dosing system at Station 42 because it would not be operational in this rate case cycle.[77] CWS requests to install a tank mixing and chemical addition fixture to the tanks at Station 42 to address potential nitrification issues.[78]

Also, CWS requests funding for design and permitting for a booster station at Station 42 (PID 124342). A portion of the PID 124342 project scope is to install a panelboard and electrical system for Station 42.[79] According to CWS, the proposed tank mixing addition is reliant on the proposed electrical upgrades.[80] This means that the proposed tank mixing system would not be operational until the electrical upgrades under PID 124342 are completed. However, the construction of PID 124342 is not planned until the next rate case. It does not make sense for ratepayers to fund the tank mixing system at Station 42 if it would not be operational and providing a benefit to ratepayers until the next rate case. Therefore, the Commission should not allow CWS to recover the PID 125120 project costs in this rate case.

2. Redwood Tank Replacement Projects (PID 124598, PID 124619, PID 124621, and PID 125008)

The Commission should deny the redwood tank replacement projects shown in Table 3-2 below since there is sufficient storage in the **<<BEGIN**

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[77] Los Altos District Capital Project Justification, p. 213.

[78] Los Altos District Capital Project Justification, pp. 209-210.

[79] Los Altos District Capital Project Justification, p. 120.

[80] Los Altos District Capital Project Justification, p. 120.

CONFIDENTIAL>> [redacted] **<<END CONFIDENTIAL>>** Pressure Zone. CWS requests to replace redwood tanks due to their existing condition.

Table 3-2: Proposed Redwood Tank Replacement Projects – Los Altos District[81]

Project ID	Year	Project Description	Direct Project Cost
124598	2022	LAS St. 31 Redwood Tank Replace	$ 798,246
124619	2024	LAS St. 15 Redwood Tank Replace	$ 831,118
124621	2024	LAS St. 115 Redwood Tank Replace	$ 754,170
125008	2023	LAS St. 30 Redwood Tank Replace	$ 812,158

The four tanks mentioned in the table above have a combined storage volume of **<<BEGIN CONFIDENTIAL>>** [redacted] **<<END CONFIDENTIAL>>** million gallons (MG).[82] The tanks serve the **<<BEGIN CONFIDENTIAL>>** [redacted] **<<END CONFIDENTIAL>>** Pressure Zone.[83] According to CWS, the **<<BEGIN CONFIDENTIAL>>** [redacted] **<<END CONFIDENTIAL>>** based on **<<BEGIN CONFIDENTIAL>>** [redacted] **<<END CONFIDENTIAL>>** demand.[84] Even without the storage associated with the redwood tanks, the **<<BEGIN CONFIDENTIAL>>** [redacted] **<<END CONFIDENTIAL>>** would still have a surplus of **<<BEGIN CONFIDENTIAL>>** [redacted]

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[81] Los Altos District Capital Project Justification, pp. 131, 137, 142, and 206.

[82] CWS Water Supply and Facilities Master Plan – Los Altos (Los Altos Master Plan), pp. 3-9 to 3-10, Table 3-4 (Summary of Existing Storage Tanks). (CONFIDENTIAL)

[83] Los Altos Master Plan, Appendix F, Table F-5 (Summary of Existing Storage Tanks). (CONFIDENTIAL)

[84] Los Altos Master Plan, Appendix F, Table F-15 (2035 System Storage Capacity Evaluation). (CONFIDENTIAL)

[redacted] **<<END CONFIDENTIAL>>**. Given the existing substantial surplus, the proposed redwood tank projects are not needed, and the Commission should reject CWS' request.

B. Common Plant Issue Projects

1. Flowmeter Replacement Projects (PID 124066, PID 124069 and PID 124070)

The Commission should adopt $73,576 in 2022, $37,942 in 2023, and $39,597 in 2024 for flowmeter replacement project budgets. These amounts are consistent with recommendations in Cal Advocates' Common Plant Issues Report.[85]

2. Pressure Vessel Project

The Commission should deny CWS' request to replace the pressure vessel at Station 118 (PID 123528) in 2022, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[86]

3. Physical Security Upgrades (PID 125465, PID 125466, and PID 125469)

The Commission should adopt $71,223 in 2022, $83,433 in 2023, and $81,631 in 2024 for the physical security upgrades projects, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[87]

4. CP Upgrades (PID 123553)

The Commission should adopt $10,530 in 2022 for the CP upgrades budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[88]

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[85] Public Advocates Office Report on Common Plant Issues.

[86] Public Advocates Office Report on Common Plant Issues.

[87] Public Advocates Office Report on Common Plant Issues.

5. Control Valve Replacement (PID 123614, PID 123616, and PID 123617)

The Commission should adopt $132,639 in 2022, $168,456 in 2023, and $173,680 in 2024 for the control valve replacement budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[89]

6. Control Valve Overhaul (PID 124216, PID 124217, and PID 124218)

The Commission should adopt $43,607 in 2022, $44,697 in 2023, and $45,814 in 2024 for the control valve overhaul budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[90]

7. Pump and Motor Replacement Projects

Table 3-3 shows the pump and motor replacement projects CWS proposes in the Los Altos District. The Commission should adopt the project budgets shown in Table 3-3, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[91]

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[88] Public Advocates Office Report on Common Plant Issues.

[89] Public Advocates Office Report on Common Plant Issues.

[90] Public Advocates Office Report on Common Plant Issues.

[91] Public Advocates Office Report on Common Plant Issues.

Table 3-3: Pump and Motor Replacement Projects – Los Altos District

Year	PID	Project Description	Direct Project Cost	
			CWS	Cal Advocates
2022	123862	LAS 001-02 Replace Pump & Motor	$ 74,620	$ 52,673
2022	123865	LAS 001-E Replace Pump & Motor	$ 71,071	$ 50,168
2022	123867	LAS 009-D Replace Pump & Motor	$ 47,554	$ 33,568
2022	123870	LAS 009-E Replace Pump & Motor	$ 47,554	$ 33,568
2022	123984	LAS 039-01 - Replace Pump & Motor	$ 83,424	$ 75,497
2023	123917	LAS 011-D - Replace Pump & Motor	$ 48,743	$ 34,407
2023	123918	LAS 019-A - Replace Pump & Motor	$ 36,191	$ 25,547
2023	123923	LAS 023-D - Replace Pump & Motor	$ 72,848	$ 51,422
2023	123969	LAS 023-F - Replace Pump & Motor	$ 72,848	$ 51,422
2023	124003	LAS 033-A - Replace Pump & Motor	$ 48,743	$ 34,407
2024	123981	LAS 032-01 - Replace Pump & Motor	$ 87,177	$ 61,537
2024	124019	LAS 104-A - Replace Pump & Motor	$ 49,961	$ 35,267

8. Vehicle Replacement Program (PID 123754 and PID 123755)

The Commission should deny funding in 2023 and 2024 for the Vehicle Replacement Program, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[92]

9. Main Replacement Program (PID 111MRP22, PID 111MRP23, and PID 111MRP24)

The Commission should adopt $3,147,584 in 2022 $4,845,897 in 2023, and $4,967,045 in 2024 for the Main Replacement Program, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[93]

10. Sample Sites (PID 125133, PID 125134, and PID 125135)

The Commission should adopt $45,828 in 2022, $46,974 in 2023, and $48,148 in 2024 for the sample sites budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[94]

11. Unscheduled Replacement (PID 111UNSCH)

The Commission should deny funding in 2022-2024 for the unscheduled replacement budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[95]

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[92] Public Advocates Office Report on Common Plant Issues.

[93] Public Advocates Office Report on Common Plant Issues.

[94] Public Advocates Office Report on Common Plant Issues.

[95] Public Advocates Office Report on Common Plant Issues.

12. Project Contingency

The Commission should remove the project contingency from the proposed project costs, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[96]

13. Construction Management and Special Inspection

The Commission should remove the construction management and special inspection project costs from the proposed project costs, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[97]

14. Design and Permitting Only Projects

Table 3-4 shows the projects CWS proposes in the Los Altos District where it only requests funding in this rate case for design and permitting.[98] Funding should not be granted for these projects. CWS may pursue the design and permitting of these projects and present these projects in the next rate case with a more defined project scope and cost, consist with recommendations in Cal Advocates' Common Plant Issues Report.[99]

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[96] Public Advocates Office Report on Common Plant Issues.

[97] Public Advocates Office Report on Common Plant Issues.

[98] Common Plant Issues Capital Project Justification, pp. 160-161.

[99] Public Advocates Office Report on Common Plant Issues.

Table 3-4: Design and Permitting Only Projects – Los Altos District[100]

PID	Project Description	Year	Direct Project Cost in 2021 Rate Case
123896	LAS 34 Storage Tank	2024	$ 209,641
123913	LAS Station 117 Rebuild	2024	$ 230,462
124342	LAS Station 042 Wildfire Booster Pumps	2024	$ 313,836

15. Projects Proposed Under Special Request 5

CWS proposes one project in the Los Altos District, specifically, LAS New Well for Zone 375 (PID 124239) where CWS requests preapproval for a project it does not expect to be in service during this rate case.[101] Project preapproval should not be granted for this project. CWS may pursue the project and propose to recover all prudent costs when the project is in service, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[102]

CWS also requests funding in this rate case to purchase land for the new well in Zone 375 (PID 124334).[103] However, the proposed well would not be completed until the next rate case, at the earliest.[104] This means that the proposed land purchase would not provide a benefit to ratepayers until the next rate case cycle assuming that 1) CWS completes the land purchase and 2) the new well is completed according to CWS' planned schedule. Thus, the Commission should not allow CWS to recover costs from the PID 124334 until PID 124239 is placed into service and providing a benefit to ratepayers.

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[100] Common Plant Issues Capital Project Justification, pp. 160-161.

[101] Common Plant Issues Capital Project Justification, p. 163. CWS requests preapproval for PID 124334 under Special Request 5.

[102] Public Advocates Office Report on Common Plant Issues.

[103] Los Altos District Capital Project Justification, p. 113. CWS requests $2,166,284 in 2022 for PID 124334.

[104] Common Plant Issues Capital Project Justification, p. 162.

C. Non-Specific Budget

The Commission should adopt $1,071,823 in 2022, $1,098,620 in 2023, and $1,098,620 in 2024 for the non-specific budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[105]

D. Previously Funded but not in Service Projects

The Commission should reduce CWS' proposed budget by $4,437,464 in 2022, $289,902 in 2023, and $4,489,678 in 2024 for projects that were previously funded but are not yet in service and therefore, not providing benefit to customers.[106] CWS may request to recover prudent project costs once the projects are complete and providing a benefit to ratepayers. Refer to the recommendations in Cal Advocates' Common Plant Issues Report.[107] A list of these projects is shown in Attachment 3-3.[108]

E. Additional Adjustments – To Recorded Plant Balances

1. LAS Customer Building Property (PID 121371)

The Commission should adjust the project year for the land CWS purchased as part of the new proposed operations center (PID 124733) from 2023 to 2024, [109] because CWS does not expect PID 124733 to be in service until 2024.[110] CWS purchased a land site for its proposed operations center (PID

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[105] Public Advocates Office Report on Common Plant Issues.

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

[107] Public Advocates Office Report on Common Plant Issues.

[108] Attachment 3-3 (Previously Funded but Not Complete Projects – Los Altos District).

[109] CWS RO model file "CH07_RB_FDR_Proposed Capital Budget," tab "IN_2018 GRC CO."

[110] Los Altos Capital Project Justification, p. 152. CWS Report on the Results of Operations, Los Altos District, Attachment E, p.1 shows that PID 121371 was purchased with non-specific funding.

124733) in 2020.[111] CWS' workpaper shows that CWS proposes to include the purchased cost of the land in rates in 2023.[112] However, CWS expects PID 124733 to be completed in 2024. CWS should not be able to include the cost of the land purchase (PID 121371) in rates until the construction of the new operations center (PID 124733) is complete and providing a benefit to ratepayers.

IV. CONCLUSION

The Commission should deny funding for the redwood tank replacement project because the existing system has enough storage capacity even without the redwood tanks. The Commission should reject CWS' funding requests for projects that are uncertain in project scope, cost, or completion date: LAS 42 Tank Mixing and Dosing project (PID 125120). The Commission should reject CWS' request for design and permitting only project: LAS Station 34 Storage Tank (PID 123896), LAS Station 117 (PID 123913), and LAS Station 42 Wildfire Booster Pumps (PID 124342). The Commission should deny CWS' request for preapproval of a project that will be built in a future rate case: new well in Zone 375 (PID 124239) including a land purchase for the new well in Zone 375 (PID 124334). These projects ask for funding in this rate case but would not provide any service to the ratepayers until the project is constructed or completed in the future.

The Commission should adopt Cal Advocates recommended budget including the Common Plant Issues recommendations.

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[111] Los Altos Capital Project Justification, p. 148.

[112] CWS RO model file "CH07_RB_FDR_Proposed Capital Budget," tab "IN_2018 GRC CO." CWS records a total $4,467,172.94 in its workpaper.

CHAPTER 4 PLANT – REDWOOD VALLEY DISTRICT

I. INTRODUCTION

In the Redwood Valley (General), Unified,[113] Coast Springs, and Lucerne service areas, respectively CWS requests approximately $933,597, $354,331, $518,298, and $989,220 annually for 2022-2024. [114] This amount is approximately 1199%, 62%, 481%, and 384% of CWS' average annual plant additions from 2015-2020 in the aforementioned service areas.[115] Additionally in 2022, approximately 91% of the proposed budget in Unified, 66% of the proposed budget in Coast Springs, and 94% of the proposed budget in Lucerne subareas includes projects that were previously funded but are not yet in service.

II. SUMMARY OF RECOMMENDATIONS

The Commission should adopt the capital budget summary presented in Table 4-1to Table 4-4 below. The Commission should adjust CWS' requests for individual proposed projects in the Redwood Valley District, as follows:

- The Commission should reduce the direct project cost for the Station Lucerne (LUC) 1 Pier Safety Improvements project (PID 125647) from $491,508 to $352,354 in 2023 to remove the project contingency in the Jacob's cost estimate, the project contingency and construction management and special inspection costs in the cost estimate.
- The Commission should reduce the direct project cost for the LUC Field Yard Land Acquisition (PID 125118) from $125,375 to $108,549 in 2023

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[113] The Unified subarea includes the following systems: Armstrong Valley, Noel Heights, Hawkins, and Rancho del Paradiso.

[114] Direct project cost.

[115] Attachment 4-2 (Redwood Valley District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

due to removing the location factor and project contingency from the project cost estimate.

- The Commission should not allow funding for the design and permitting of a new well for Coast Springs (PID 123714) in this rate case, and it should be handled like the other projects where CWS only requests funding for design and permitting. CWS may pursue the design and permitting for the project and propose the project in the next rate case with a more defined project scope and cost.

Recommendations on plant additions also reflect the recommendations in its Common Plant Issues testimony regarding Main Replacement Program, Vehicle Replacement Program, physical security upgrade, CP upgrades, unscheduled replacement, project contingency, construction management and special inspection, design and permitting only projects, non-specific, and previously funded but not in service projects. Attachment 4-1 presents Cal Advocates' project-specific adjustments.

Table 4-1: Capital Budget Summary – Redwood Valley District (General)

Redwood Valley	2022	2023	2024	Annual Average
Cal Advocates	$ 801,744	$ 547,564	$ 682,092	$ 677,133
CWS	$ 1,064,285	$ 846,551	$ 889,954	$ 933,597
CWS > Cal Advocates	$ 262,541	$ 298,987	$ 207,863	$ 256,464
Cal Advocates as % CWS	75.33%	64.68%	76.64%	72.53%

Table 4-2: Capital Budget Summary – Unified

Unified Area	2022	2023	2024	Annual Average
Cal Advocates	$ 142,446	$ 73,301	$ 293,992	$ 169,913
CWS	$ 601,521	$ 211,928	$ 249,542	$ 354,331
CWS > Cal Advocates	$ 459,075	$ 138,627	$ (44,450)	$ 184,417
Cal Advocates as % CWS	23.68%	34.59%	117.81%	47.95%

Table 4-3: Capital Budget Summary – Coast Springs

Coast Springs	2022	2023	2024	Annual Average
Cal Advocates	$ 177,512	$ 384,176	$ 259,302	$ 273,663
CWS	$ 577,319	$ 380,414	$ 597,161	$ 518,298
CWS > Cal Advocates	$ 399,807	$ (3,763)	$ 337,859	$ 244,634
Cal Advocates as % CWS	30.75%	100.99%	43.42%	52.80%

Table 4-4: Capital Budget Summary – Lucerne

Lucerne	2022	2023	2024	Annual Average
Cal Advocates	$ 65,735	$ 558,243	$ 140,431	$ 254,803
CWS	$ 1,964,876	$ 777,938	$ 224,847	$ 989,220
CWS > Cal Advocates	$ 1,899,141	$ 219,695	$ 84,416	$ 734,417
Cal Advocates as % CWS	3.35%	71.76%	62.46%	25.76%

III. ANALYSIS

The Redwood Valley District recorded $1,018,726,[116] in annual average gross plant additions, for 2015-2020.[117] Attachment 4-2 compares CWS' and Cal Advocates' estimates to recorded annual average gross plant additions.[118]

A. Individual Proposed Projects

1. Station Lucerne (LUC) 1 Pier Safety Improvements (PID 125647)

The Commission should reduce CWS' request from $491,508 to $352,354 in 2023 to remove the redundant project contingency, project contingency, and construction management and special inspection costs in the cost estimate. [119] CWS proposes to modify the existing pier at Station LUC 1 to address safety issues associated with the existing condition of the pier.[120]

CWS relied on Jacobs Engineering Group Inc. (Jacobs) to calculate the estimated cost of the "pier safety upgrades" line item in CWS' cost estimate.[121] Jacobs' estimate for the "pier safety upgrades" line item includes a project contingency of ten percent.[122] CWS in their cost estimate for PID 125647 already applies a project contingency of twenty percent to the overall cost of the

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[116] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

[117] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

[118] Attachment 4-2 (Redwood Valley District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

[119] Redwood Valley District Capital Project Justification, p. 118.

[120] Redwood Valley District Capital Project Justification, p. 112.

[121] Redwood Valley District Capital Project Justification Book, Section F (Background Reports), Jacobs Lucerne Water Treatment Plant (WTP) Wood Pier Improvements Report and Cost Estimate.

[122] Jacobs Lucerne WTP Wood Pier Improvements Report and Cost Estimate, Estimate Detail, p. 2.

project.[123] This means that CWS double counts contingency allowances in the "pier safety upgrades" line item. Therefore, the ten percent contingency in the Jacobs' cost estimate should be removed to remove the redundant project cost contingency in the "pier safety upgrades" line item.

The project contingency of twenty percent should also be removed, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[124]

The construction management and special inspection costs should also be removed, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[125] The adjusted project direct cost estimate for PID 125647 is shown in Attachment 4-3.[126]

After removing the construction management and special inspection costs, the project contingency from the Jacobs' estimate, and the overall project contingency, the Commission should only authorize $352,354 for PID 125647.

2. LUC Field Yard Land Acquisition (PID 125118)

The Commission should reduce CWS' request from $125,375 to $119,404 in 2023 to remove the location factor from the project cost estimate. CWS proposes to acquire land to park vehicles and store materials, vehicles, and temporarily store waste spoils.[127]

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[123] Redwood Valley District Capital Project Justification, p. 118.

[124] Public Advocates Office Report on Common Plant Issues.

[125] Public Advocates Office Report on Common Plant Issues.

[126] Attachment 4-3 (Direct Project Cost Comparison – PID 125647).

[127] Redwood Valley District Capital Project Justification, p. 91. The waste spoils are the soil and pipe excavated from pipeline replacement projects.

CWS uses the location factor in their capital project cost estimates to account for the differences in regional costs throughout California.[128] The "125'X 125'lot" line item in the cost estimate is based on property value from the Lucerne area. The cost of land already accounts for the local property values. Therefore, the location factor is not necessary. The location factor was thus removed from the PID 125118 direct project cost.

The project contingency of twenty percent should be excluded, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[129] The adjusted direct project cost estimate for PID 125118 is shown in Attachment 4-4 below.[130]

After removing the location factor and the project contingency, the Commission should only allow $108,549 for PID 125118.

B. Common Plant Issue Projects

1. Main Replacement Program (PID 146MRP22, PID 146MRP23, and PID 146MRP24)

The Commission should adopt $393,313 in 2022, $403,146 in 2023, and $413,224 in 2024 for the Main Replacement Program, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[131]

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[128] Common Plant Issues Capital Project Justification, p. 137.

[129] Public Advocates Office Report on Common Plant Issues.

[130] Attachment 4-4 (Direct Project Cost Comparison – PID 125118).

[131] Public Advocates Office Report on Common Plant Issues.

2. Vehicle Replacement Program (PID 123769 and PID 123770)

The Commission should adopt $54,528 in 2022 and deny funding in 2023 for the Vehicle Replacement Program, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[132]

3. Physical Security Upgrades

The Commission should adopt $71,223 in 2022 and $81,631 in 2024 for the physical security upgrades budget for Armstrong Valley. The Commission should adopt $71,223 in 2022 for the physical security upgrades budget for Hawkins. The Commission should adopt $71,223 in 2022, $83,433 in 2023, and $81,631 in 2024 for the physical security upgrades budget for Coast Springs. These recommendations are consistent with recommendations in Cal Advocates' Common Plant Issues Report.[133]

4. CP Upgrades (PID 123246 and PID 123220)

The Commission should adopt $5,479 in 2022 to upgrade the CP at Tank 1 in Station 8 for Coast Springs (PID 123246). The Commission should also adopt $4,988 in 2022 to upgrade the CP at Tank 1 in Station 3 for Lucerne (PID 123220). These recommendations are consistent with recommendations in Cal Advocates' Common Plant Issues Report.[134]

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[132] Public Advocates Office Report on Common Plant Issues.

[133] Public Advocates Office Report on Common Plant Issues.

[134] Public Advocates Office Report on Common Plant Issues.

5. Unscheduled Replacement (PID 146UNSCH and PID 147UNSCH))

The Commission should deny funding in 2022-2024 for the unscheduled replacement budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[135]

6. Project Contingency

The Commission should remove the project contingency from the proposed project costs, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[136]

7. Construction Management and Special Inspection

The Commission should remove the construction management and special inspection project costs from the proposed project costs, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[137]

8. Design and Permitting Only Projects

CWS proposes one project in the Redwood Valley District (Hawkins Station 1 Station Upgrade project (PID 123623)) where it requests funding in this rate case for design and permitting.[138] Funding should not be granted for this project. CWS may pursue the design and permitting of these projects and present these projects in the next rate case with a more defined project scope and cost, consist with recommendations in Cal Advocates' Common Plant Issues Report.[139]

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[135] Public Advocates Office Report on Common Plant Issues.

[136] Public Advocates Office Report on Common Plant Issues.

[137] Public Advocates Office Report on Common Plant Issues.

[138] Common Plant Issues Capital Project Justification, pp. 160-161.

[139] Public Advocates Office Report on Common Plant Issues.

CWS also requests another project in the Redwood Valley District where CWS requests funding for permitting and design in this rate case. CWS also proposes a new well in Coast Springs (PID 123714), but CWS only requests funding for design and permitting.[140] However, CWS does not include PID 123714 in the list of projects where CWS is only proposing funding for permitting and design in this rate case.[141] PID 123714 should also be handled like the other design and permitting only projects due to the uncertainty of the project scope and costs.[142]

CWS requests PID 123714 as the design and permitting phase for installing a new well in Coast Springs. CWS hired the consultant company Jacobs to evaluate alternative supply projects for Coast Springs.[143] Some of the project alternatives considered include acquiring the SGS Well, acquiring and drilling a new well near the SGS Well site, and acquiring and installing a well near the well owned by Lawson's Landing. The report conducted by Jacobs highlights some potential issues with the project alternatives that bring uncertainty to the project alternative's viability.

The SGS Well currently under review by the California Coastal Commission (CCC) for a potential mitigation order to the well's proximity to biologically sensitive areas may delay this project.[144] CWS states that the CCC's

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[140] Redwood Valley District Capital Project Justification, p. 50. CWS requests $336,613 in 2024 for PID 123714.

[141] Common Plant Issues Capital Project Justification, pp. 160-161.

[142] Public Advocates Office Report on Common Plant Issues.

[143] Redwood Valley District Capital Project Justification, Section F (Background Reports - Coast Springs Water Supply System – Alternative Water Supply Assessment).

[144] Redwood Valley District Capital Project Justification, Section F (Background Reports - Coast Springs Water Supply System – Alternative Water Supply Assessment), p. 5. The SGS well near the biologically sensitive habitat adjacent to Dillon Creek and the sand dunes.

review is unclear,[145] so it is difficult to determine the potential mitigation improvements. CWS also states the well may not become a viable option since the well's current owner has threatened to plug the well due to current litigation with the CCC.[146] Jacobs states that it would take up to approximately two years to acquire the land from the SGS Well owner.[147]

Jacobs states that Lawson's Landing might be a potential new well site.[148] Lawson's Landing present challenges, however. Jacobs states that it is unknown if pumping from a new well in Lawson's Landing could impact the production rate of the SGS well and CWS' well 4.[149] In addition, Lawson's Landing is in a sand dune environment and the well permitting process might present the same restrictions as the SGS well.[150]

Jacobs estimates the cost for shallow supply well ranges between $250,000 and $500,000 but will depend on the geologic conditions, piping and appurtenances, and drilling costs.[151] The cost estimate does not consider the costs due to potential mitigation improvements or the cost to purchase the well site.[152]

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[145] Redwood Valley District Capital Project Justification, Section F (Background Reports - Coast Springs Water Supply System – Alternative Water Supply Assessment), p. 5.

[146] Redwood Valley District Capital Project Justification, Section F (Background Reports - Coast Springs Water Supply System – Alternative Water Supply Assessment), p. 5.

[147] Redwood Valley District Capital Project Justification, Section F (Background Reports - Coast Springs Water Supply System – Alternative Water Supply Assessment), p. 7.

[148] Redwood Valley District Capital Project Justification, Section F (Background Reports - Coast Springs Water Supply System – Alternative Water Supply Assessment), pp. 7-8.

[149] Redwood Valley District Capital Project Justification, Section F (Background Reports - Coast Springs Water Supply System – Alternative Water Supply Assessment), p. 7.

[150] Redwood Valley District Capital Project Justification, Section F (Background Reports - Coast Springs Water Supply System – Alternative Water Supply Assessment), p. 7.

[151] Redwood Valley District Capital Project Justification, Section F (Background Reports - Coast Springs Water Supply System – Alternative Water Supply Assessment), p. 7.

[152] Redwood Valley District Capital Project Justification, Section F (Background Reports - Coast Springs Water Supply System – Alternative Water Supply Assessment), p. 7.

Due to the uncertainty in the project scope and cost, PID 123714 should be treated like the other design and permitting only projects, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[153] CWS may present this project in the next rate case when CWS has a better understanding on the project scope and cost.

C. Non-Specific Budget

The Commission should adopt $140,962 in 2022, $144,418 in 2023, and $148,004 in 2024 for the non-specific budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[154]

D. Previously Funded but not in Service Projects

The Commission should reduce CWS' proposed budget by $2,767,938 in 2022,[155] for projects that were previously funded in rates but not yet in service.[156] CWS may request to recover the prudent project costs once the projects are complete and providing a benefit to ratepayers. Refer to the recommendations in Cal Advocates' Common Plant Issues Report.[157] A list of these projects is shown in Attachment 4-5.[158]

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[153] Public Advocates Office Report on Common Plant Issues.

[154] Public Advocates Office Report on Common Plant Issues.

[155] $548,074 in 2022 for Unified, $125,669 in 2022 for Coast Springs, and $1,840,291 in 2022 for Lucerne.

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

[157] Public Advocates Office Report on Common Plant Issues.

[158] Attachment 4-5 (Previously Funded but Not Complete Projects – Redwood Valley District).

E. Additional Adjustments – To Recorded Plant Balances

1. Hawkins (HKN) 01 Add 4 100 Gallon Pressure Tanks (PID 116100)

The Commission should remove the recorded plant of $15,898 associated with PID 116100 from rates until the pressure tanks are installed, in service, and providing a benefit to ratepayers. PID 116100 was adopted in the 2018 rate case which was originally scheduled to be completed in 2019.[159] CWS states that PID 116100 was completed but is currently not in service.[160] CWS requests improvements at Station 1 in the Hawkins system (PID 123623), which includes installing the pressure tanks from PID 116100.[161] CWS states that the pressure tanks could not be installed due to environmental issues at Station 1.[162] CWS states that precast foundation slabs must be used and all mechanical and electrical installations outside must be above ground due to existing biological species that potentially inhabit near Station 1. PID 123623 is currently scheduled to be completed during the 2024 rate case cycle.[163] This means that the pressure tanks will not provide a benefit to ratepayers during this rate case. The cost of PID 116100 should thus be removed from rates until the pressure tanks are installed and placed into service.

IV. CONCLUSION

The Commission should reduce the Station LUC 1 Pier Safety Improvements (PID 125647) direct project cost from $491,508 to $352,354 to

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[159] CWS 2018 GRC D.20-12-007, Attachment 12.

[160] CWS Bay Area RO Report, Attachment A, p. 232.

[161] Redwood Valley District Project Justification, p. 37.

[162] Redwood Valley District Project Justification, p. 37.

[163] Redwood Valley District Project Justification, p. 38.

remove the redundant contingency in the Jacobs estimate, project contingency, and construction management and special inspection project costs. The Commission should also reduce the LUC Field Yard Land Acquisition (PID 125118) direct project cost from $125,375 to $108,549 to remove the location factor and project contingency. The Commission should remove the project contingency and construction management and special inspection costs from the proposed project costs.[164, 165]

The Commission should not allow funding for the Hawkins Station 1 Station Upgrade project (PID 123623) and a new well for Coast Springs (PID 123714) in this rate case.[166] CWS may pursue the design and permitting for these projects and propose these projects in the next rate case with a more defined project scope and cost. The Commission should also reduce CWS' proposed budget by $2,767,937 in 2022 for projects that were previously funded but are not yet in service.[167] CWS may request to recover the prudent project costs once the projects are in service and providing a benefit to ratepayers. The Commission should remove the recorded cost for the HKN 01 Add 4 100 Gallon Pressure Tanks project (PID 116100). PID 116100 should not be placed in rates until the pressure tanks are installed and in service.

The Commission should adopt Cal Advocates recommended budget including the Common Plant Issues recommendations.

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[164] Public Advocates Office Report on Common Plant Issues.

[165] Public Advocates Office Report on Common Plant Issues.

[166] Public Advocates Office Report on Common Plant Issues.

[167] Public Advocates Office Report on Common Plant Issues.

CHAPTER 5 PLANT – SALINAS DISTRICT

I. INTRODUCTION

CWS requests approximately $16 million annually for 2022-2024 in the Salinas District.[168] This amount is approximately 40% higher than CWS' plant additions from 2015-2020 in the same district. For 2022, approximately 39% of the proposed budget includes projects that were previously funded but are not yet in service.

II. SUMMARY OF RECOMMENDATIONS

The Commission should adopt the recommended capital budget summary presented in Table 5-1 below.

Table 5-1: Capital Budget Summary – Salinas District

Salinas	2022	2023	2024	Annual Average
Cal Advocates	$ 5,152,855	$ 6,480,783	$10,952,315	$ 7,528,651
CWS	$ 17,065,582	$11,696,234	$19,720,889	$16,160,902
CWS > Cal Advocates	$ 11,912,726	$ 5,215,451	$ 8,768,575	$ 8,632,251
Cal Advocates as % CWS	30.19%	55.41%	55.54%	46.59%

Recommendations on plant additions also reflect the recommendations in its Common Plant Issues testimony regarding Meter Replacement Program, pressure vessel projects, physical security, CP upgrades, control valve overhaul, sample site, Vehicle Replacement Program, control valve replacement, pump and motor replacement, unscheduled replacement, project contingency, construction management and special inspection, design and permitting only projects, projects proposed under Special Request

[168] The Salinas District consists of the following systems: main Salinas, Bolsa Knolls, Salinas Hills, Las Lomas, Oak Hills, Country Meadows, and Buena Vista.

5, non-specific budget, and previously funded, but not in service, projects.[169] Attachment 5-1 presents Cal Advocates' project-specific adjustments.[170]

III. ANALYSIS

The Salinas District recorded $11,545,128[171] in average gross plant additions for 2015-2020.[172] Attachment 5-2 compares CWS' and Cal Advocates' estimates against recorded annual average gross plant additions.[173]

A. Common Plant Issue Projects

1. Meter Replacement Program – Salinas (SLN 0900)

The Commission should adopt $205,971 in 2024 for the proposed Meter Replacement Program budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[174]

2. Pressure Vessel Projects

Table 5-2 shows the pressure vessel projects CWS proposes in the Salinas District. The Commission should adopt the project budgets shown in Table 5-2, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[175]

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[169] Public Advocates Office Report on Common Plant Issues.

[170] Attachment 5-1 (Capital Budget Details – Salinas District).

[171] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

[172] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

[173] Attachment 5-2 (Salinas City District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

[174] Public Advocates Office Report on Common Plant Issues.

[175] Public Advocates Office Report on Common Plant Issues.

Table 5-2: Pressure Vessel Projects – Salinas District

Year	PID	Project Description	Direct Project Cost	
			CWS	Cal Advocates
2022	124771	SLN 057-PT1 - Pressure Vessel Replacement	$ 287,318	$ -
2022	124775	SLN 033-PT1 Pressure Vessel Replacement	$ 326,867	$ -
2022	123681	SLN 036-PT1 - Pressure Vessel Rehab	$ 81,788	$ -
2023	123706	SLN 040-PT1 - Pressure Vessel Replacement	$ 301,372	$ 262,176
2023	123708	SLN 304-PT1 - Pressure Vessel Repalcement	$ 290,796	$ -
2023	123669	SLN 072-PT1 - Pressure Vessel Rehab	$ 83,833	$ -
2024	123707	SLN 303-PT1 - Pressure Vessel Replacement	$ 314,932	$ -
2024	124774	SLN 060-PT1 - Pressure Vessel Replacement	$ 314,932	$ 273,973

3. Physical Security Upgrades (PID 125491, PID 125493, and PID 125494)

The Commission should adopt $71,223 in 2022, $83,433 in 2023, and $81,631 in 2024 for the physical security upgrades projects, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[176]

4. CP Upgrades (PID 123295, PID 123299, and PID 123305)

The Commission should adopt $19,048 in 2022, $48,300 in 2023, and $49,014 in 2024 for the CP upgrades budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[177]

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[176] Public Advocates Office Report on Common Plant Issues.

[177] Public Advocates Office Report on Common Plant Issues.

5. Control Valve Overhaul (PID 123843, PID, and PID)

The Commission should adopt $45,123 in 2022, $18,599 in 2023, and $14,642 in 2024 for the control valve overhaul budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[178]

6. Sample Site – Salinas (PID 125157) and Salinas Hills (PID 125173)

The Commission should adopt $5,456 in 2022 for the sample site budget in Salinas, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[179] In addition, the Commission should adopt $5,456 in 2022 for the sample site budget in Salinas Hills, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[180]

7. Vehicle Replacement Program (PID 123773, PID 123774, and PID 123776)

The Commission should adopt $42,664 in 2022 and deny funding in 2023 and 2024 for the Vehicle Replacement Program, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[181]

8. Main Replacement Program (PID 114MRP22, PID 114MRP23, and PID 114MRP24)

The Commission should adopt $3,270,515 in 2022 $3,352,278 in 2023, and $3,436,085 in 2024 for the Main Replacement Program, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[182]

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[178] Public Advocates Office Report on Common Plant Issues.

[179] Public Advocates Office Report on Common Plant Issues.

[180] Public Advocates Office Report on Common Plant Issues.

[181] Public Advocates Office Report on Common Plant Issues.

[182] Public Advocates Office Report on Common Plant Issues.

9. Control Valve Replacement (PID 123837)

The Commission should adopt $11,249 in 2024 for the control valve replacement budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[183]

10. Pump and Motor Replacement Projects

Table 5-3 shows the pump and motor replacement projects CWS proposes in the Salinas District. The Commission should adopt the project budgets shown in Table 5-3, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[184]

Table 5-3: Pump and Motor Replacement Projects – Salinas District

Year	PID	Project Description	Direct Project Cost	
			CWS	Cal Advocates
2023	123678	SLN 058-A - Replace Pump & Motor	$ 35,649	$ 25,252
2024	123682	SLN 020-01 - Replace Pump & Motor	$ 87,251	$ 61,869

11. Unscheduled Replacement (PID 114UNSCH)

The Commission should deny funding in 2022-2024 for the unscheduled replacement budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[185]

12. Project Contingency

The Commission should remove the project contingency from the proposed project costs, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[186]

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[183] Public Advocates Office Report on Common Plant Issues.

[184] Public Advocates Office Report on Common Plant Issues.

[185] Public Advocates Office Report on Common Plant Issues.

13. Construction Management and Special Inspection

The Commission should remove the construction management and special inspection from the proposed project costs, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[187]

14. Design and Permitting Only Projects

Table 5-4 shows the projects CWS proposes in the Salinas District where it only requests funding in this rate case for design and permitting.[188] No funding should be granted for these projects. CWS may pursue the design and permitting of these projects and present these projects in the next rate case with a more defined project scope and cost, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[189]

Table 5-4: Design and Permitting Only Projects – Salinas District[190]

PID	Project Description	Year	Direct Project Cost in 2021 Rate Case
123811	SLN Las Lomas Intertie	2024	$ 88,195
123839	SLN 071 Station Rebuild	2024	$ 449,708
123881	Wildfire SLN 039: Arsenic Treatment	2024	$ 596,659
125060	SLN 78: New Well	2024	$ 1,164,284

15. Projects Proposed Under Special Request 5

CWS proposes one project in the Salinas District, specifically, the SLN 76 – New Well (PID 123887) where CWS requests preapproval for a project it does not expect to

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[186] Public Advocates Office Report on Common Plant Issues.

[187] Public Advocates Office Report on Common Plant Issues.

[188] Common Plant Issues Capital Project Justification, pp. 160-161.

[189] Public Advocates Office Report on Common Plant Issues.

[190] Common Plant Issues Capital Project Justification, pp. 160-161.

be in service during this rate case.[191] Preapproval should not be granted for these projects. CWS may pursue the projects and propose to recover all prudent costs when the projects are in service, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[192]

B. Non-Specifc Budget

The Commission should adopt $813,174 in 2022, $833,582 in 2023, and $854,511 in 2024 for the non-specific budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[193]

C. Previously Funded but Not in Service Projects

The Commission should reduce CWS' proposed budget by $6,734,866 in 2022 for projects that were previously funded but are not yet in service.[194] CWS may request to recover all prudent project costs once the projects are complete and providing a benefit to ratepayers. Refer to the recommendations in Cal Advocates' Common Plant Issues Report.[195] A list of these projects is shown in Attachment 5-3.[196]

IV. CONCLUSION

The Commission should deny funding proposed for the Salinas (SLN) Los Lomas Intertie (PID 123811), SLN 071 Station Rebuild (PID 123839), Wildfire SLN 039: Arsenic Treatment (PID 123881), and SLN 78: New Well (PID 125060) projects in this

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[191] Common Plant Issues Capital Project Justification, p. 163. CWS requests preapproval for PID 123887 under Special Request 5.

[192] Public Advocates Office Report on Common Plant Issues.

[193] Public Advocates Office Report on Common Plant Issues.

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

[195] Public Advocates Office Report on Common Plant Issues.

[196] Attachment 5-3 (Previously Funded but Not Complete Projects – Salinas District).

rate case. CWS may pursue the design and permitting of these projects and present these projects in the next rate case with a more defined project scope and cost.[197]

The Commission should not grant pre-approval for SLN 76 – New Well (PID 123887). CWS may pursue the project and propose to recover all prudent costs when the project is in service.[198] The Commission should reduce CWS' proposed budget by $6,734,866 in 2022 for projects that were previously funded but not yet in service.[199] CWS may request to recover all prudent project costs once the projects are in service and providing a benefit to ratepayers.

The Commission should adopt Cal Advocates recommended budget including the Common Plant Issues recommendations.

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[197] Public Advocates Office Report on Common Plant Issues.

[198] Public Advocates Office Report on Common Plant Issues.

[199] Public Advocates Office Report on Common Plant Issues.

CHAPTER 6 PLANT – KING CITY DISTRICT

I. INTRODUCTION

CWS requests approximately $2,568,016 annually for 2022-2024 in the King City District. [200] This amount is approximately 50% higher than CWS' plant additions from 2015-2020 in the same district.[201] For 2022, approximately 33% of the proposed budget includes projects that were previously funded but are not yet in service.

II. SUMMARY OF RECOMMENDATIONS

The Commission should adopt the recommended capital budget summary presented in Table 6-1 below.

Table 6-1: Capital Budget Summary – King City District

King City	2022	2023	2024	Annual Average
Cal Advocates	$ 1,299,282	$ 1,131,940	$ 1,388,240	$ 1,273,154
CWS	$ 3,818,543	$ 1,814,595	$ 2,070,911	$ 2,568,016
CWS > Cal Advocates	$ 2,519,261	$ 682,655	$ 682,671	$ 1,294,862
Cal Advocates as % CWS	34.03%	62.38%	67.04%	49.58%

Recommendations on plant additions also reflect the recommendations in its Common Plant Issues testimony regarding Meter Replacement Program, physical security, control valve replacement, SB 1398 service replacement, sample sites, Vehicle Replacement Program, Main Replacement Program, unscheduled replacement, project contingency, construction management and special inspection, non-specific budget, and previously funded, but not in service projects. Attachment 6-1 presents Cal Advocates' project-specific adjustments.

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[200] Direct project cost.

[201] Attachment 6-2 (King City District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

III. ANALYSIS

The King City District recorded $1,712,400[202] in annual average gross plant additions for 2015-2020.[203] Attachment 6-2 compares CWS' and Cal Advocates' estimates against recorded annual average gross plant additions.[204]

A. Common Plant Issue Projects

1. Meter Replacement Program – King City (KCD 0900)

The Commission should adopt $23,379 in 2023 and $23,963 in 2024 for the Meter Replacement Program budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[205]

2. Physical Security Upgrades (PID 125461, PID 125462, and PID 125463)

The Commission should adopt $71,223 in 2022, $83,433 in 2023, and $81,631 in 2024 for the physical security upgrades projects, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[206]

3. Control Valve Replacement (PID 123832 and PID 123835)

The Commission should adopt $21,266 in 2022 and $21,252 in 2023 for the control valve replacement budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[207]

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[202] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

[203] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

[204] Attachment 6-2 (King City District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

[205] Public Advocates Office Report on Common Plant Issues.

[206] Public Advocates Office Report on Common Plant Issues.

[207] Public Advocates Office Report on Common Plant Issues.

4. SB 1398 Service Replacement (PID 125004, PID 125005, and PID 125006)

The Commission should adopt $345,088 in 2022, $424,458 in 2023, and $474,114 in 2024 for the SB 1398 service replacement budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[208]

5. Sample Sites (PID 125140)

The Commission should adopt $5,456 in 2022 for the sample sites budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[209]

6. Vehicle Replacement Program (PID 123744)

The Commission should deny funding in 2022 for the Vehicle Replacement Program, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[210]

7. Main Replacement Program (PID 109MRP22, PID 109MRP23, and PID 109MRP24)

The Commission should adopt $402,537 in 2022, $412,600 in 2023, and $422,915 in 2024 for the Main Replacement Program, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[211]

8. Unscheduled Replacement (PID 109UNSCH)

The Commission should deny funding in 2022-2024 for the unscheduled replacement budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[212]

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[208] Public Advocates Office Report on Common Plant Issues.

[209] Public Advocates Office Report on Common Plant Issues.

[210] Public Advocates Office Report on Common Plant Issues.

[211] Public Advocates Office Report on Common Plant Issues.

[212] Public Advocates Office Report on Common Plant Issues.

9. Project Contingency

The Commission should remove the project contingency from the proposed project costs, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[213]

10. Construction Management and Special Inspection

The Commission should remove the construction management and special inspection project costs from the proposed project costs, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[214]

B. Non-Specifc Budget

The Commission should adopt $37,360 in 2022, $38,272 in 2023, and $39,381 in 2024 for the non-specific budget, consistent with recommendations in Cal Advocates' Common Plant Issues Report.[215]

C. Previously Funded but Not in Service Projects

The Commission should reduce CWS' proposed budget by $1,272,899 in 2022 for projects that were previously funded but are not yet in service.[216] CWS may request to recover all prudent project costs once the projects are complete and providing a benefit to ratepayers. Refer to the recommendations in Cal Advocates' Common Plant Issues Report.[217] A list of these projects is shown in Attachment 6-3.[218]

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[213] Public Advocates Office Report on Common Plant Issues.

[214] Public Advocates Office Report on Common Plant Issues.

[215] Public Advocates Office Report on Common Plant Issues.

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

[217] Public Advocates Office Report on Common Plant Issues.

[218] Attachment 6-3 (Previously Funded but Not Complete Projects – King City District).

IV. CONCLUSION

The Commission should adopt Cal Advocates recommended budget including the Common Plant Issues recommendations.

Attachment 1-1: Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY OF JUSTIN MENDA

Q.1 Please state your name and address.

A.1 My name is Justin Menda and my business address is 505 Van Ness Ave, San Francisco, California 94102.

Q.2 By whom are you employed and what is your job title?

A.2 I am a Utilities Engineer in the Water Branch of the Cal Advocates of California Public Utilities Commission.

Q.3 Please describe your educational and professional experience.

A.3 I received a Bachelor of Science Degree and Master of Science Degree in Civil Engineering from the University of California Irvine.

I have been employed by the Cal Advocates since June 2012. Since that time, I prepared testimony on capital investment in serval GRCs: California Water Service Company's 2012, 2015 and 2018 GRCs; California-American Water's 2013, 2016, and 2019 GRCs; San Jose Water Company's 2015 GRC; and Golden State Water Company's 2017 and 2020 GRC.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am responsible for the preparation of testimony regarding proposed plant projects in the Bay Area Region, Bear Gulch District, Los Altos District, and Salinas Valley Region. I am also responsible for the preparation of testimony regarding the following common plant issues: Meter Replacement Program, flowmeter replacement projects, tank painting projects, Special Request #5, and design and permitting only projects.

Q.5 Does that complete your prepared testimony?

A.5 Yes, it does.

Attachment 1-2: Capital Budget Details – Bayshore District

Att. Table 1-1: Capital Budget Details – Bayshore District[219]

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	00123283	MPS 112-T1 - Tank Retrofits	$ 6,257	$ 5,659	$ 598	90.44%
2022	00123284	BAY 2022 Vehicle Replacement Program	$ 197,107	$ 134,391	$ 62,716	68.18%
2022	00123297	MPS 2022 Control Valve Replacement	$ 831,690	$ 259,139	$ 572,551	31.16%
2022	00123408	MPS 033-T2 - Tank Retrofits	$ 34,396	$ 31,110	$ 3,286	90.45%
2022	00123426	SSF Tank Exterior Ladder Lifelines	$ 48,837	$ 44,173	$ 4,664	90.45%
2022	00123794	MPS 2022 Flowmeter Replacement	$ 142,943	$ -	$ 142,943	0.00%
2022	00123828	MPS 027-T1 - Tank Retrofits	$ 12,165	$ 11,003	$ 1,161.43	90.45%
2022	00123830	SSF 006-D - Replace Pump & Motor	$ 49,639	$ 35,039	$ 14,600	70.59%
2022	00124001	MPS 106-B - Replace Pump & Motor	$ 70,087	$ 63,715	$ 6,372	90.91%
2022	00124039	MPS 2022 Customer Meter Vault Lids	$ 30,337	$ 27,579	$ 2,758	90.91%
2022	00124045	SSF 2022 Customer Meter Vault Lids	$ 30,337	$ 27,579	$ 2,758	90.91%
2022	00124160	MPS 2022 Control Valve Overhaul	$ 124,264	$ 79,077	$ 45,187	63.64%
2022	00124192	SSF 2022 Control Valve Overhaul	$ 40,124	$ 25,533	$ 14,590	63.64%
2022	00124303	SSF 2022 Control Valve Replacement	$ 209,649	$ 66,707	$ 142,943	31.82%
2022	00124313	SC Wildfire New Main 460 Zone	$ 489,060	$ 444,600	$ 44,460	90.91%
2022	00124349	MPS Sta 106 Slope Stabilization	$ 543,319	$ 452,766	$ 90,553	83.33%

[219] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	00124369	SC Wildfire New Main 850 Zone	$ 1,827,318	$ 1,661,201	$ 166,117	90.91%
2022	00124383	MPS El Camino Real Main Connection	$ 267,618	$223,015	$ 44,603	83.33%
2022	00124396	SM Wildfire New Main 465 Zone	$ 1,078,449	$ 980,408	$ 98,041	90.91%
2022	00124417	SSF Wildfire New Main 390 Zone	$ 1,547,973	$ 1,407,603	$ 140,370	90.93%
2022	00124452	SSF STA 1 Wildfire Booster Pump	$ 812,868	$ 680,631	$ 132,237	83.73%
2022	00124748	SSF-1 Treatment Plant Automation	$ 58,208	$ 48,506	$ 9,701.28	83.33%
2022	00124760	BAY Misc Tools Equipment 2022	$ 41,270	$ 41,270	$ -	100.00%
2022	00125152	SSF 2022 Sample Sites	$ 49,693	$ 34,371	$ 15,322	69.17%
2022	00125189	BAY-SC 2022 Sample Site	$ 107,668	$ 74,470	$ 33,198	69.17%
2022	00125190	BAY-SM 2022 Sample Site	$ 82,821	$ 57,285	$ 25,536	69.17%
2022	00125510	MPS 2022 Physical Security Upgrades	$ 329,212	$ 71,223	$ 257,989	21.63%
2022	00125511	SSF 2022 Physical Security Upgrades	$ 243,970	$ 71,223	$ 172,746	29.19%
2022	00125531	MPS 2022 SB1398 Service Replacement	$ 116,612	$ 106,181	$ 10,431	91.05%
2022	00125813	Land Purchase for Recycled Water St	$ 1,155,687	$ -	$ 1,155,687	0.00%

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	116UNSCH	Unscheduled Replacements	$ 2,299,965	$ -	$ 2,299,965	0.00%
2022	118UNSCH	Unscheduled Replacements	$ 647,240	$ -	$ 647,240	0.00%
2022	152MRP22	BAY 2022 Main Replacement Program	$ 10,150,139	$ 3,926,505	$ 6,223,634	38.68%
2022	SMD0900	Meter Replacement Program	$ 320,877	$ 312,187	$ 8,689.67	97.29%
2022	SSF0900	Meter Replacement Program	$ 158,263	$ 158,263	$ -	100.00%
2022		**Specific Total**	$ 24,156,061	$ 11,562,412	$ 12,593,649	47.87%
2022	116-NON-SP	**Non-specific Total**	$ 942,548	$ 754,038	$ 188,510	80.00%
2022	118-NON-SP	**Non-specific Total**	$ 127,874	$ 102,299	$ 25,575	80.00%
2022	152-NON-SP	**Non-specific Total**	$ 30,318	$ 24,254	$ 6,064	80.00%
2022		**Previously Funded but not in Service Projects Total**	$ 10,818,397	$ -	$ 10,818,397	0.00%
		TOTAL 2022	$ 36,075,197	$ 12,443,004	$ 23,632,193	34.49%

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	00123292	BAY 2023 Vehicle Replacement Program	$ 203,112	$ 137,336	$ 65,775	67.62%
2023	00123296	MPS 123-T3 - Tank Retrofits	$ 23,809	$ 21,478	$ 2,331	90.21%
2023	00123300	SSF 011-T2 - Tank Retrofits	$ 11,793	$ 10,638	$ 1,155	90.21%
2023	00123316	SSF 001-T1 - Tank Retrofits	$ 28,993	$ 26,154	$ 2,839	90.21%
2023	00123318	SSF 001-T2 - Tank Retrofits	$ 5,653	$ 5,099	$ 553	90.21%
2023	00123321	MPS 030-T1 - Tank Retrofits	$ 16,853	$ 15,203	$ 1,650	90.21%
2023	00123324	MPS 115-T1 - Tank Retrofits	$ 14,625	$ 13,193	$ 1,432	90.21%
2023	00123358	SSF 014-T1 - Tank Retrofits	$ 52,460	$ 47,324	$ 5,136	90.21%
2023	00123451	MPS 024-T1 - Tank Retrofits	$ 11,793	$ 10,638	$ 1,155	90.21%
2023	00123564	MPS 2023 Control Valve Replacement	$ 987,705	$ 311,864	$ 675,842	31.57%
2023	00123673	MPS 023-T1 - Tank Retrofit	$ 36,115	$ 32,580	$ 3,535	90.21%
2023	00123852	SSF 006-F Replace Pump & Motor	$ 50,880	$ 35,915	$ 14,965	70.59%
2023	00123854	SSF 013-A Replace Pump & Motor	$ 36,191	$ 25,547	$ 10,644	70.59%
2023	00123903	MPS 2023 Flowmeter Replacement	$ 147,358	$ 40,933	$ 106,425	27.78%
2023	00124040	MPS 2023 Customer Meter Vault Lids	$ 31,095	$ 28,268	$ 2,827	90.91%
2023	00124046	SSF 2023 Customer Meter Vault Lids	$ 31,095	$ 28,268	$ 2,827	90.91%
2023	00124073	MPS 107-C - Replace Pump & Motor	$ 90,496	$ 82,269	$ 8,227	90.91%

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	00124075	MPS 112-A Replace Pump & Motor	$ 50,948	$ 36,127	$ 14,821	70.91%
2023	00124170	MPS 2023 Control Valve Overhaul	$ 127,371	$ 81,054	$ 46,317	63.64%
2023	124194	SSF 2023 Control Valve Overhaul	$ 41,127	$ 26,172	$ 14,955	63.64%
2023	00124308	SSF 2023 Control Valve Replacement	$ 87,812	$ 27,940	$ 59,872	31.82%
2023	00124372	SC Wildfire New Main 345 Zone	$ 1,882,439	$ 1,711,308	$ 171,131	90.91%
2023	00124410	SSF Wildfire New Main 555 Zone	$ 1,967,643	$ 1,788,784	$ 178,859	90.91%
2023	00124418	SSF Station 8 New Main	$ 840,851	$ 700,710	$ 140,142	83.33%
2023	00124424	SC-117 Sta Rebuild - Design	$ 234,960	$ -	$ 234,960	0.00%
2023	00124427	MPS SM-17 Sta Rebuild - Design	$ 99,043	$ -	$ 99,043	0.00%
2023	00124455	BAY Extend 345 Zone at Nevada Ave	$ 910,246	$ 758,539	$ 151,708	83.33%
2023	00124761	BAY 2023 Misc Equipment	$ 43,570	$ 43,570	$ -	100.00%
2023	00124949	SC and SM Nitrification Evaluation	$ 123,916	$ 103,263	$ 20,653	83.33%
2023	00124965	MPS-027 T1,T2,T3 Nitrification Cont	$ 601,583	$ 555,585	$ 45,999	92.35%
2023	00124970	MPS-029 T1 Nitrification Control	$ 394,796	$ 336,265	$ 58,531	85.17%
2023	00124989	SSF 005 T1 Nitrification Control	$ 535,255	$ 466,639	$ 68,616	87.18%
2023	00124991	SSF 008 Res 2 Nitrification Control	$ 535,255	$ 466,639	$ 68,616	87.18%
2023	00125153	SSF 2023 Sample Sites	$ 42,446	$ 29,358	$ 13,087	69.17%
2023	00125512	SSF 2023 Physical Security Upgrades	$ 171,044	$ 83,433	$ 87,612	48.78%

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	00125533	SSF 2023 SB1398 Service Replacement	$ 119,528	$ 108,835	$ 10,692	91.05%
2023	00125645	BAY SC-116 Rebuild	$ 1,741,114	$ 1,450,928	$ 290,186	83.33%
2023	116UNSCH	Unscheduled Replacements	$ 2,357,464	$ -	$ 2,357,464	0.00%
2023	118UNSCH	Unscheduled Replacements	$ 663,421	$ -	$ 663,421	0.00%
2023	152MRP23	BAY 2023 Main Replacement Program	$ 10,403,892	$ 4,024,668	$ 6,379,225	38.68%
2023	SMD0900	Meter Replacement Program	$ 328,899	$ 328,899	$ -	100.00%
2023	SSF0900	Meter Replacement Program	$ 162,220	$ 162,220	$ -	100.00%
2023		**Specific Total**	$ 26,246,870	$ 14,163,645	$ 12,083,225	53.96%
2023	116-NON-SP	**Non-specific Total**	$966,101	$ 772,881	$ 193,220	80.00%
2023	118-NON-SP	**Non-specific Total**	$131,052	$ 104,842	$ 26,210	80.00%
2023	152-NON-SP	**Non-specific Total**	$31,052	$ 24,841	$ 6,210	80.00%
2023		**Previously Funded but not in Service Projects Total**	$ 1,133,489	$ -	$ 1,133,489	0.00%
		TOTAL 2023	$ 28,508,563	$ 15,066,209	$ 13,442,355	52.85%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	00123293	MPS 032-T2 - Tank Retrofits	$ 21,536	$ 19,375	$ 2,161	89.97%
2024	00123306	MPS 029-T1 - Tank Retrofits	$ 32,237	$ 29,002	$ 3,235	89.96%
2024	00123315	MPS 112-T3 - Tank Retrofits	$ 32,271	$ 29,033	$ 3,238	89.97%
2024	00123413	MPS Tank Exterior Ladder Lifelines	$ 148,713	$ 137,479	$ 11,234	92.45%
2024	00123606	SSF 2024 CP Upgrades	$ 28,301	$ 11,063	$ 17,238	39.09%
2024	00123641	MPS Station 29 Replace Generator	$ 287,832	$ 237,775	$ 50,057	82.61%
2024	00123702	BAY 2024 Vehicle Replacement Program	$ 103,543	$ 94,130	$ 9,413	90.91%
2024	00123709	SSF 005 Panelboard Replacement	$ 394,557	$ 328,409	$ 66,149	83.23%
2024	00123796	SSF STA 101 Wildfire Generator	$ 258,861	$ 216,286	$ 42,575	83.55%
2024	00123848	BAY SM STA 012 Wildfire Generator	$ 256,843	$ 214,802	$ 42,041	83.63%
2024	00123856	SSF 101-A Replace Pump & Motor	$ 49,961	$ 35,267	$ 14,695	70.59%
2024	00123858	SSF 101-B Replace Pump & Motor	$ 49,961	$ 35,267	$ 14,695	70.59%
2024	00123906	MPS 2024 Flowmeter Replacement	$ 99,448	$ 82,873	$ 16,575	83.33%
2024	00124041	MPS 2024 Customer Meter Vault Lids	$ 31,873	$ 28,975	$ 2,898	90.91%
2024	00124048	SSF 2024 Customer Meter Vault Lids	$ 31,873	$ 28,975	$ 2,898	90.91%
2024	00124081	MPS 114-B Replace Pump & Motor	$ 38,774	$ 27,494	$ 11,280	70.91%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	00124085	MPS 118-A Replace Pump & Motor	$ 78,048	$ 55,343	$ 22,705	70.91%
2024	00124090	MPS 120-B Replace Pump & Motor	$ 38,996	$ 27,652	$ 11,344	70.91%
2024	00124171	MPS 2024 Control Valve Overhaul	$ 130,555	$ 83,081	$ 47,475	63.64%
2024	00124199	SSF 2024 Control Valve Overhaul	$ 42,155	$ 26,826	$ 15,329	63.64%
2024	00124248	MPS 123-T4 - Tank Retrofits	$ 4,715	$ 4,242	$ 473	89.97%
2024	00124249	MPS 027-T2 - Tank Retrofits	$ 129,158	$ 116,198	$ 12,960	89.97%
2024	00124360	SC Wildfire New Main 600 Zone	$ 1,045,246	$ 950,235	$ 95,011	90.91%
2024	00124426	BAY Zone Intertie at Polhemus Rd	$ 1,135,774	$ 946,478	$ 189,296	83.33%
2024	00124442	SSF Wildfire 380 Zone SFPUC Conn.	$ 476,013	$ 432,740	$ 43,274	90.91%
2024	00124462	Wildfire SC-121 Station Rebuild	$ 1,506,077	$ 1,255,064	$ 251,013	83.33%
2024	00124622	MPS 109-T2 - Tank Retrofits	$ 54,142	$ 48,609	$ 5,532	89.78%
2024	00124624	SSF 101-T1 - Tank Retrofits	$ 10,573	$ 9,512	$ 1,061	89.97%
2024	00124688	MPS 032-T1 - Tank Retrofits	$ 13,703	$ 12,328	$ 1,375	89.96%
2024	00124762	BAY 2024 Misc Tools-Equipment	$ 46,464	$ 46,464	$ -	100.00%
2024	00124993	SSF-14 Res 11 Nitrification Control	$ 548,629	$ 478,299	$ 70,330	87.18%
2024	00125025	BAY SM STA 028 Wildfire Generator	$ 263,186	$ 220,611	$ 42,575	83.82%
2024	00125513	SSF 2024 Physical Security Upgrades	$ 116,923	$ 81,631	$ 35,292	69.82%
2024	00125535	MPS 2024 SB1398 Service Replacement	$ 122,516	$ 111,556	$ 10,960	91.05%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	116UNSCH	Unscheduled Replacements	$ 2,416,401	$ -	$ 2,416,401	0.00%
2024	118UNSCH	Unscheduled Replacements	$ 680,006	$ -	$ 680,006	0.00%
2024	152MRP24	BAY 2024 Main Replacement Program	$ 10,663,990	$ 4,125,284	$ 6,538,706	38.68%
2024	SMD0900	Meter Replacement Program	$ 337,121	$ 337,121	$ -	100.00%
2024	SSF0900	Meter Replacement Program	$ 166,275	$ 166,275	$ -	100.00%
2024		**Specific Total**	$ 21,893,252	$ 11,091,756	$ 10,801,495	50.66%
2024	116-NON-SP	**Non-specific Total**	$ 990,225	$ 792,180	$ 198,045	80.00%
2024	118-NON-SP	**Non-specific Total**	$ 134,312	$ 107,450	$ 26,862	80.00%
2024	152-NON-SP	**Non-specific Total**	$ 31,948	$ 25,558	$ 6,390	80.00%
2024		**Previously Funded but not in Service Projects Total**	$ 921,000	$ -	$ 921,000	0.00%
		TOTAL 2024	$ 23,970,737	$ 12,016,944	$ 11,953,792	50.13%

Attachment 1-3: Bayshore District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures

Att. Table 1-2: Bayshore District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[220]

Bayshore	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$23,224,769	100%
Cal Advocates	$ 12,443,004	$ 15,066,209	$ 12,016,944	$ 13,175,385	57%
CWS	$ 36,075,197	$ 28,508,563	$ 23,970,737	$ 29,518,166	127%

[220] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

Attachment 1-4: CWS Response to Cal Advocates Data Request JMI-011 (Recycled Water – Bayshore)

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Justin Menda Utilities Engineer	Phone: Email:	(415) 703-2170 justin.menda@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **September 23, 2021**	Request Received from CPUC: **September 16, 2021**
Re: **JMI-011**	Requested Due Date: **September 23, 2021**
Subj: **Recycled Water – Bayshore**	

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Does not contain confidential information.**

- **Attachment 1 – Bay Area Supply Reliability Study – Recycled Water Quality**

Data Requests and Responses

1. Regarding the Land Purchase for Recycled Water Storage Tank project (PID 125813) in the Bayshore District:

   a. Bayshore District Capital Project Justification Book, p.195 states that Cal Water is also having discussions with potential customers, primarily cemeteries, to determine interest. How many potential customer(s) have expressed interest in recycled water? For convenience, please fill in the table below.

Response:

Potential Customer	Potential Demand
13 cemeteries and other smaller irrigation customers	1.25 MGD

   b. Bayshore District Capital Project Justification Book, p. 195 states that Cal Water's contribution to the recycled water project would include this land purchase for a future recycled water storage tank, future construction of the recycled water storage tank, and distribution system improvements to new non-potable customers.

      i. What is the infrastructure is needed to deliver the future recycled water to the new non-portable customers?
      Response: The Daly City Water Treatment Plant (WTP) will need to be upgraded with:
      - **Advanced purification water treatment (tertiary treatment),**
      - **Over 5 miles of main trunkline connecting the Daly City WTP to the cemeteries in Colma,**
      - **A network of lateral pipelines, and**
      - **Other potential customers located in Daly City and Town of Colma, pump stations, injection wells, storage tanks, and other conveyance infrastructures.**

      ii. What is the estimated cost associated with the distribution system improvements to new non-potable customers?
      Response: Preliminary estimates provided by the SFPUC's consultant are $85 million as a baseline cost with three alternatives ranging from $72 to $147 million. Identifying project ownership and cost share among Partners (SFPUC, Daly City, Cal Water) and among the project alternatives currently being developed.

      iii. What is the estimated cost to construct the recycled water storage tank?
      Response: The estimated cost to construct the recycled water storage tank is $4.75 million.

c. Bayshore District Capital Project Justification Book, p. 195 states that Cal Water is moving forward with water quality analysis of recycled water impact on tombstones, cost/benefit analysis, and analysis of the allocation of costs between the three parties as part of the Bay Area Regional Water Supply Reliability Study.

i. Has Cal Water completed the water quality analysis of the impact of recycled water on tombstones? If so, please provide the findings of the analysis.
Response: As part of the Bay Area Supply Reliability Study (Reliability Study), the consultant Woodard & Curran developed a memo (Attachment 1, dated March 11, 2021) that compared the current Daly City water quality with other cemeteries that have undergone a tertiary treatment upgrades at their Water Treatment Plants.

The following is a list of items the consultant has identified:

- **Concerns with Recycled Water are mostly from salt deposits as opposed to staining of headstones. Staining is noticeable on the color headstones but this is all tied back to the maintenance of the headstone too.**
  - **Staining will be linked to magnesium, iron, copper, zinc**
  - **Salt deposits will be linked to total dissolved solids (TDS)**
- **Daly City Recycled Water is for secondary effluent; tertiary treatment quality should improve Iron and Turbidity levels with the additional filtration.**
- **Daly City Recycled Water shows a high range of chlorine levels. Chlorine levels could be of concern for cemetery uses.**

ii. If not, why not?
Response: Please see the response to question c (i).

iii. Has Cal Water completed the cost/benefit analysis? If so, please provide the findings of the cost/benefit analysis.
Response: Cost/benefit analysis has not yet been completed.

iv. If not, why not?
Response: SFPUC/consultant are evaluating project alternatives and developing Term Sheets for project. Once this first step is complete, Cal Water's Bay Area Supply Reliability Study (Reliability Study) will develop cost/benefit analysis.

v. Has Cal Water complete the analysis of the allocation of cost between the three parties? If so, please provide the findings of the analysis.

Response: The SFPUC and their consultant are currently developing an initial ownership and cost allocation proposal for consideration by the three parties.

vi. If not, why not?
Response: Please see the response to question c (v).

d. Bayshore District Capital Project Justification Book, p. 195 states that San Francisco Public Utilities Commission (SFPUC) has completed a 30% design for a recycled water project in Daly City. When would the recycled water be available to Cal Water?
Response: The present schedule projects that recycled water would be available in 2030.

e. Bayshore District Capital Project Justification Book, p. 195 states that a suitable site has been identified. What site has been identified as a suitable site?
Response: The site of the recycled water tank is at the Holy Cross Cemetery. Cal Water has had preliminary site visits and discussions with representatives of Holy Cross Cemetery regarding three potential sites.

f. Bayshore District Capital Project Justification Book, p. 197 shows the cost estimate for PID 125813.

i. The "land purchase" line item shows a unit cost of $1 million. What size storage tank is the proposed land purchase intended for?
Response: The proposed size of the tank is 2.5 million gallons.

ii. What size land site does Cal Water intend to purchase?
Response: Land size has not been determined at this time. Cal Water has met with Holy Cross Cemetery to discuss 3 potential sites on their property that would be suitable to build a tank. A pre-feasibility, geotechnical investigation, and preliminary piping infrastructure will need to be developed to identify the most suitable site for this project.

iii. The cost basis for the "land purchase" line item is based on an engineer's estimate. Please provide the methodology Cal Water used to calculate this line item along with all supporting documentation.
Response: The $1 million estimate for the land purchase is a high level cost estimate for typical land values in the general vicinity, given the general size needed for the tank.

Attachment 1-5: Previously Funded but Not in Service Projects – Bayshore District

Att. Table 1-3: Previously Funded but Not in Service Projects – Bayshore District[221]

Year	Description	Work Order #	2022	2023	2024
2023	SSF Sta.11 New Access Road	114980		$ 244,330	
2023	Install new station piping SM116	115010		$ 486,720	
2022	Panelboard Replacement MPS 117	115080	$ 264,806		
2022	Panelboard Replacement MPS 107	115110	$ 186,992		
2022	SM-22 Reconfiguration	117597	$ 1,616,968		
2022	Station Rebuild SM 22	98594	$ 779,126		
2022	SC-107 PSPS Genset	121255	$ 373,984		
2023	MPS 116 Retaining Wall	119754		$ 402,439	
2022	Construct new booster station	114808	$ 1,300,813		
2022	Replace Panelboard MPS 118	115085	$ 284,553		
2022	Panelboard Replacement MPS 112	115112	$ 186,992		
2022	SSF 015-T1 - Overflow Retrofit	115634	$ 5,372		
2022	SSF 014-T1: Repl Interior Ladder	115635	$ 3,851		
2022	SSF 004-T3&T4 - Tank Struc Retro	115641	$ 55,366		
2022	MPS 120-T1 - Tank Struc Retrofits	115667	$ 20,147		
2022	MPS 119-T1 - Tank Struct Retrofit	115680	$ 38,781		
2022	MPS 031-T1 - Tank Struct Retrofit	115716	$ 65,842		
2022	MPS 118- T1- Tank Struct Retrofit	115844	$ 36,504		
2022	MPS 118-T2 - Tank Struct Retrofits	115992	$ 16,667		
2022	SSF 005-T1 - Roof Retrofit	116014	$ 60,163		
2022	MPS 116-PT1 - Replace Pressure Tank	116058	$ 252,114		
2022	SSF 011-T1: Seismic Retrofit	116139	$ 66,423		
2022	MPS 017-T3 - Tank Retrofits	116160	$ 45,691		
2022	MPS 024-T2 - Tank Retrofits	116314	$ 16,341		
2022	Station 26 Stabilization Project	116335	$ 1,198,007		
2022	MPS 2021 Flowmeter Replacements	116415	$ 195,122		
2022	Mid Peninsula Reliability Study	116516	$ 224,888		
2022	SSF 2021 Flowmeter Replacements	116669	$ 48,780		
2022	SSF Reliability Study	116850	$ 157,055		
2022	Mid Peninsula WSFMP	116851	$ 280,830		
2022	South San Francisco WSFMP	116852	$ 280,830		
2022	MPS 2021 Physical Security Upgrades	117284	$ 54,472		
2022	SSF 4 New Pumps	117656	$ 170,732		
2022	Bayshore Ops. Center Improvements	117796	$ 1,788,618		
2024	Purchase Land for SM Well	61972			$ 921,000
2022	Panelboard Replacement SC 119	98172	$ 227,642		
2022	SC-118 PSPS Genset	121261	$ 391,973		
2022	SSF Hillside Blvd PRV	122976	$ 121,951		

[221] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

Attachment 2-1: District Capital Budget Details – Bear Gulch District

Att. Table 2-1: Capital Budget Details – Bear Gulch District[222]

[222] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	00123131	BG 002-T2 - Tank Retrofits	$ 17,249	$ 15,602	$ 1,647	90.45%
2022	00123141	BG Tank Exterior Ladder Lifelines	$ 120,303	$ 108,814	$ 11,489	90.45%
2022	00123363	BG 028-T1 - Tank Retrofits	$ 35,878	$ 32,451	$ 3,427	90.45%
2022	00123574	BG 2022 Control Valve Replacement	$ 173,858	$ 52,865	$ 120,994	30.41%
2022	00123624	BG 041-T1 - Tank Retrofits	$ 22,765	$ 20,591	$ 2,175	90.45%
2022	00123716	BG 2022 Vehicle Replacement Program	$ 147,831	$ 44,797	$ 103,033	30.30%
2022	00123814	BG 005-K Replace Pump & Motor	$ 140,442	$ 99,586	$ 40,856	70.91%
2022	00123874	BG 2022 CARB Vehicle Replacement	$ 208,154	$ 189,231	$ 18,923	90.91%
2022	00123914	BG 2022 Flowmeter Replacement	$ 93,545	$ 38,977	$ 54,568	41.67%
2022	00123987	BG 2022 Customer Meter Vault Lids	$ 15,168	$ 13,789	$ 1,379	90.91%
2022	00124156	BG Wildfire Control Valves 2022	$ 357,391	$ 311,549	$ 45,842	87.17%
2022	00124203	BG 2022 Control Valve Overhaul	$ 110,064	$ 70,041	$ 40,023	63.64%
2022	00124380	BG Wildfire New Main & CV Wayside Rd	$ 470,993	$ 394,372	$ 76,621	83.73%
2022	00125130	BG 2022 Sample Sites	$ 82,821	$ 57,285	$ 25,537	69.17%
2022	00125414	BG 2022 Physical Security Upgrades	$ 530,004	$ 71,223	$ 458,781	13.44%
2022	102MRP 22	BG 2022 Main Replacement Program	$ 10,333,862	$ 7,729,420	$ 2,604,442	74.80%
2022	BGD0900	Meter Replacement Program	$ 226,215	$ 226,215	$ -	100.00%
2022	102UNS CH	Unscheduled Replacements	$ 2,610,949	$ -	$ 2,610,949	0.00%
2022		**Specific Total**	$ 15,697,491	$ 9,476,806	$ 6,220,685	60.37%
2022	102-NON-SP	**Non-specific Total**	$ 845,400	$ 676,320	$ 169,080	80.00%
2022		**Previously Funded but not in Service Projects Total**	$ 22,033,971	$ -	$ 22,033,971	0.00%
		TOTAL 2022	$ 38,576,862	$ 10,153,125	$ 28,423,737	26.32%

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	00123168	BG 022-T1 - Tank Retrofits	$ 45,352	$ 40,553	$ 4,799	89.42%
2023	00123234	BG 002-T1 - Tank Retrofits	$ 13,560	$ 12,233	$ 1,327	90.21%
2023	00123338	BG 030-T1 - Tank Retrofits	$ 26,071	$ 23,519	$ 2,552	90.21%
2023	00123365	BG 041-T2 - Tank Retrofits	$ 30,371	$ 27,397	$ 2,973	90.21%
2023	00123429	BG 038-T1 - Tank Retrofits	$ 35,847	$ 32,338	$ 3,509	90.21%
2023	00123578	BG 2023 Control Valve Replacement	$ 98,785	$ 29,998	$ 68,787	30.37%
2023	00123650	BG 037-T1 - Tank Retrofits	$ 59,393	$ 53,578	$ 5,815	90.21%
2023	00123988	BG 2023 Customer Meter Vault Lids	$ 15,548	$ 14,134	$ 1,413	90.91%
2023	00124158	BG Wildfire Control Valves 2023	$ 363,916	$ 317,237	$ 46,679	87.17%
2023	00124204	BG 2023 Control Valve Overhaul	$ 112,816	$ 71,792	$ 41,024	63.64%
2023	00124437	BG Land For New Booster Station	$ 1,105,358	$ -	$ 1,105,358	0.00%
2023	00125132	BG 2023 Sample Sites	$ 76,403	$ 52,845	$ 23,558	69.17%
2023	00125415	BG 2023 Physical Security Upgrades	$ 429,336	$ 83,433	$ 345,903	19.43%
2023	00125623	BG Spillway & Outlet Works Replace	$ 11,127,800	$ 8,510,637	$ 2,617,163	76.48%
2023	00125628	BG Wildfire - New Main Morrow Vista	$ 1,154,601	$ 882,723	$ 271,879	76.45%
2023	102MRP 23	BG 2023 Main Replacement Program	$ 10,592,208	$ 7,922,655	$ 2,669,553	74.80%
2023	102UNS CH	Unscheduled Replacements	$ 2,547,267	$ -	$ 2,547,267	0.00%
2023	BGD0900	Meter Replacement Program	$ 231,871	$ 231,871	$ -	100.00%
2023		**Specific Total**	$ 28,066,502	$ 18,306,943	$ 9,759,559	65.23%
2023	102-NON-SP	**Non-specific Total**	$ 878,978	$ 693,206	$ 185,771	78.87%
2023		**Previously Funded but not in Service Projects Total**	$ 10,269,729	$ -	$ 10,269,729	0.00%
		TOTAL 2023	$ 39,215,208	$ 19,000,149	$ 20,215,059	48.45%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	00123211	BG 036-T1 - Tank Retrofits	$ 17,274	$ 15,541	$ 1,733	89.97%
2024	00123461	BG 019-T1 - Tank Retrofits	$ 58,490	$ 52,621	$ 5,869	89.97%
2024	00123580	BG 2024 Control Valve Replacement	$ 105,880	$ 32,226	$ 73,654	30.44%
2024	00123720	BG 2024 Vehicle Replacement Program	$ 162,451	$ 47,569	$ 114,882	29.28%
2024	00123820	BG 019-B Replace Pump & Motor	$ 38,774	$ 27,494	$ 11,280	70.91%
2024	00123935	BG Sta. 20 Panelboard Replacement	$ 383,481	$ 330,372	$ 53,110	86.15%
2024	00123957	BG Sta. 23 Panelboard Replacement	$ 399,909	$ 348,613	$ 51,296	87.17%
2024	00123989	BG Customer Meter Vault Lids	$ 18,075	$ 15,062	$ 3,012	83.33%
2024	00124159	BG Wildfire Control Valves 2024	$ 555,948	$ 490,411	$ 65,538	88.21%
2024	00124205	BG 2024 Control Valve Overhaul	$ 115,636	$ 73,587	$ 42,049	63.64%
2024	00124381	BG Wildfire New Main Tynan Way	$ 988,556	$ 827,739	$ 160,817	83.73%
2024	00124399	BG Wildfire Pump Sta Kings Mt-Design	$ 368,350	$ -	$ 368,350	0.00%
2024	00124938	BG 21-T1 & T2 Nitrification Control	$ 804,630	$ 673,733	$ 130,897	83.73%
2024	00124939	BG 32-T1 Nitrification Control	$ 532,221	$ 463,953	$ 68,267	87.17%
2024	00124975	BG 2024 Analyzers Replacement	$ 88,333	$ 80,303	$ 8,030	90.91%
2024	00125419	BG 2024 Physical Security Upgrades	$ 449,055	$ 81,631	$ 367,424	18.18%
2024	00125670	BG Algal Toxin Study Phase 2	$ 141,396	$ 117,830	$ 23,566	83.33%
2024	00125671	BG Skyline Woodside Main	$ 5,837,024	$ 4,480,172	$ 1,356,852	76.75%
2024	102MRP 24	BG 2024 Main Replacement Program	$ 10,857,014	$ 8,120,722	$ 2,736,292	74.80%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	102UNSCH	Unscheduled Replacements	$ 2,610,949	$ -	$ 2,610,949	0.00%
2024	BGD0900	Meter Replacement Program	$ 237,667	$ 237,667	$ -	100.00%
2024		**Specific Total**	$ 24,771,113	$ 16,517,247	$ 8,253,866	66.68%
2024	102-NON-SP	**Non-specific Total**	$ 888,269	$ 710,615	$ 177,654	80.00%
2024		**Previously Funded but not in Service Projects Total**	$ 40,650	$ -	$ 40,650	0.00%
		TOTAL 2024	$ 25,700,032	$ 17,227,861	$ 8,472,170	67.03%

Attachment 2-2: Bear Gulch District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures

Att. Table 2-2: Bear Gulch District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[223]

Bear Gulch	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$ 18,841,916	100.00%
Cal Advocates	$ 10,153,125	$ 19,000,149	$ 17,227,861	$ 15,460,379	82.05%
CWS	$ 38,576,862	$ 39,215,208	$ 25,700,032	$ 34,497,367	183.09%

[223] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

Attachment 2-3: Previously Funded but Not in Service Projects – Bear Gulch District

Att. Table 2-3: Previously Funded but Not in Service Projects – Bear Gulch District[224]

[224] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

Year	Description	Work Order #	2022	2023	2024
2022	Algal Treatment Study - BG	115586	$ 9,584		
2023	BG 18" Raw Water	116301		$ 3,319,951	
2023	Sta 5 3MG Welded Steel Tank	97310		$ 4,065,041	
2024	Raw Water Line	97628			$ 40,650
2022	Flow meters 4,20,33,35,36,38	98610	$ 249,837		
2023	Install Backup Gen Set at BG 23	122836		$ 450,586	
2023	Install Backup Generator BG 017	122876		$ 401,631	
2022	Sta 18 Station Rebuild	114325	$ 821,138		
2022	BG Sta 40 Property Acquisition	114326	$ 46,678		
2022	Low Zone Surge Protection	114327	$ 693,579		
2022	Wayside Woodside Pipeline	114329	$ 651,656		
2022	Sta 21 Partial Rebuild	114642	$ 518,476		
2022	Sta 17 Partial Rebuild	114643	$ 1,410,569		
2022	BG 036-A: Pump & Motor Replacement	115002	$ 45,994		
2022	BG 023-B: Pump & Motor Replacement	115009	$ 46,807		
2022	BG 022-B:Pump & Motor Replacement	115011	$ 31,446		
2022	BG 043-A:Pump & Motor Replacement	115017	$ 31,446		
2022	BG 43-B:Pump & Motor Replacement	115020	$ 31,446		
2022	Panelboard Replacement Station 3	115102	$ 471,545		
2022	Panelboard Replacement Station 7	115106	$ 235,772		
2022	BG 032-T1 - Tank Retrofits	115722	$ 35,122		
2022	2021 Vehicle Replacement Program	115762	$ 198,659		
2022	BG 005-T9 - New 30" Manway	115970	$ 8,862		
2022	Sta. 19 VFD Replacement	116070	$ 65,041		
2022	BG 3 Reduce Sediment	116303	$ 250,000		
2022	BG16 Slope Stabilization	116305	$ 2,191,307		
2022	BG 2020 Flowmeter Replacements	116387	$ 174,499		
2022	BG Skeggs Tanks Construction	116413	$ 2,840,779		
2022	Bear Gulch WSFMP	116587	$ 256,861		
2022	BG 2020 Physical Security Upgrades	117234	$ 277,690		
2022	BG 2021 Physical Security Upgrades	117237	$ 322,024		
2022	SCADA RTUs at 6 turnouts	117418	$ 212,224		
2022	Replace Genset - Sta 33	118028	$ 203,043		
2022	AMI (Smart) Meter Pilot	114644	$ 1,026,588		
2022	Sta 33 STA Rebuild	65389	$ 764,228		
2022	Sta 42 0.25MG Welded Steel Tank	97302	$ 1,686,160		
2022	Sta 3 Reduce Sediment Intake	97637	$ 337,375		
2022	Upper Diversion Slope Stabilization	98018	$ 350,206		
2022	BG Skeggs Tanks (Design)	98036	$ 406,504		
2022	Upper Low Zone Mitigation	98236	$ 406,504		

Year	Description	Work Order #	2022	2023	2024
2022	Bear Gulch Dam Modifications	117532	$ 1,690,839		
2022	BG-007 PSPS Genset	121245	$ 317,667		
2022	BG-025 PSPS Genset	121345	$ 307,889		
2022	BG-026 PSPS Genset	121347	$ 318,363		
2023	BG 590 Zone Transmission Main	123121		$ 2,032,520	
2022	BG Buck Meadow Dr New Main	123112	$ 752,298		
2022	BG Patrol/Sta 025 New Main	123113	$ 1,118,511		
2022	Bear Gulch Reliability Study	116517	$ 218,755		

Attachment 3-1: District Capital Budget Details – Los Altos District

Att. Table 3-1: Capital Budget Details – Los Altos District[225]

[225] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	00124334	LAS Land for New Well	$ 2,166,284	$ -	$ 2,166,284	0.00%
2022	00123422	LAS Sta. 14 Panelboard Replacement	$ 306,258	$ 265,565	$ 40,693	86.71%
2022	00123528	LAS 118-PT1 - Pressure Vessel Replacement	$ 323,033	$ -	$ 323,033	0.00%
2022	00125465	LAS 2022 Physical Security Upgrades	$ 145,565	$ 71,223	$ 74,341	48.93%
2022	00124283	LAS 039-01: Well Renewal	$ 120,937	$ 109,943	$ 10,994	90.91%
2022	00123383	LAS 119-T1 - Tank Retrofits	$ 22,054	$ 19,948	$ 2,106	90.45%
2022	00123384	LAS 121-T1 - Tank Retrofits	$ 43,797	$ 39,614	$ 4,183	90.45%
2022	00123397	LAS Tank Exterior Ladder Lifelines	$ 107,925	$ 97,618	$ 10,307	90.45%
2022	00123553	LAS 2022 CP Upgrades	$ 26,937	$ 10,530	$ 16,407	39.09%
2022	00123614	LAS 2022 Control Valve Replacements	$ 436,201	$ 132,639	$ 303,563	30.41%
2022	00124216	LAS 2022 Control Valve Overhaul	$ 68,524	$ 43,607	$ 24,918	63.64%
2022	00124598	LAS Sta. 31 Redwood Tank Replace	$ 798,246	$ -	$ 798,246	0.00%
2022	00124687	LAS 010-T2 - Tank Retrofits	$ 23,415	$ 21,178	$ 2,237	90.45%
2022	00123862	LAS 001-02 Replace Pump & Motor	$ 74,620	$ 52,673	$ 21,947	70.59%
2022	00123865	LAS 001-E Replace Pump & Motor	$ 71,071	$ 50,168	$ 20,903	70.59%
2022	00123867	LAS 009-D Replace Pump & Motor	$ 47,554	$ 33,568	$ 13,986	70.59%

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	00123870	LAS 009-E Replace Pump & Motor	$ 47,554	$ 33,568	$ 13,986	70.59%
2022	00123984	LAS 039-01 - Replace Pump & Motor	$ 83,424	$ 75,497	$ 7,927	90.50%
2022	00124066	LAS 2022 Flowmeter Replacement	$ 88,291	$ 73,576	$ 14,715	83.33%
2022	00125073	LAS 2022 Analyzer Replacement	$ 24,911	$ 22,647	$ 2,265	90.91%
2022	00123893	LAS Wildfire Control Valves 2022	$ 717,182	$ 625,190	$ 91,992	87.17%
2022	00125133	LAS 2022 Sample Sites	$ 66,257	$ 45,828	$ 20,429	69.17%
2022	00124023	LAS 2022 Customer Meter Vault Lids	$ 30,337	$ 27,579	$ 2,758	90.91%
2022	00123876	LAS 2022 CARB Vehicle Replacement	$ 249,376	$ 226,705	$ 22,671	90.91%
2022	111MRP22	LAS 2022 Main Replacement Program	$ 5,171,674	$ 3,147,584	$ 2,024,090	60.86%
2022	LAS0900	Meter Replacement Program	$ 205,409	$ 205,409	$ -	100.00%
2022	111UNSCH	Unscheduled Replacements	$ 1,531,203	$ -	$ 1,531,203	0.00%
2022		**Specific Total**	$ 12,998,039	$ 5,431,855	$ 7,566,184	41.79%
2022	111-NON-SP	**Non-specific Total**	$ 1,339,779	$ 1,071,823	$ 267,956	80.00%
2022		**Previously Funded but not in Service Projects Total**	$ 4,437,464	$ -	$ 4,437,464	0.00%
		TOTAL 2022	$ 18,775,282	$ 6,503,678	$12,271,604	34.64%

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	00125466	LAS 2023 Physical Security Upgrades	$ 796,180	$ 83,433	$ 712,747	10.48%
2023	00123325	LAS 121-T2 - Tank Retrofits	$ 14,327	$ 12,924	$ 1,403	90.21%
2023	00123344	LAS 114-T1 - Tank Retrofits	$ 25,500	$ 23,003	$ 2,496	90.21%
2023	00123379	LAS 007-T1 - Tank Retrofits	$ 29,185	$ 26,328	$ 2,858	90.21%
2023	00123438	LAS 114-T2 - Tank Retrofits	$ 46,782	$ 42,202	$ 4,580	90.21%
2023	00123470	LAS 123-T1 - Tank Retrofits	$ 36,342	$ 32,785	$ 3,557	90.21%
2023	00123616	LAS 2023 Control Valve Replacement	$ 551,637	$ 168,456	$ 383,181	30.54%
2023	00123842	LAS 019-T1 - Tank Retrofits	$ 40,726	$ 36,841	$ 3,885	90.46%
2023	00124217	LAS 2023 Control Valve Overhaul	$ 70,238	$ 44,697	$ 25,541	63.64%
2023	00125008	LAS Sta. 30 Redwood Tank Replace	$ 812,158	$ -	$ 812,158	0.00%
2023	00123917	LAS 011-D - Replace Pump & Motor	$ 48,743	$ 34,407	$ 14,336	70.59%
2023	00123918	LAS 019-A - Replace Pump & Motor	$ 36,191	$ 25,547	$ 10,644	70.59%
2023	00123923	LAS 023-D - Replace Pump & Motor	$ 72,848	$ 51,422	$ 21,426	70.59%
2023	00123969	LAS 023-F - Replace Pump & Motor	$ 72,848	$ 51,422	$ 21,426	70.59%
2023	00124003	LAS 033-A - Replace Pump & Motor	$ 48,743	$ 34,407	$ 14,336	70.59%

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	124069	LAS 2023 Flowmeter Replacement	$ 91,060	$ 37,942	$ 53,118	41.67%
2023	00125051	LAS 28 Tank Mixing and Dosing	$ 785,005	$ 657,301	$ 127,704	83.73%
2023	00125075	LAS 2023 Analyzer Replacement	$ 6,292	$ 5,720	$ 572	90.91%
2023	00125094	LAS Sta. 111 Tank Mixing and Dosing	$ 568,466	$ 495,550	$ 72,917	87.17%
2023	00125187	LAS 32, 1, 121 Well Chloramination	$ 1,757,377	$ 1,471,488	$ 285,889	83.73%
2023	00123898	LAS Wildfire Control Valves 2023	$ 557,525	$ 486,012	$ 71,513	87.17%
2023	00124086	LAS Grant Rd. Rezone	$ 969,174	$ 811,509	$ 157,665	83.73%
2023	00124279	LAS Sta 38 Wildfire New Main & PRV	$ 285,720	$ 237,242	$ 48,478	83.03%
2023	00124363	LAS Wildfire New Main & CV Granger Av	$ 807,452	$ 665,477	$ 141,975	82.42%
2023	00124735	LAS Covington Ph 2 New 16" Main	$ 1,715,152	$ 1,311,278	$ 403,874	76.45%
2023	00125134	LAS 2023 Sample Sites	$ 67,914	$ 46,974	$ 20,940	69.17%
2023	00125629	LAS STA 008 New Mainline to Mora	$ 2,125,942	$ 1,625,346	$ 500,596	76.45%
2023	00125633	LAS Marion Way New Mainline	$ 3,966,928	$ 3,032,819	$ 934,108	76.45%
2023	00124024	LAS 2023 Customer Meter Vault Lids	$ 31,095	$ 28,268	$ 2,827	90.91%
2023	00123754	LAS 2023 Vehicle Replacement Program	$ 50,509	$ -	$ 50,509	0.00%

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	111MRP23	LAS 2023 Main Replacement Program	$ 5,300,966	$ 4,845,897	$ 455,069	91.42%
2023	LAS0900	Meter Replacement Program	$ 210,545	$ 210,545	$ -	100.00%
2023	111UNSCH	Unscheduled Replacements	$ 1,569,483	$ -	$ 1,569,483	0.00%
2023		**Specific Total**	$ 23,569,052	$ 16,637,242	$ 6,931,810	70.59%
2023	111-NON-SP	**Non-specific Total**	$ 1,373,275	$ 1,098,620	$ 274,655	80.00%
2023		**Previously Funded but not in Service Projects Total**	$ 289,902	$ -	$ 289,902	0.00%
		TOTAL 2023	$ 25,232,228	$ 17,735,862	$ 7,496,366	70.29%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	00123895	LAS Sta. 41 New Booster Pump	$ 1,697,984	$ 1,421,757	$ 276,227	83.73%
2024	00123896	LAS 34 Storage Tank-Design and Perm	$ 209,641	$ -	$ 209,641	0.00%
2024	00123897	LAS Sta. 33 Panelboard Replacement	$ 312,574	$ 269,188	$ 43,387	86.12%
2024	00124093	LAS STA 008 Wildfire New Generator	$ 276,606	$ 238,334	$ 38,271	86.16%
2024	00124221	LAS STA 14 Wildfire New Pump & Main	$ 601,750	$ 461,869	$ 139,880	76.75%
2024	00124254	LAS Station 17 New Generator	$ 303,031	$ 261,120	$ 41,911	86.17%
2024	00124269	LAS Station 119 New Generator	$ 264,342	$ 227,797	$ 36,545	86.17%
2024	00124314	LAS 27 New Generator	$ 272,475	$ 234,775	$ 37,700	86.16%
2024	00124330	LAS Station 30 New Generator	$ 330,109	$ 284,576	$ 45,534	86.21%
2024	00124336	LAS Station 31 New Generator	$ 274,063	$ 274,063	$ -	100.00%
2024	00124342	LAS STA 42 Wildfire Booster Pumps-Design	$ 313,836	$ -	$ 313,836	0.00%
2024	00124733	LAS New Operations Building	$ 6,034,125	$ 4,578,290	$ 1,455,835	75.87%
2024	00125469	LAS 2024 Physical Security Upgrades	$ 1,060,473	$ 81,631	$ 978,841	7.70%
2024	00124288	LAS 104-02: Well Renewal	$ 320,199	$ 257,781	$ 62,418	80.51%
2024	00123286	LAS 121-T3 - Tank Retrofits	$ 6,573	$ 5,914	$ 660	89.96%
2024	00123290	LAS 042-T2 - Tank Retrofits	$ 12,088	$ 10,875	$ 1,213	89.97%
2024	00123452	LAS 113-T1 - Tank Retrofits	$ 33,550	$ 30,184	$ 3,366	89.97%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	00123617	LAS 2024 Control Valve Replacement	$ 571,210	$ 173,680	$ 397,530	30.41%
2024	00124218	LAS 2024 Control Valve Overhaul	$ 71,994	$ 45,814	$ 26,179	63.64%
2024	00124619	LAS Sta. 15 Redwood Tank Replace	$ 831,118	$ -	$ 831,118	0.00%
2024	00124621	LAS-115 Redwood Tank Replacement	$ 832,462	$ -	$ 832,462	0.00%
2024	00123913	LAS Sta. 117 Rebuild - Design	$ 230,462	$ -	$ 230,462	0.00%
2024	00123981	LAS 032-01 - Replace Pump & Motor	$ 87,177	$ 61,537	$ 25,640	70.59%
2024	00124019	LAS 104-A - Replace Pump & Motor	$ 49,961	$ 35,267	$ 14,695	70.59%
2024	00124070	LAS 2024 Flowmeter Replacement	$ 95,032	$ 39,597	$ 55,436	41.67%
2024	00123618	LAS Sta. 39 and 104 Well Chloram	$ 1,219,972	$ 1,015,293	$ 204,679	83.22%
2024	00125076	LAS 2024 Analyzer Replacement	$ 66,020	$ 60,019	$ 6,002	90.91%
2024	00125120	LAS Sta. 42 Tank Mixing and Dosing	$ 625,108	$ -	$ 625,108	0.00%
2024	00125128	LAS Sta. 41 Tank Mixing and Dosing	$ 396,718	$ 345,832	$ 50,887	87.17%
2024	00124140	LAS Wildfire Control Valves 2024	$ 544,101	$ 474,309	$ 69,792	87.17%
2024	00124208	LAS Transmission Main Isolation Valves	$ 1,313,619	$ 1,194,199	$ 119,420	90.91%
2024	00125135	LAS 2024 Sample Sites	$ 69,611	$ 48,148	$ 21,463	69.17%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	00124050	LAS 2024 Customer Meter Vault Lids	$ 31,873	$ 28,975	$ 2,898	90.91%
2024	00123755	LAS 2024 Vehicle Replacement Program	$ 63,017	$ -	$ 63,017	0.00%
2024	111MRP24	LAS 2024 Main Replacement Program	$ 5,433,490	$ 4,967,045	$ 466,446	91.42%
2024	LAS0900	Meter Replacement Program	$ 215,809	$ 215,809	$ -	100.00%
2024	111UNSCH	Unscheduled Replacements	$ 1,608,720	$ -	$ 1,608,720	0.00%
2024		**Specific Total**	$ 26,680,894	$ 17,343,677	$ 9,337,217	65.00%
2024	111-NON-SP	**Non-specific Total**	$ 1,407,750	$ 1,098,620	$ 309,130	78.04%
2024		**Previously Funded but not in Service Projects Total**	$ 4,489,678	$ -	$ 4,489,678	0.00%
2024	00121371	**LAS Customer Building Property**	$ 4,467,173	$ 4,467,173	$ -	100.00%
		TOTAL 2024	$ 37,045,494	$ 22,909,470	$14,136,024	61.84%

Attachment 3-2: Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures

Att. Table 3-2: Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[226]

Los Altos	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$ 11,046,398	100.00%
Cal Advocates	$ 6,503,678	$ 17,735,862	$ 22,909,470	$ 15,716,337	142.28%
CWS	$ 18,775,282	$ 25,232,228	$ 37,045,494	$ 27,017,668	244.58%

[226] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

Attachment 3-3: Previously Funded but Not in Service Projects – Los Altos District

Att. Table 3-3: Previously Funded but Not in Service Projects – Los Altos District[227]

Year	Description	Work Order #	2022	2023	2024
2022	LAS 2019 Flowmeter Replacements	116506	$ 96,076		
2022	LAS 2021 Flowmeter Replacement	117429	$ 91,314		
2022	PSPS LAS-33 Genset	121487	$ 260,163		
2024	New well replacement at station 20	116020			$ 4,489,678
2022	LAS Reliability Study	116515	$ 215,518		
2022	LAS Transmission Main Valves	116719	$ 1,296,049		
2022	LAS 2020 Physical Security Upgrades	117223	$ 274,045		
2022	LAS 009-T1-Tank Struc. Retro Study	117316	$ 60,391		
2022	Install Genset - LAS 9	117411	$ 325,203		
2022	Water Quality Instrumentation - LAS	118142	$ 85,447		
2023	Advanced Metering Infrastructure	116323		$ 289,902	
2022	2,000 LF Homestead Rd 24"	103638	$ 813,008		
2022	LAS Eastbrook Ave Main & Check Valve	122989	$ 619,762		
2022	Los Altos Field Office Upgrade	119986	$ 300,488		

[227] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

Attachment 4-1: District Capital Budget Details – Redwood Valley District

Att. Table 4-1: Capital Budget Details – Redwood Valley District (General)[228]

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	00123423	RDV Tank Exterior Ladder Lifelines	$ 30,140	$ 27,262	$ 2,879	90.45%
2022	146MRP22	RDV 2022 Main Replacement Program	$ 378,509	$ 393,313	$ (14,804)	103.91%
2022	00123769	RDV 2022 Vehicle Replacement Program	$ 109,258	$ 54,528	$ 54,730	49.91%
2022	00124902	RDV Forklift	$ 35,417	$ 32,197	$ 3,220	90.91%
2022	00124906	RDV ATV AND TRAILER	$ 18,018	$ 16,380	$ 1,638	90.91%
2022	00124355	Redwood Valley Reliability Study	$ 150,813	$ 137,102	$ 13,710	90.91%
2022	146UNSCH	Unscheduled Replacements	$ 165,929	$ -	$ 165,929	0.00%
2022		**Specific Total**	$ 888,082	$ 660,782	$ 227,301	74.41%
2022	146-NON-SP	**Non-specific Total**	$ 176,203	$ 140,962	$ 35,241	80.00%
2022		**Previously Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2022	$ 1,064,285	$ 801,744	$ 262,541	75.33%

[228]CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	146MRP23	RDV 2023 Main Replacement Program	$ 387,972	$ 403,146	$ (15,174)	103.91%
2023	00123770	RDV 2023 Vehicle Replacement Program	$ 107,980	$ -	$ 107,980	0.00%
2023	146UNSCH	Unscheduled Replacements	$ 170,077	$ -	$ 170,077	0.00%
2023		**Specific Total**	$ 666,028	$ 403,146	$ 262,883	60.53%
2023	146-NON-SP	**Non-specific Total**	$ 180,523	$ 144,418	$ 36,105	80.00%
2023		**Previously Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2023	$ 846,551	$ 547,564	$ 298,987	64.68%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	146MRP24	RDV 2024 Main Replacement Program	$ 397,671	$ 413,224	$ (15,553)	103.91%
2024	00124266	Redwood Valley WSFMP	$ 132,950	$ 120,863	$ 12,086	90.91%
2024	146UNSCH	Unscheduled Replacements	$ 174,329	$ -	$ 174,329	0.00%
2024		**Specific Total**	$ 704,949	$ 534,088	$ 170,862	75.76%
2024	146-NON-SP	**Non-specific Total**	$ 185,005	$ 148,004	$ 37,001	80.00%
2024		**Previously Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 889,954	$ 682,092	$ 207,863	76.64%

Att. Table 4-2: Capital Budget Details – Unified[229]

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	00125515	ARM 2022 Physical Security Upgrades	$ 48,126	$ 71,223	$ (23,098)	147.99%
2022	00125520	HKN 2022 Physical Security Upgrades	$ 5,322	$ 71,223	$ (65,902)	1338.40%
2022		**Specific Total**	$ 53,447	$ 142,446	$ (88,999)	266.52%
2022	650-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2022		**Previously Funded but not in Service Projects Total**	$ 548,074	$ -	$ 548,074	0.00%
		TOTAL 2022	$ 601,521	$ 142,446	$ 459,075	23.68%

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	00125578	RDV-NOH New Well Siting Study	$ 69,010	$ 69,010	$ -	100.00%
2023	00123623	RDV HKN Sta 1 - Upgrade - Design	$ 138,198	$ -	$ 138,198	0.00%
2023	00125434	RDV-HWK 2023 Analyzer Replacement	$ 4,721	$4,291	$ 429	90.91%
2023		**Specific Total**	$ 211,928	$ 73,301	$ 138,627	34.59%
2023	650-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2023		**Previously Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2023	$ 211,928	$ 73,301	$ 138,627	34.59%

[229] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	00125523	ARM 2024 Physical Security Upgrades	$ 5,934	$ 81,631	$ (75,697)	1375.62%
2024	00124333	ARM 001 New Genset	$ 243,608	$ 212,361	$ 31,247	87.17%
2024		**Specific Total**	$ 249,542	$ 293,992	$ (44,450)	117.81%
2024	650-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2024		**Previously Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 249,542	$ 293,992	$ (44,450)	117.81%

Att. Table 4-3: Capital Budget Details – Coast Springs[230]

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	00125517	COS 2022 Physical Security Upgrades	$ 72,840	$ 71,223	$ 1,617	97.78%
2022	00123246	COS 008-T1 - CP Upgrade	$ 14,016	$ 5,479	$ 8,537	39.09%
2022	00124895	RDV-COS STA 08 Tank Maintenance Area	$ 19,804	$ 18,003	$ 1,800	90.91%
2022	00124862	RDV-COS PALL unit expansion	$ 23,643	$ 21,494	$ 2,149	90.91%
2022	00123712	COS Study - New Access Driveway	$ 67,444	$ 61,312	$ 6,131	90.91%
2022		**Specific Total**	$ 197,747	$ 177,512	$ 20,235	89.77%
2022	149-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2022		**Previously Funded but not in Service Projects Total**	$ 379,572	$ -	$ 379,572	0.00%
		TOTAL 2022	$ 577,319	$ 177,512	$ 399,807	30.75%

[230]CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	00123711	RDV COS 7 New Generator	$ 359,174	$ 300,744	$ 58,430	83.73%
2023	00125522	COS 2023 Physical Security Upgrades	$ 21,240	$ 83,433	$ (62,193)	392.81%
2023		**Specific Total**	$ 380,414	$ 384,176	$ (3,763)	100.99%
2023	149-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2023		**Previously Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2023	$ 380,414	$ 384,176	$ (3,763)	100.99%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	00123714	RDV COS-Design and Permit New Well	$ 336,613	$ -	$ 336,613	0.00%
2024	00123619	RDV-COS - Well Housing (Various)	$ 195,437	$ 177,670	$ 17,767	90.91%
2024	00125524	COS 2024 Physical Security Upgrades	$ 65,111	$ 81,631	$ (16,521)	125.37%
2024		**Specific Total**	$ 597,161	$ 259,302	$ 337,859	43.42%
2024	149-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2024		**Previously Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 597,161	$ 259,302	$ 337,859	43.42%

Att. Table 4-4: Capital Budget Details – Lucerne[231]

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	123220	LUC 003-T1 - Tank Retrofits	$ 5,515	$ 4,988	$ 527	90.45%
2022	00124083	RDV 2022 Flowmeter Replacement	$ 44,146	$ 36,788	$ 7,358	83.33%
2022	00125086	RDV-LUC 2022 Analyzer Replacements	$ 26,354	$23,959	$ 2,396	90.91%
2022	147UNSCH	Unscheduled Replacements	$ 48,570	$ -	$ 48,570	0.00%
2022		**Specific Total**	$ 124,585	$ 65,735	$ 58,850	52.76%
2022	147-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2022		**Previously Funded but not in Service Projects Total**	$ 1,840,292	$ -	$ 1,840,292	0.00%
		TOTAL 2022	$ 1,964,876	$ 65,735	$ 1,899,141	3.35%

[231] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	00125118	LUC Field Yard Land Acquisition	$ 125,375	$ 108,549	$ 16,825	86.58%
2023	00125647	RDV LUC 001 Pier Safety Upgrades	$ 491,508	$ 352,354	$ 139,154	71.69%
2023	00123251	LUC 002-T1 - Tank Retrofits	$ 17,823	$ 16,079	$ 1,744	90.21%
2023	00123674	LUC 004-T1 - Tank Retrofit	$ 34,795	$ 31,389	$ 3,406	90.21%
2023	00124087	RDV 2023 Flowmeter	$ 45,530	$ 37,941	$ 7,588	83.33%
2023	00125090	RDV-LUC 2023 Analyzer	$ 13,124	$ 11,930	$ 1,193	90.91%
2023	147UNSCH	Unscheduled Replacements	$ 49,784	$ -	$ 49,784	0.00%
2023		**Specific Total**	$ 777,938	$ 558,243	$ 219,695	71.76%
2023	147-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2023		**Previously Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2023	$ 777,938	$ 558,243	$ 219,695	71.76%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	00125404	LUC Field Yard Site Improvements	$ 37,475	$ 31,229	$ 6,246	83.33%
2024	00124546	LUC 003-T1 - CP Upgrade	$ 14,726	$ 5,757	$ 8,970	39.09%
2024	00124088	RDV 2024 Flowmeter Replacement	$ 93,929	$ 78,274	$ 15,655	83.33%
2024	00125093	RDV-LUC 2024 Analyzer Replacements	$ 27,689	$ 25,171	$ 2,517	90.91%
2024	147UNSCH	Unscheduled Replacements	$ 51,029	$ -	$ 51,029	0.00%
2024		**Specific Total**	$ 224,847	$ 140,431	$ 84,416	62.46%
2024	147-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2024		**Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 224,847	$ 140,431	$ 84,416	62.46%

Attachment 4-2: Redwood Valley District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures

Att. Table 4-5: Redwood Valley District (General) Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[232]

Redwood Valley	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$ 77,890	100.00%
Cal Advocates	$ 801,744	$ 547,564	$ 682,092	$ 677,133	869.34%
CWS	$ 1,064,285	$ 846,551	$ 889,954	$ 933,597	1198.60%

Att. Table 4-6: Unified Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[233]

Unified	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$ 575,665	100.00%
Cal Advocates	$ 142,446	$ 73,301	$ 293,992	$ 169,913	29.52%
CWS	$ 601,521	$ 211,928	$ 249,542	$ 354,331	61.55%

Att. Table 4-7: Coast Springs Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[234]

Coast Springs	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$ 107,743	100.00%
Cal Advocates	$ 177,512	$ 384,176	$ 259,302	$ 273,663	254.00%
CWS	$ 577,319	$ 380,414	$ 597,161	$ 518,298	481.05%

[232] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

[233] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

[234] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

Table 4-8: Lucerne Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[235]

Lucerne	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$ 257,426	100.00%
Cal Advocates	$ 65,735	$ 558,243	$ 140,431	$ 254,803	98.98%
CWS	$ 1,964,876	$ 777,938	$ 224,847	$ 989,220	384.27%

[235] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

Attachment 4-3: Direct Project Cost Comparison—PID 125647

Att. Table 4-9: Direct Project Cost Comparison—PID 125647

Pier Safety Upgrades – Jacobs Estimate[236]

Description	CWS	Cal Advocates
Labor	$ 35,102	$ 35,102
Material	$ 55,010	$ 55,010
Subcontract	$ 19,168	$ 19,168
Equipment	$ 1,857	$ 1,857
Subtotal	$ 111,137	$ 111,137
Total Taxes	$ 4,975.00	$ 4,975
Subtotal	$ 116,112	$ 116,112
Adjustment Factors	$ 31,396	$ 31,396
Subtotal	$ 147,508	$ 147,508
Subcontractor I, OH&P	$ 17,221	$ 17,221
Subtotal	$ 164,729	$ 164,729
Indirect Costs	$ 14,826	$ 14,826
Subtotal	$ 179,555	$ 179,555
OH&P	$ 40,588	$ 40,588
Subtotal	$ 220,143	$ 220,143
Contingency	$ 22,014	$ -
Subtotal	$ 242,157	$ 220,143

Direct Cost – PID 125647[237]

Item	Units	Quantity	Unit Cost	Total	
				CWS	Cal Advocates
Electrical Eng.	hour	16	$ 121.41	$ 1,942.56	$ 1,942.56
Engineering Design	each	1	$ 40,000	$ 40,000	$ 40,000
Environmental Permitting	each	1	$ 44,800	$ 44,800	$ 44,800
Field Labor	hour	20	$ 75.29	$ 1,505.80	$ 1,505.80
Field Manager	hour	100	$ 107.03	$ 10,703	$ 10,703
Labor	hour	100	$ 121.41	$ 12,141	$ 12,141
Pier Safety Upgrades	each	1	$ 242,156	$ 242,156	$ 220,143
Subtotal (w/o CM/SI and contingency)				$ 353,248.36	$ 331,235.36
CM/SI		1	10%	$ 31,792.35	$ -
Subtotal (w/o contingency)				$ 385,040.71	$ 331,235.36
Contingency	each	1	20%	$ 77,008.14	$ -
Subtotal				$ 462,048.85	$ 331,235.36
Escalation			6.38%	$ 29,459.42	$ 21,118.98
Direct Cost				$ 491,508.27	$ 352,354.34

[236] Jacobs Lucerne WTP Wood Pier Improvements Report and Cost Estimate, Estimate Detail, pp. 1-2.

[237] Redwood Valley District Capital Project Justification, p. 118.

Attachment 4-4: Direct Project Cost Comparison – PID 125118

Att. Table 4-10: Direct Project Cost Comparison—PID 125118[238]

Item	Unit	Quantity		Unit Cost	Total Cost	
		CWS	Cal Advocates		CWS	Cal Advocates
125 ft x 125 ft lot	ea	1	1	$ 89,000.00	$ 89,000.00	$ 89,000.00
CWS EA MNGR Labor	ea	20	20	$ 121.41	$ 2,428.20	$ 2,428.20
CWS Field Mngr/ Supv. Labor	ea	20	20	$ 107.03	$ 2,140.60	$ 2,140.60
Environmental Site Assessment	ea	1	1	$ 500.00	$ 500.00	$ 500.00
Land Survey and Legal Description	ea	1	1	$ 8,396.23	$ 8,396.23	$ 8,396.23
Subtotal					$ 102,465.03	$ 102,465.03
Location Factor	ea	5%	0%	$ 11,201.85	$ 5,123.25	$ -
Subtotal					$ 107,588.28	$ 102,465.03
Contingency	ea	10%	0%	$ 21,943.46	$ 10,758.83	$ -
Subtotal					$ 118,347.11	$ 102,465.03
Escalation				5.94%	$ 7,027.45	$ 6,084.37
Direct Cost					$ 125,374.56	$ 108,549.40

[238] Redwood Valley District Capital Project Justification, p. 94.

Attachment 4-5: Previously Funded but Not in Service Projects – Redwood Valley District

Att. Table 4-11: Previously Funded but Not in Service Projects – Redwood Valley District[239]

Year	Description	Work Order #	2022
2022	ARM_STA_02_T1_Seismic_Upgrad	115989	$ 76,665
2022	ARMV 202-T1 - Replace Int. Ladder	116182	$ 5,447
2022	RDP_102_Replace_Pump_Bldg	116271	$ 23,294
2022	ARM-148 2020 Physical Security Upgr	117341	$ 63,150
2022	HKN-150 2020 Physical Security Upg	117344	$ 651
2022	RDV-ARM 2021 Physical Security Upgr	117345	$ 81,817
2022	NOH_201_Chlorine_Bldg	117537	$ 47,909
2022	ARM-NOH AMI Meters	117876	$ 209,817
2022	HKN - AMI Smart Meters	117880	$ 31,188
2022	Stabilize NH support structure	98554	$ 2,204
2022	ARMV 002-T1-Overflow Airgap Retrof.	98466	$ 5,931
2022	COS_1,2,3,10_new_elec_panel_control	116120	$ 21,485
2022	LUC 01 - Acid Feed Installation	115214	$ 71,545
2022	LUC 01 Activated Carbon	115229	$ 757,398
2022	LUC 01 Cynobacteria Meters	115657	$ 54,090
2022	2021 LUC Flowmeter Replacements	116759	$ 11,382
2022	LUC 2019 Analyzer Replacement	116829	$ 21,573
2022	LUC 2020 Analyzer Replacement	116832	$ 28,057
2022	CSPR Sta 8 - Spray Aeration Sys	116925	$ 87,774
2022	RDV 2019 Physical Security Upgrades	117263	$ 18,842
2022	RDV 2020 Physical Security Upgrades	117265	$ 66,849
2022	LUC-147 2021 Physical Security Upgr	117268	$ 80,791
2022	COS-148 2020 Physical Security Upgr	117342	$ 16,409
2022	LUC AMI Smart Meter	117877	$ 729,763
2022	COS AMI Meters	117879	$ 253,903

[239] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

Attachment 5-1: District Capital Budget Details – Salinas

Att. Table 5-1: Capital Budget Details – Salinas District[240]

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	00124771	SLN 057-PT1 - Pressure Vessel Replacement	$ 287,318	$ -	$ 287,318	0.00%
2022	00124775	SLN 033-PT1 Pressure Vessel Replacement	$ 326,867	$ -	$ 326,867	0.00%
2022	00125491	SLN 2022 Physical Security Upgrades	$ 358,142	$ 71,223	$ 286,918	19.89%
2022	00123295	SLN 2022 CP Upgrades	$ 48,727	$ 19,048	$ 29,679	39.09%
2022	00123424	SLN Tank Exterior Ladder Lifelines	$ 81,256	$ 73,497	$ 7,760	90.45%
2022	00123843	SLN 2022 Control Valve Overhaul	$ 74,069	$ 45,123	$ 28,946	60.92%
2022	00123851	SLN 016-T1 - Tank Retrofits	$ 55,525	$ 50,221	$ 5,304	90.45%
2022	00123681	SLN 036-PT1 - Pressure Vessel Rehab	$ 81,788	$ -	$ 81,788	0.00%
2022	00124163	SLN 2022 Flowmeter Replacements	$ 174,443	$ 145,369	$ 29,074	83.33%
2022	00123886	Davis Rd Bridge 12" Pipe Provisions	$ 138,060	$ 138,060	$ -	100.00%
2022	00125157	SLN 2022 Sample Site	$ 7,888	$ 5,456	$ 2,432	69.17%
2022	00125173	SLN- SLNH 2022 Sample Site	$ 7,888	$ 5,456	$ 2,432	69.17%

[240] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	00125542	SLN 2022 Vault Replacements	$ 165,043	$ 150,039	$ 15,004	90.91%
2022	00124036	SLN 2022 Customer Meter Vault Lids	$ 28,892	$ 26,266	$ 2,627	90.91%
2022	00125472	SLN 2022 Toro Hydrant Replacement	$ 101,210	$ 92,009	$ 9,201	90.91%
2022	00123773	SLN 2022 Vehicle Replacement Program	$ 46,930	$ 42,664	$ 4,266	90.91%
2022	114MRP22	SLN 2022 Main Replacement Program	$ 4,582,556	$ 3,270,515	$ 1,312,041	71.37%
2022	SLN0900	Meter Replacement Program	$ 204,735	$ 204,735	$ -	100.00%
2022	114UNSCH	Unscheduled Replacements	$ 2,542,910	$ -	$ 2,542,910	0.00%
2022		**Specific Total**	$ 9,314,247	$ 4,339,681	$ 4,974,567	46.59%
2022	114-NON-SP	**Non-specific Total**	$ 1,016,468	$ 813,174	$ 203,294	80.00%
2022		**Previously Funded but not in Service Projects Total**	$ 6,734,866	$ -	$ 6,734,866	0.00%
		TOTAL 2022	$ 17,065,582	$ 5,152,855	$11,912,726	30.19%

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	125746	SLN New Customer Parking Lot	$ 1,217,050	$ 1,106,409	$ 110,641	90.91%
2023	123706	SLN 040-PT1 - Pressure Vessel Replacement	$ 301,372	$ 262,176	$ 39,195	86.99%
2023	123708	SLN 304-PT1 - Pressure Vessel Replacement	$ 290,796	$ -	$ 290,796	0.00%
2023	125493	SLN 2023 Physical Security Upgrades	$ 381,998	$ 83,433	$ 298,565	21.84%
2023	123299	SLN 2023 CP Upgrades	$ 47,578	$ 18,599	$ 28,980	39.09%
2023	123845	SLN 2023 Control Valve Overhaul	$ 79,143	$ 48,300	$ 30,843	61.03%
2023	123678	SLN 058-A - Replace Pump & Motor	$ 35,649	$ 25,252	$ 10,398	70.83%
2023	123699	SLN 072-PT1 - Pressure Vessel Rehab	$ 83,833	$ -	$ 83,833	0.00%
2023	124166	SLN 2023 Flowmeter Replacement	$ 146,195	$ 121,829	$ 24,366	83.33%
2023	125550	SLN 2023 Vault replacement	$ 169,169	$ 153,790	$ 15,379	90.91%
2023	124037	SLN 2023 Customer Meter Vault Lids	$ 29,615	$ 26,922	$ 2,692	90.91%
2023	125489	SLN 2023 Toro Hydrant Replacement	$ 114,115	$ 103,741	$ 10,374	90.91%
2023	123774	SLN 2023 Vehicle Replacement Program	$ 96,207	$ -	$ 96,207	0.00%
2023	124252	SLN 2023 Additional Valve Truck	$ 148,080	$ 134,618	$ 13,462	90.91%

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	114MRP23	SLN 2023 Main Replacement Program	$ 4,697,120	$ 3,352,278	$ 1,344,842	71.37%
2023	SLN0900	Meter Replacement Program	$ 209,854	$ 209,854	$ -	100.00%
2023	114UNSCH	Unscheduled Replacements	$ 2,606,483	$ -	$ 2,606,483	0.00%
2023		**Specific Total**	$ 10,654,257	$ 5,647,201	$ 5,007,056	53.00%
2023	114-NON-SP	**Non-specific Total**	$ 1,041,978	$ 833,582	$ 208,396	80.00%
2023		**Previously Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2023	$ 11,696,234	$ 6,480,783	$ 5,215,451	55.41%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	00123884	SLN Wildfire Oak Hills Grid Improvement	$ 3,240,244	$ 2,477,251	$ 762,993	76.45%
2024	00123707	SLN 303-PT1 - Pressure Vessel Replacement	$ 314,932	$ -	$ 314,932	0.00%
2024	00123839	SLN 071: Sta Rebuild - Design	$ 449,708	$ -	$ 449,708	0.00%
2024	00124034	SLN STA 304 Panelboard Installation	$ 304,658	$ 255,987	$ 48,671	84.02%
2024	00124774	SLN 060-PT1 - Pressure Vessel Replacement	$ 314,932	$ 273,973	$ 40,959	86.99%
2024	00125060	SLN 155 Zone: New Well - Design	$ 1,164,284	$ -	$ 1,164,284	0.00%
2024	00125061	SLN 045 Wildfire Station Upgrade	$ 1,808,509	$ 1,508,348	$ 300,161	83.40%
2024	00125494	SLN 2024 Physical Security Upgrades	$ 228,606	$ 81,631	$ 146,975	35.71%
2024	00123305	SLN 2024 CP Upgrades	$ 37,456	$ 14,642	$ 22,814	39.09%
2024	00123846	SLN 2024 Control Valve Overhaul	$ 80,416	$ 49,014	$ 31,402	60.95%
2024	00123682	SLN 020-01 - Replace Pump & Motor	$ 87,251	$ 61,869	$ 25,382	70.91%
2024	00123837	SLN 2024 Control Valve Replacement	$ 36,853	$ 11,249	$ 25,604	30.52%
2024	00123932	SLN Sta 47 Genset Installation	$ 311,662	$ 271,546	$ 40,116	87.13%
2024	00123960	SLN Sta 57 Panelboard Replacement	$ 343,271	$ 285,662	$ 57,610	83.22%
2024	00123982	SLN STA 058 Wildfire New Generator	$ 242,915	$ 200,078	$ 42,837	82.37%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	00124013	SLN STA 61 Panelboard Replacement	$ 318,701	$ 268,818	$ 49,883	84.35%
2024	00124026	SLN STA 205 Wildfire New Generator	$ 254,737	$ 199,762	$ 54,975	78.42%
2024	00124167	SLN 2024 Flowmeter Replacement	$ 150,423	$125,353	$ 25,071	83.33%
2024	00123881	SLN 039: As Treatment Plant - Design	$ 596,659	$ -	$ 596,659	0.00%
2024	00123811	SLN Las Lomas Intertie Design	$ 88,195	$ -	$ 88,195	0.00%
2024	00125551	SLN 2024 Vault replacement	$ 173,398	$157,635	$ 15,763	90.91%
2024	00124038	SLN 2024 Customer Meter Vault Lids	$ 30,355	$ 27,595	$ 2,760	90.91%
2024	00125052	SLN Wharfhead Replacements	$ 86,901	$ 79,001	$ 7,900	90.91%
2024	00125664	SLN 2024 Toro Hydrant Replacement	$ 116,967	$ 106,334	$ 10,633	90.91%
2024	00123776	SLN 2024 Vehicle Replacement Program	$ 169,340	$ -	$ 169,340	0.00%
2024	114MRP24	SLN 2024 Main Replacement Program	$ 4,814,548	$ 3,436,085	$ 1,378,463	71.37%
2024	SLN0900	Meter Replacement Program	$ 215,182	$ 205,971	$ 9,211	95.72%
2024	114UNSCH	Unscheduled Replacements	$ 2,671,645	$ -	$ 2,671,645	0.00%
2024		**Specific Total**	$ 18,652,750	$ 10,097,803	$ 8,554,947	54.14%
2024	114-NON-SP	**Non-specific Total**	$ 1,068,139	$ 854,511	$ 213,628	80.00%
2024		**Previously Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 19,720,889	$ 10,952,315	$ 8,768,575	55.54%

Attachment 5-2: Salinas District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures

Att. Table 5-2: Salinas District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[241]

Salinas	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$ 11,545,128	100.00%
Cal Advocates	$ 5,152,855	$ 6,480,783	$ 10,952,315	$ 7,528,651	65.21%
CWS	$ 17,065,582	$ 11,696,234	$ 19,720,889	$ 16,160,902	139.98%

[241] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

Attachment 5-3: Previously Funded but Not in Service Projects – Salinas District

Att. Table 5-3: Previously Funded but Not in Service Projects – Salinas District[242]

Year	Description	Work Order #	2022
2022	Replace six RTUs	117379	$ 199,187
2022	Country Meadows Interconnection	98607	$ 2,764,228
2022	SLN 016-02 Replace Pump and Motor	115409	$ 109,431
2022	SLN 50-A Replace Pump and Motor	115412	$ 43,594
2022	SLN 050-01 Replace Pump and Motor	115416	$ 31,994
2022	SLN 204-T1 - Replace Cupola Vent	115645	$ 12,358
2022	2021 Vehicle Replacement Program	115835	$ 247,696
2022	Proposed 250K Storage Tank LL 302	115854	$ 1,016,260
2022	Install Booster Pumps SLN 50	115930	$ 303,912
2022	SLN 108-A Pump & Motor Replacement	115938	$ 52,134
2022	SLN 2020 Flowmeter Replacements	116666	$ 243,902
2022	SLN 2021 Flowmeter Replacements	116667	$ 203,252
2022	SLN 2021 Physical Security Upgrades	117251	$ 67,480
2022	SLN-049 PSPS Genset	121171	$ 231,081
2022	PSPS SLN-040 New Genset and ATS	121246	$ 203,252
2022	SLNH Zonal Interconnections Study	123004	$ 1,005,105

[242] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

Attachment 6-1: District Capital Budget Details – King City District

Att. Table 6-1: Capital Budget Details – King City District[243]

[243] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2022	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2022	00125127	KC 010: New Bladder Tank	$ 119,707	$ 106,430	$ 13,277	88.91%
2022	00125461	KC 2022 Physical Security Upgrades	$ 123,140	$ 71,223	$ 51,917	57.84%
2022	00125745	KC 006: New Bladder Tank	$ 119,707	$ 106,430	$ 13,277	88.91%
2022	00123245	KC Tank Exterior Ladder Lifelines	$ 13,400	$ 12,121	$ 1,279	90.45%
2022	00123832	KC 2022 Control Valve Replacement	$ 64,859	$ 21,266	$ 43,593	32.79%
2022	00124175	KC 2022 Flowmeter Replacement	$ 54,686	$ 45,572	$ 9,114	83.33%
2022	00125140	KC 2022 Sample Sites	$ 7,888	$ 5,456	$ 2,432	69.17%
2022	00125258	KC 2022 Replace mainline valves	$ 34,671	$ 31,519	$ 3,152	90.91%
2022	00125262	KC 2022 Valve Casings/Covers	$ 21,380	$ 19,437	$ 1,944	90.91%
2022	00125004	KC 2022 SB 1398 Service Replacement	$ 805,127	$ 345,088	$ 460,039	42.86%
2022	00124015	KC 2022 Customer Meter Vault Lids	$ 14,446	$ 13,133	$ 1,313	90.91%
2022	00124319	KC 2022 Hydrant Replacements	$ 55,237	$ 50,215	$ 5,022	90.91%
2022	00123744	KC 2022 Vehicle Replacement Program	$ 57,125	$ -	$ 57,125	0.00%
2022	109MRP22	KC 2022 Main Replacement Program	$ 680,582	$ 402,537	$ 278,045	59.15%
2022	KCD0900	Meter Replacement Program	$ 31,498	$ 31,498	$ -	100.00%
2022	109UNSCH	Unscheduled Replacements	$ 295,492	$ -	$ 295,492	0.00%
2022		**Specific Total**	$ 2,498,944	$ 1,261,923	$ 1,237,022	50.50%
2022	109-NON-SP	**Non-specific Total**	$ 46,700	$ 37,360	$ 9,340	80.00%
2022		**Previously Funded but not in Service Projects Total**	$ 1,272,899	$ -	$ 1,272,899	0.00%
		TOTAL 2022	$ 3,818,543	$ 1,299,282	$ 2,519,261	34.03%

2023	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2023	00125462	KC 2023 Physical Security Upgrades	$ 60,544	$ 83,433	$ (22,889)	137.81%
2023	00123304	KC 010-T1 - Tank Retrofits	$ 12,621	$11,386	$ 1,236	90.21%
2023	00123835	KC 2023 Control Valve Replacement	$ 65,049	$ 21,252	$ 43,797	32.67%
2023	00125260	KCD Replace Mainline Valves - 2023	$ 35,537	$ 32,307	$ 3,231	90.91%
2023	00125263	KC 2023 Valve Casings/Covers	$ 21,915	$ 19,922	$ 1,992	90.91%
2023	00125005	KC 2023 SB 1398 Service Replacement	$ 466,903	$ 424,458	$ 42,446	90.91%
2023	00124016	KC 2023 Customer Meter Vault Lids	$ 14,807	$ 13,461	$ 1,346	90.91%
2023	00124498	KC 2023 Hydrant Replacements	$ 56,617	$ 51,470	$ 5,147	90.91%
2023	109MRP23	KC 2023 Main Replacement Program	$ 697,596	$ 412,600	$ 284,996	59.15%
2023	KCD0900	Meter Replacement Program	$ 32,285	$ 23,379	$ 8,907	72.41%
2023	109UNSCH	Unscheduled Replacements	$ 302,879	$ -	$ 302,879	0.00%
2023		**Specific Total**	$ 1,766,755	$ 1,093,667	$ 673,087	61.90%
2023	109-NON-SP	**Non-specific Total**	$ 47,841	$ 38,272	$ 9,568	80.00%
2023		**Previously Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2023	$ 1,814,595	$ 1,131,940	$ 682,655	62.38%

2024	Work Order #	Project Description	CWS	Cal Advocates	CWS > Cal Advocates	Cal Advocates / CWS
2024	00125463	KC 2024 Physical Security Upgrades	$ 38,334	$ 81,631	$ (43,298)	212.95%
2024	00124120	KC STA 14 Generator Installation	$ 271,148	$ 226,146	$ 45,001	83.40%
2024	00125261	KC 2024 Replace Mainline Valves	$ 36,426	$ 33,114	$ 3,311	90.91%
2024	00125264	KC 2024 Valve casings/covers	$ 22,463	$ 20,421	$ 2,042	90.91%
2024	00125006	KC 2024 SB 1398 Service Replacement	$ 521,525	$ 474,114	$ 47,411	90.91%
2024	00124017	KC 2024 Customer Meter Vault Lids	$ 15,177	$ 13,798	$ 1,380	90.91%
2024	00124499	KC 2024 Hydrant Replacements	$ 58,033	$ 52,757	$ 5,276	90.91%
2024	109MRP24	KC 2024 Main Replacement Program	$ 715,036	$ 422,915	$ 292,121	59.15%
2024	KCD0900	Meter Replacement Program	$ 33,092	$ 23,963	$ 9,129	72.41%
2024	109UNSCH	Unscheduled Replacements	$ 310,451	$ -	$ 310,451	0.00%
2024		**Specific Total**	$ 2,021,685	$ 1,348,859	$ 672,826	66.72%
2024	109-NON-SP	**Non-specific Total**	$ 49,226	$ 39,381	$ 9,845	80.00%
2024		**Previously Funded but not in Service Projects Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 2,070,911	$ 1,388,240	$ 682,671	67.04%

Attachment 6-2: King City District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures

Att. Table 6-2: King City District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[244]

King City	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$ 1,712,400	100.00%
Cal Advocates	$ 1,299,282	$ 1,131,940	$ 1,388,240	$ 1,273,154	74.35%
CWS	$ 3,818,543	$ 1,814,595	$ 2,070,911	$ 2,568,016	149.97%

[244] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

Attachment 6-3: Previously Funded but Not in Service Projects – King City District

Att. Table 6-3: Previously Funded but Not in Service Projects – King City District[245]

Year	Description	Work Order #	2022
2022	New 5,800 gal Pressure Tank Sta.12	114350	$ 299,400
2022	KC 013-T1 - Cupola Vent Install	116143	$ 17,073
2022	King City WSFMP	116581	$ 120,066
2022	Water Quality Instrumentation - KC	118135	$ 23,352
2022	KC Metz Rd New Main	122987	$ 813,008

[245] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie L. Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office Witness(es)	:	Isaac Gendler

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

Report on Plant for Districts: BAKERSFIELD, KERN RIVER VALLEY, SELMA, AND VISALIA

California Water Service Company

Test Year 2023 General Rate Case

A.21-07-002

San Francisco, California
February 4, 2022

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MEMORANDUM

This Report on Plant for California Water Service Company (Cal Water) General Rate Case (GRC) A.21-07-002 is prepared by Isaac Gendler of the Public Advocates Office of the California Public Utilities Commission (Cal Advocates) - Water Branch, and under the general supervision of Program Manager Richard Rauschmeier, Program & Project Supervisors Syreeta Gibbs, and Project Lead Brian Yu. Marybelle Ang and Caryn Mandelbaum serve as legal counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any particular issue connotes neither agreement nor disagreement of the underlying request, methodology, or policy position related to that issue.

CHAPTER 1 Plant - Bakersfield District

I. INTRODUCTION

This chapter presents analyses and recommendations for the Plant in Service for Cal Water's Bakersfield District.

II. SUMMARY OF RECOMMENDATIONS

- The Commission should approve $1,599,955 in Test Year (TY) 2023 to build the booster facility at Bakersfield North Gardens. This amount excludes $1,219,318 in funding proposed by Cal Water for a storage tank because the tank is not needed at this time.
- The Commission should deny the entirety of the $216,157 of funds Cal Water's proposal for the Partial Rebuild at Station 87 and require Cal Water to resubmit the request in its next GRC application cycle since no physical work is proposed or planned in the current GRC application.
- The Commission should approve $394,795 in TY 2023 to build the Flowmeter & Building and Panelboard Replacement at Station 116. This amount excludes $257,369 in funding proposed by Cal Water for an electrical component replacement because it is not needed at this time.
- The Commission should approve the removal of lead paint at station 148 for $8,329 in TY 2023 instead of $424,112 for a complete building and panelboard replacement because a complete replacement is unnecessary at this time.
- The Commission should deny the entirety of the $2,920,402 of funds in TY 2023 for the BK 2024 Well Replacement Program because it is not needed.
- The Commission should deny Cal Water's request for $1,305,235 in TY 2023 to install the Well PFAS Treatment at Station 49 because it is not needed.

These recommendations form the basis of Cal Advocates' recommended capital budget summary presented in **Attachments 1-1, 1-2,** and **1-3.**

III. ANALYSIS

A. Specific Projects

1. *BKNG Tank & Booster Facility (PID: 123165)*

Cal Water requests $2,819,271 in TY23 to build a Booster Facility at Bakersfield North Gardens. Cal Water's request includes $1,219,318 in funding for a storage tank in addition to total project contingency and special inspection.[1] The Commission should approve $1,599,955 which excludes the storage tank because it is not needed at this time. The Max Day Demand (MDD) and Peak Hour Demand (PHD) for the Bakersfield North Gardens (BKNG) subsystem has already been met.[2] A new storage tank is not needed at this time and would unnecessarily increase costs and burden ratepayers.

Please refer to Cal Advocate's report on Common Plant Issues, Contingency - Chapter 16 by Suliman Ibrahim for a full discussion concerning treatment of contingency requests in this GRC.

2. *Partial Rebuild Station 87 (PID: 123185)*

The Commission should deny $216,157 in TY 2023 requested for the Partial Rebuild at Station 87 and require Cal Water to resubmit the project and funding proposal in its next GRC application. According to Cal Water, "For the 2021 General Rate Case (GRC) application, Cal Water is proposing to complete only the design and permitting of the recommended solution given the significant number of unknowns, design challenges, and timing required to complete the design and secure all the necessary permits."[3] Since no physical work is proposed or planned during this rate cycle the project should be denied and resubmitted in a future GRC application. Please refer to the direct testimony

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[1] Capital Project Justifications – Bakersfield Report BK PJ – 89 - 90

[2] Capital Project Justifications – Bakersfield Report BK PJ – 210

[3] Capital Project Justifications – Bakersfield Report BK PJ – 108

of Justin Menda for a full discussion concerning treatment of design and permitting project requests in this GRC.

3. *Flowmeter & Building, Panelboard Replacement Station 116 (PID: 123190)*

Cal Water requests $752,064 for TY 2023 to replace its Flowmeter & Building, Panelboard Replacement, and electrical component at Station 116. In the response to discovery, Cal Water provided the log of maintenance performed on the electrical components at Station 116 by Cal Water's Electrical Maintenance Technicians and SCADA Technicians.[4] The maintenance log showed that none of the repairs completed on the panelboard took more than one day to complete, with most lasting a few hours and the longest lasting 8 hours. Eleven of the fifteen repair work orders completed in the past ten years (2011-2020) were for maintenance.[5] The electrical components appear to be fine and fit for continued service for customers based on this condition assessment.

The proposed electrical component replacement is not needed at this time and would burden ratepayers with unnecessary costs. Therefore, $357,269 should be excluded from the amount proposed by Cal Water. The Commission should approve $394,795 to build the Flowmeter & Building and Panelboard Replacement at Station 116 without the electrical components.

Labor contingencies for this project should also be denied. Please refer to Cal Advocate's report on Common Plant Issues, Contingency Chapter by Suliman Ibrahim for a full discussion concerning treatment of contingency requests in this GRC.

4. *Station 148 Building & Panelboard Replacement (PID: 123193)*

Cal Water requests $424,112 in TY 2023 for the Station 148 Building & Panelboard Replacement. The electrical panelboard replacement proposal should be

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[4] Attachment 1-4: Cal Water's response to Cal Advocates' data request ISC-021, Attachment 1

[5] 11 work orders for maintenance/15 work orders = 73.33% > 2/3

denied because it is unjustified and would serve no useful purpose for ratepayers. Instead, the Commission should approve $8,329 for lead paint removal and deny all remaining items in the project.

The log of maintenance performed at Station 148 by Cal Water's Electrical Maintenance Technicians and SCADA Technicians shows only minor repair action in the past 10 years (2011-2020).[6] The inspection report document for the electrical panel does not include any corrective action recommendation for replacement.[7]

The existing building was originally constructed in [the] 1960's and therefore was designed and constructed prior to any building code considerations.[8] Since buildings are grandfathered into the codes to the year they were constructed,[9] the current building is not violating any legal standard. The organization did not generate routine inspection reports or track maintenance and repair records for buildings.[10] The proposed pump house building demolition and replacement funding request should be denied since the building is not out of compliance and Cal Water has no record for building repairs and costs. The electrical conduit replacement should be denied as well since it will not be necessary with the building proposal being denied.

No security breaches were recorded in the building since measurements were started three years ago.[11]Though the crime map provided shows the station is in a high-crime neighborhood relative to the City of Bakersfield,[12] crime activity is still lower than

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[6] Attachment 1-5: Cal Water's response to Cal Advocates' data request ISC-022, Attachment 1

[7] Attachment 1-6: Cal Water's response to Cal Advocates' data request ISC-022, Attachment 2

[8] Attachment 1-7: Cal Water's response to Cal Advocates' data request ISC-022, Question 2

[9] Grandfathering clauses are not referenceable since they're not a part of building codes since those only govern how new buildings should be built, not past ones.

[10] Attachment 1-7: Cal Water's response to Cal Advocates' data request ISC-022, Question 2

[11] Attachment 1-7: Cal Water's response to Cal Advocates' data request ISC-022, Question 4.a

[12] Attachment 1-8: Cal Water's response to Cal Advocates' data request ISC-022, Attachment 5

cities such as Santa Monica and Emeryville.[13] Thus, the security component proposal should be denied as no break-ins were recorded or are anticipated at the station.

According to the Bakersfield station 148 maintenance log that Cal Water provided, no repairs were recorded for the motor breaker and the last repairs performed on the starter were in 2015 and the main breaker in 2011. The replacement of the starter, motor breaker, and main breaker and any related contingencies should be denied since there has been a paucity of repairs needed.

For this project, the Commission should only approve $8,329 for lead paint removal to ensure the lead paint is be removed and properly disposed through lead abatement.

5. *BK 2024 New Well Project[14] (PID: 123434)*

The Commission should deny $2,920,402 in TY 2023 for the BK 2024 New Well Project. Plant items can operate well past the anticipated life expectancy under stable operating conditions.

When asked about non-age-based failure conditions, Cal Water indicated that only "[s]even wells, based on a limited quantity of advanced assessments were determined to be in poor condition" out of 135 active wells.[15] Since this amounts to only 5.19%,[16] of wells being in confirmed poor condition for non-age-related reasons, there is not enough evidence to justify a new well. Therefore, the funding for this proposal, $2,920,402, should be denied.

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[13] Bakersfield ranks number 40 out of California cities with a population above 100,000 for overall crime, lower than Santa Monica Michael McKneely, Criminal Defense Lawyer | Top 100 Most Dangerous Cities in California: 2018 (fresnocriminalattorney.com)

[14] Cal Water defines this as a "BK 2024 Well Replacement Program" when in fact the entire project is just to design and build a new well.

[15] Attachment 1-9: Cal Water's response to Cal Advocates' data request ISC-032, Attachment 1

[16] 7 wells/135 wells ~= 5.19%

6. *Well PFAS Treatment at Station 49 (PID: 125251)*

The Commission should deny $1,305,235 for TY 2023 for the Well PFAS Treatment at Station 49.

The Commission adopted a Resolution about Perfluorooctanoic acid ("PFOA") and Perfluoroocatane sulfonate ("PFOS") testing which recommended delaying approvals for treatment plants until California establishes MCLs for PFAS.[17] Consistent with previous decisions, Cal Water should wait until MCLs for PFAS substances are established and the treatment needs are determined before constructing a treatment plant. The Commission should not authorize funding to construct PFAS treatment plants until MCLs for PFAS substances are established and treatment needs have been determined.

B. Non-Specific Budgets

Refer to Cal Advocate's Report on Common Plant Issues: Non-Specific Budgets chapter by Zaved Sarkar regarding non-specific budget for 2022, 2023, and 2024.

C. Carry-Over Budget

Refer to Cal Advocate's Report on Common Plant Issues: Previously Funded Incomplete Projects chapter by Suliman Ibrahim regarding carry over budgets & previously authorized but not in service.

IV. CONCLUSION

The Commission should make the adjustments for Cal Water's Bakersfield District as specified below in Table 1-A which compares proposed and recommended estimates.[18]

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[17] California Public Utilities Commission Resolution W-5226.

[18] These recommended adjustments include those presented in the Cal Advocate's Report on Common Issues that affected the specific projects listed above such as Contingency adjustments.

Table 1-A Bakersfield District Cal Advocates Recommended vs. Cal Water's Proposed Budgets (Direct Costs)

Item	Recommended	Proposed	Difference
PID 123165: BKNG Tank & Booster Facility	$1,599,955	$2,819,273	($1,219,317)
PID 123185: Partial Rebuild Station 87	$0	$216,157	($216,157.00)
PID 123190: Flowmeter & Building, Panelboard Replacement Station 116	$394,795	$752,064	($357,269.01)
PID 123193: Station 148 Building & Panelboard Replacement	$8,329	$424,112	($415,783.45)
PID 123434: BK 2024 Well Replacement Program	$0	$2,920,402	($2,920,402.00)
PID 125251: Well PFAS Treatment at Station 49	$0	$1,305,235	($1,305,235.00)
Total	**$2,003,079**	**$8,437,243**	**($6,434,164)**

Attachment 1-1: Capital Budget Summary - Bakersfield District

Bakersfield	2022	2023	2024	Annual Average
Cal Advocates	$15,535,311	$15,761,109	$18,232,712	$16,509,711
CWS	$45,116,637	$34,173,191	$37,267,560	$38,852,463
CWS > Cal Advocates	$29,581,326	$18,412,082	$19,034,848	$22,342,752
Cal Advocates as % CWS	34.43%	46.12%	48.92%	42.49%

Attachment 1-2: Capital Budget Details - Bakersfield District:

2022	Work Order #	Project Description		Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00124745	BKD 147 Storage Tank Replacement		$818,340	$977,098	$158,758	83.75%
2022	00125251	BK 49-03 GAC Treatment		-	$1,305,235	$1,305,235	0.00%
2022	00125421	BK 2022 Physical Security Upgrades		$71,223	$920,623	$849,400	7.74%
2022	00124262	BK 081-01 Well Renewal		$263,487	$302,076	$38,589	87.23%
2022	00123130	BK 2022 CP Upgrades		$26,664	$68,209	$41,546	39.09%
2022	00123132	BK 116-T1 - Tank Retrofits		$29,102	$32,175	$3,073	90.45%
2022	00123142	BK 116-T1 - Seismic Retrofit		$69,639	$76,993	$7,354	90.45%
2022	00123367	BK 2022 Control Valve Overhaul		$34,444	$55,825	$21,380	61.70%
2022	00123371	BK 116-T3 - Tank Retrofits		$25,203	$27,865	$2,661	90.45%
2022	00123510	BK Tank Exterior Ladder Lifelines		$165,622	$183,110	$17,488	90.45%
2022	00123625	BK 073-T5 Tank Retrofits		$18,433	$20,380	$1,947	90.45%
2022	00123626	BK 188-T1 - Seismic Retrofit		$63,522	$70,231	$6,708	90.45%
2022	00123628	BK 188-T2 - Seismic Retrofit		$69,639	$76,993	$7,354	90.45%
2022	00124173	BK 209 Panel Shade Awning		$10,930	$13,226	$2,296	82.64%
2022	00124729	BK 045-T1 - Tank Roof Replacement		$426,646	$471,699	$45,053	90.45%
2022	00123430	BK 087-E Replace Pump & Motor		$50,039	$70,568	$20,529	70.91%
2022	00123437	BK 091-C Replace Pump & Motor		$31,889	$44,972	$13,083	70.91%
2022	00123471	BK 100-E Replace Pump & Motor		$31,889	$45,359	$13,470	70.30%
2022	00123642	BK 176-A VFD Install		$58,415	$70,682	$12,267	82.65%
2022	00123654	BK 162-A Replace Pump & Motor		$31,889	$44,972	$13,083	70.91%
2022	00123658	BK 162-B - Replace Pump & Motor		$31,889	$44,972	$13,083	70.91%
2022	00123925	BK 2022 Flowmeter Replacement		$98,430	$118,116	$19,686	83.33%
2022	00124169	BK 194 Sta Valve Replacement		$15,631	$17,194	$1,563	90.91%
2022	00124172	BK 202 Chemical Enclosure		$18,036	$19,840	$1,804	90.91%
2022	00124291	BK 040-02 - Replace Pump & Motor		$144,842	$159,327	$14,484	90.91%
2022	00124295	BK 134-01 - Replace Pump & Motor		$141,830	$156,013	$14,183	90.91%
2022	00124328	BK 2022 Misc Pumping Equipment		$24,048	$26,453	$2,405	90.91%
2022	00124280	BKD 2022 chemical pump replacements		$17,378	$19,116	$1,738	90.91%
2022	00124358	BK 2022 GAC Media Replacement		$901,391	$986,913	$85,523	91.33%
2022	00124979	BK 2022 Analyzer Replacements		$11,099	$12,209	$1,110	90.91%
2022	00123401	BK 2022 Control Valve Replacements		$47,317	$150,666	$103,349	31.41%
2022	00124934	BK 2022 Sample Sites		$5,183	$7,493	$2,310	69.17%
2022	00123195	BK 2022 Poly Service Replacements		$606,213	$666,834	$60,621	90.91%

2022	00123974	BK 2022 Customer Meter Vault Lids		$24,952	$27,448	$2,495	90.91%
2022	00124412	BK 2022 Flat to Meter		$2,421,588	$2,663,746	$242,159	90.91%
2022	123159	BK 2022 Vehicle Replacement Program		-	-	-	0.00%
2022	00123863	BK 2022 CARB VEHICLE REPLACEMENT		$471,332	$518,466	$47,133	90.91%
2022	101MRP22	BK 2022 Main Replacement Program		$6,234,293	$14,850,914	$8,616,621	41.98%
2022	BKD0900	Meter Replacement Program		$390,754	$416,823	$26,069	93.75%
2022	101UNSCH	Unscheduled Replacements		-	$5,298,558	$5,298,558	0.00%
2022		**Specific Total**		$13,903,224	$31,039,390	$17,136,166	44.79%
2022	101-NON-SP	**Non-specific Total**		$1,632,086	$2,040,108	$408,022	80.00%
2022		**Carry-Over Total**		-	$12,037,139	$12,037,139	0.00%
		TOTAL 2022		$15,535,311	$45,116,637	$29,581,326	34.43%

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2023	Work Order #	Project Description		Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00123171	BK 2023 Vehicle Replacement Program		-	$38,727	$38,727	0.00%
2023	00123180	BK 150 Surge Tank		$275,229	$245,662	$(29,567)	112.04%
2023	00123181	BKNG 219 Surge Tank		$217,882	$245,662	$27,780	88.69%
2023	00123183	BK 186 Corner Tank BFV Controls		$77,108	$77,108	-	100.00%
2023	00123190	BK 116 PB & Building Replacement		$394,795	$752,064	$357,269	52.49%
2023	00123194	BK 23 Building Replacement		$203,077	$234,554	$31,477	86.58%
2023	00123196	BK 2023 Poly Service Replacements		$621,368	$683,505	$62,137	90.91%
2023	00123201	BK 82 Piping Replacement		$73,238	$84,590	$11,352	86.58%
2023	00123345	BK 096-T2 - Tank Retrofits		$14,731	$16,330	$1,598	90.21%
2023	00123347	BK 096-T3 - Tank Retrofits		$14,731	$16,330	$1,598	90.21%
2023	00123352	BK 096-T4 - Tank Retrofits		$18,861	$20,908	$2,047	90.21%
2023	00123377	BK 2023 Control Valve Overhaul		$34,881	$56,121	$21,240	62.15%
2023	00123441	BK 2023 Control Valve Replacements		$54,909	$176,174	$121,265	31.17%
2023	00123473	BK 144-01 Replace Pump & Motor		$57,034	$80,433	$23,399	70.91%
2023	00123475	BK 195-01 Replace Pump & Motor		-	$80,433	$80,433	0.00%
2023	00123595	BK 100-F Install VFD		$63,869	$70,256	$6,387	90.91%
2023	00123607	BKD 116-G Install VFD		$60,166	$72,801	$12,635	82.64%
2023	00123637	BK 218-E Install VFD		$63,559	$69,915	$6,356	90.91%
2023	00123643	BK 212-D Replace Pump & Motor		$34,119	$48,117	$13,998	70.91%
2023	00123644	BK 209-A VFD Install		$58,068	$63,875	$5,807	90.91%
2023	00123645	BK 116-F Replace Pump & Motor		$62,629	$68,892	$6,263	90.91%
2023	00123655	BK 148-T1 - Tank Retrofit		$40,698	$45,114	$4,417	90.21%
2023	00123735	BK 2022 Field Equipment/Tools		$34,333	$37,766	$3,433	90.91%
2023	00123936	BK 116-PT1 Pressure Vessel Replace		$295,985	$325,584	$29,599	90.91%
2023	00123961	BK 2023 Flowmeter Replacements		$124,892	$137,382	$12,489	90.91%
2023	00123975	BK 2023 Customer Meter Vault Lids		$25,576	$28,134	$2,558	90.91%
2023	00124190	BK Sta 96 Vault Lid Replacement		$94,282	$103,710	$9,428	90.91%
2023	00124286	BK 2023 Chemical Pump Replace		$18,168	$18,168	-	100.00%
2023	00124302	BK 079-01 Well Renewal		$262,763	$299,673	$36,910	87.68%
2023	00124325	BK Sta 96 Isolation Valve install		$51,426	$62,226	$10,800	82.64%
2023	00124329	BK 2023 MISC PUMPING EQUIPMENT		$25,142	$27,656	$2,514	90.91%
2023	00124364	BK 2023 GAC Media Replacement		$310,141	$339,605	$29,463	91.32%
2023	00124419	BK 2023 Flat to Meter		$2,531,770	$2,784,947	$253,177	90.91%

2023	00124819	BK 2023 NEWTP Filter Modules		$288,503	$317,353	$28,850	90.91%
2023	00124822	BK NEWTP Traveling Screen Rebuild		$161,730	$177,903	$16,173	90.91%
2023	00124824	BK NEWTP CIP Neutralization Tank		$172,265	$206,718	$34,453	83.33%
2023	00124826	BK NWWTP Algal Toxin Study		$108,984	$119,883	$10,899	90.91%
2023	00124828	BK NEWTP Algal Toxin Study		$103,778	$114,156	$10,378	90.91%
2023	00124983	BK 2023 Analyzers Replacement		$4,468	$4,915	$447	90.91%
2023	00125422	BK 2023 Physical Security Upgrades		$83,433	$914,755	$831,322	9.12%
2023	00126467	2023 BK 49 Carbon Change Outs		$132,220	$145,442	$13,222	90.91%
2023	BKCompVeh	BK Vehicle for Proposed Complement		-	-	-	0.00%
2023	101MRP23	BK 2023 Main Replacement Program		$6,390,150	$15,222,187	$8,832,036	41.98%
2023	101UNSCH	Unscheduled Replacements		-	$5,431,022	$5,431,022	0.00%
2023	BKD0900	Meter Replacement Program		$427,243	$427,243	-	100.00%
2023		**Specific Total**		$14,088,207	$30,493,999	$16,405,792	46.20%
2023	101-NON-SP	**Non-specific Total**		$1,672,902	$2,091,127	$418,225	80.00%
2023		**Carry-Over Total**		-	$1,588,064	$1,588,064	0.00%
		TOTAL 2023		$15,761,109	$34,173,191	$18,412,082	46.12%

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2024	Work Order #	Project Description		Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00123165	BK New Tank & Booster Facility		$1,219,318	$2,819,273	$1,599,955	43.25%
2024	00123185	BK 87 Station Rebuild - Design		-	$216,157	$216,157	0.00%
2024	00123193	BK 148 PB & Building Replacement		$8,329	$424,112	$415,783	1.96%
2024	00123200	BK 36-02 Piping Replacement		$75,962	$91,154	$15,192	83.33%
2024	00123684	BK Sta 146-04 Wildfire Generator		$285,109	$329,301	$44,192	86.58%
2024	00123721	BK 148 Generator Replacement		$219,296	$253,287	$33,991	86.58%
2024	00123850	BK 156 Generator Replacement		$208,610	$240,945	$32,335	86.58%
2024	00125423	BK 2024 Physical Security Upgrades		$81,631	$572,814	$491,182	14.25%
2024	00124306	BK 042-02 Well Renewal		$225,986	$248,584	$22,598	90.91%
2024	00123255	BK 213-T3 - Tank Retrofits		$11,839	$13,160	$1,321	89.96%
2024	00123376	BK 087-T5 - Tank Retrofits		$33,160	$36,858	$3,698	89.97%
2024	00123399	BK 2024 Control Valve Overhaul		$36,067	$58,101	$22,034	62.08%
2024	00123454	BK 100-T3 - Tank Retrofits		$32,407	$36,021	$3,614	89.97%
2024	00123456	BK 100-T1 - Tank Retrofits		$35,822	$39,818	$3,996	89.97%
2024	00123459	BK 073-T3 - Tank Retrofits		$29,807	$33,132	$3,325	89.96%
2024	00123662	BK 176-T2 - Seismic Retrofit		$159,066	$176,808	$17,742	89.97%
2024	00123675	BK 100-T4 - Tank Retrofit		$33,764	$37,530	$3,766	89.96%
2024	00123676	BK 176-T2 - Tank Retrofit		$24,466	$27,194	$2,728	89.97%
2024	00123176	BK 1025 Zone SCADA		$97,905	$97,905	-	100.00%
2024	00123409	BK 003-04 Replace Pump & Motor		$58,460	$82,444	$23,984	70.91%
2024	00123440	BK 097-B Replace Pump & Motor		$33,504	$47,249	$13,745	70.91%
2024	00123462	BK 097-C Replace Pump & Motor		$33,504	$47,249	$13,745	70.91%
2024	00123859	BK 215 VFD Controls Upgrades		$85,765	$99,059	$13,294	86.58%
2024	00123864	BK 162 Panelboard Replacement		$308,423	$356,228	$47,805	86.58%
2024	00123899	BK 212 Panelboard Replacement		$309,615	$357,605	$47,990	86.58%
2024	00123962	BK 2024 Flowmeter Replacements		$123,149	$135,464	$12,315	90.91%
2024	00124297	BK 042-02 - Replace Pump & Motor		-	$82,444	$82,444	0.00%
2024	00124331	BK 2024 pumping equipment		$26,286	$28,915	$2,629	90.91%
2024	00124290	BK 2024 chemical pump replace		$18,996	$20,895	$1,899	90.91%
2024	00124365	BK 2024 GAC Media Replacement		$72,580	$79,475	$6,895	91.32%
2024	00124820	BK 2024 NEWTP Filter Modules		$295,715	$325,287	$29,572	90.91%

2024	00124823	BK NWWTP Traveling Screen Rebuild		$81,475	$89,623	$8,148	90.91%
2024	00124986	BK 2024 Analyzers Replacement		$6,103	$6,713	$610	90.91%
2024	00126470	2024 BK Carbon Change Outs		$135,526	$149,079	$13,553	90.91%
2024	00123170	BK 675 Rezone		$1,357,349	$1,595,033	$237,684	85.10%
2024	00123425	BK 2024 Control Valve Replacement		$17,803	$57,371	$39,568	31.03%
2024	101MRP24	BK 2024 Main Replacement Program		$6,549,904	$15,602,741	$9,052,837	41.98%
2024	00123197	BK 2024 Poly Service Replacements		$636,902	$700,592	$63,690	90.91%
2024	00124420	BK 2024 Flat to Meter		$2,646,965	$2,911,662	$264,697	90.91%
2024	00123978	BK 2024 Customer Meter Vault Lids		$26,216	$28,837	$2,622	90.91%
2024	00123799	BK 2024 Vehicle Replacemnt Program		$426,851	$521,706	$94,856	81.82%
2024	00124178	BK 2023 Misc Field Equipment		$37,785	$41,564	$3,779	90.91%
2024	BKD0900	Meter Replacement Program		$410,534	$437,925	$27,391	93.75%
2024	101UNSCH	Unscheduled Replacements		-	$5,566,798	$5,566,798	0.00%
2024		**Specific Total**		$16,517,952	$35,124,110	$18,606,158	47.03%
2024	101-NON-SP	**Non-specific Total**		$1,714,760	$2,143,450	$428,690	80.00%
2024		**Carry-Over Total**		-	-	-	0.00%
		TOTAL 2024		$18,232,712	$37,267,560	$19,034,848	48.92%

Attachment 1-3: Capital Budget vs. Recorded Expenditure - Bakersfield District

Bakersfield	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$28,116,233	100%
Cal Advocates	$15,535,311	$15,761,109	$18,232,712	$16,509,711	59%
CWS	$45,116,637	$34,173,191	$37,267,560	$38,852,463	138%

Attachment 1-4: Cal Water's Response to Cal Advocates' Data Request ISC-021, Attachment 1:

Location	Work Order	Work Order Type	Labor Date	Craft	Transaction Type	Hours	Labor Notes
BK-116-PB01	198174	CM	7/30/2012	EMT	REG	3	Varified malf. ordered parts.
BK-116-PB01	198174	CM	7/31/2012	EMT	REG	3	Pick up parts and deliver to sites.
BK-116-PB01	198174	CM	8/2/2012	EMT	REG	1	Replaced roof vent fans.
BK-116-PB01	198174	CM	8/2/2012	EMT	REG	1	Install two vent fans.
BK-116-PB01	209922	CM	3/19/2013	EMT	REG	6	Repair and replace broken underground conduit from west Valley backhoe for booster H. Booster back in service.
BK-116-PB01	209922	CM	3/19/2013	EMT	REG	8	Repaired conduit, megged feeders, to booster H and tested. replaced power monitor. picked up new feeders booster G and checked additional wiring.
BK-116-PB01	209922	CM	3/20/2013	EMT	REG	2	Drop off new feeder wire at site and check for additional needs.
BK-116-PB01	209922	CM	4/1/2013	EMT	REG	6	Installed new wire in Conduit for Booster "G" ,conduit was full of mud and debris swabbed out and pulled in new conductors will terminate in the am 6-2-13
BK-116-PB01	209922	CM	4/2/2013	EMT	REG	4	terminated motor Booster "G" at University tanks
BK-116-PB01	217175	CM	7/22/2013	ENGINEER-ELEC	REG	5	help install and program red lion controler, tested ok , set at 70-95 psi

BK-116-PB01	221804	CM	10/14/2013	ENGINEER-ELEC	REG	2	HELP TONY FIND PROBLEM WITH H CONTROLS ,CONTROLS OK PRESSURE DIFFERENCE BETWEEN BUILDINGS, CLEARED PRESSURE LINES, OK
BK-116-PB01	229136	CM	1/30/2014	ENGINEER-ELEC	REG	1	MEET TODD TEST CONTROLS, OK
BK-116-PB01	228995	CM	2/3/2014	EMT	REG	3	Checked overload, amps and voltage and adjusted settings.
BK-116-PB01	229894	CM	2/3/2014	ENGINEER-ELEC	REG	2	HELP TONY GET NEW OL UNIT
BK-116-PB01	228995	CM	2/13/2014	EMT	REG	2	Checked on progress booster repairs
BK-116-PB01	228995	CM	2/18/2014	EMT	REG	4	Tested rewound motor after installation and checked with contractor.Checked amps.
BK-116-PB01	228995	CM	2/25/2014	EMT	REG	4	Booster F single phaseing, motor co. made in field repairs (bad connection) in motor. Test ran checked volts and amps.
BK-116-PB01	229894	CM	2/25/2014	ENGINEER-ELEC	REG	2	MOTOR RUNING AT 613 RPM, SINGLE PHASED INSIDE MOTOR, TEST WITH TONY,
BK-116-PB01	228995	CM	2/26/2014	EMT	REG	2	Checked operation of booster controls.
BK-116-PB01	229894	CM	2/26/2014	ENGINEER-ELEC	REG	2	REPAIRS TO MOTOR COMPLETED, TESTED OK, PUT F BACK IN LEAD
BK-116-PB01	228995	CM	4/3/2014	EMT	REG	4	Checked operation booster F and G.
BK-116-PB01	228995	CM	4/15/2014	EMT	REG	1	Booster operation normal.

BK-116-PB01	263137	EMGCY	6/11/2015	EMT	REG	2	Troubleshooted found bad coupling from motor to pump. Notify opertions, lock out/tag out main breaker and disconnect motor leads. Pump company came and repair coupling. Reconnect motor leads and test. Booster F back in service.
BK-116-PB01	263137	EMGCY	6/11/2015	EMT	REG	2	found coupling had failed and motor was running althoug pump was nonfunctional notified ops and contacted ops for repair
BK-116-PB01	306849	EMGCY	4/25/2016	EMT	REG	6	Took vibration test (good), check for loose connections, clean contacts/starter and replace electronic overload relay. Test and back in service.
BK-116-PB01	306849	EMGCY	4/25/2016	EMT	REG	6	Booster F size 4 starter continues to trip, amperages and voltages do not warrant a overload trip. dis-assembled starter and inspected internal components. Cleaned contacts and replaced overload block. Motor nameplate FLA 104 amps, Motor running 78 amps. Notified ops and returned to service.
BK-116-PB01	309982	CM	5/26/2016	EMT	REG	0.5	Picked up fans at vendor warehouse
BK-116-PB01	309982	CM	5/27/2016	EMT	REG	4.5	Replaced both roof vent fans

BK-116-PB01	309982	CM	5/27/2016	EMT	REG	4	Repalce south and north exhaust fans. Test and in serivce
BK-116-PB01	321299	PM	5/1/2017	EMT	REG	1	Took contractor to look at the job for panel PM
BK-116-PB01	321299	PM	5/11/2017	EMT	REG	4	Panel PM
BK-116-PB01	321299	PM	5/11/2017	EMT	REG	2	assisted with pm set-up, purchased new batteries for scada,
BK-116-PB01	321299	PM	5/17/2017	EMT	REG	2	Panel Pm
BK-116-PB01	321299	PM	5/17/2017	EMT	REG	3	Assist Contractor - PM
BK-116-PB01	321299	PM	5/17/2017	EMT	OTC	0.5	Assist Contractor - PM
BK-116-PB01	321299	PM	5/23/2017	EMT	REG	1	papaerwork
BK-116-PB01	340171	CM	8/18/2017	EMT	REG	5	Install red lion, programmed and test.
BK-116-PB01	340344	JOB	8/22/2017	EMT	REG	1	PG@E METER NO. 5000035422
BK-116-PB01	563861	JOB	12/22/2020	EMT	REG	2	Assist contractor in regards to soil sample for PGE Xfmr
BK-116-PB01	551468	PM	12/24/2020	EMT	REG	8	Panel board PM
BK-116-PB01	551468	PM	12/28/2020	EMT	REG	2	Panel Board PM
BK-116-PB01	551468	PM	12/29/2020	EMT	REG	1	Added station pictures and changed SCADA RTU Battery

Attachment 1-5: Cal Water's Response to Cal Advocates' Data Request ISC-022, Attachment 1:

Location	Location	Work Order	Work Order Type	Labor Date	Craft	Transaction Type	Labor Notes
FMT-001-PB01	BK-148-PB01	165870	CM	1/6/2011	EMT	REG	assisted on repair of 480vac main breaker failure
FMT-001-PB01	BK-148-PB01	168386	CM	4/5/2011	EMT	REG	Checked connections on unit and calibration.
FMT-001-PB01	BK-148-PB01	168386	CM	4/5/2011	EMT	REG	Checked connections and calibration.
FMT-001-PB01	BK-148-PB01	169779	CM	4/21/2011	EMT	REG	Lo-level protection relay problem by-passed lo-level protection while efficeincy test performed on booster, will replace or fix problem
FMT-001-PB01	BK-148-PB01	169793	CM	4/22/2011	EMT	REG	Found shorted wires in conduit from building to tank for low level protection. This problem is causing booster starter to chatter.
FMT-001-PB01	BK-148-PB01	168386	CM	4/25/2011	EMT	REG	Low level protection not working.
FMT-001-PB01	BK-148-PB01	169793	CM	4/25/2011	EMT	REG	Pulled new wire for low level protection and also drove new ground rod into earth for tank ground.
FMT-001-PB01	BK-148-PB01	169779	CM	4/26/2011	EMT	REG	installed new level indicator will need to verify scaling with scada
FMT-001-PB01	BK-148-PB01	173821	PM	9/26/2013	EMT	REG	Panel board PM.
FMT-001-PB01	BK-148-PB01	229137	CM	1/30/2014	ENGINEER-ELEC	REG	FOUND TIME CLOCK PROBLEM CLEARED.
FMT-001-PB01	BK-148-PB01	241683	PM	5/28/2015	EMT	REG	started PM.
FMT-001-PB01	BK-148-PB01	241683	PM	6/1/2015	EMT	REG	continued PM.
FMT-001-PB01	BK-148-PB01	241683	PM	6/3/2015	EMT	REG	Replaced roof fan.

FMT-001-PB01	BK-148-PB01	241683	PM	6/8/2015	EMT	REG	PM finished: However, motor meggered bad and had issues with supervisors on what direction we were taking. Checked motor with two meggers and two meters and it still looks bad to me. I will not start the unit unless I get signed off of responsibility by supervisors. Juan indicated he wanted the unit locked and tagged out until tomorrow.
FMT-001-PB01	BK-148-PB01	241683	PM	6/9/2015	EMT	REG	Disconnected motor for removal. Unit taken to shop for repair.
	BK-148-PB01	241683	PM	6/10/2015	EMT	REG	Called to remove lock from booster: Assisted in installation of new motor, took amp readings on new unit and all was well, put information on new motor on paperwork, assisted with cleanup and put station back in service.
	BK-148-PB01	263138	EMGCY	6/11/2015	EMT	REG	Waited for pump to set motor. Reconnect motor leads at JB and starter. Megger/rotation check, amp and voltage check.
	BK-148-PB01	263138	EMGCY	6/11/2015	EMT	REG	Pacific brought out new motor, installeed reconnected and terminated motor set stretch and verified rotation., notified ops and returned to operation. Documented amp and voltage readings for pm documentation

	BK-148-PBC1	241283	PV	6/19/2013	EVT	REG	Maxim:
	BK-148-PBC1	266023	CM	6/24/2013	EVT	REG	Tulare reported saw other than heat that may have caused the power interruptions will put power monitor on station to record incoming utility power
	BK-148-PBC1	266023	CM	6/30/2013	EVT	REG	Documented power variations sent to operations that occurred since saw the [illegible] causes the power interruption. Emailed PGE for a documentation of why we are seeing a power [illegible] and taking out power monitor. Suspect due to weather and power demands voltage is shifting and causing problems. We are the only 3 phase system in the neighborhood and seeing a significant drop on 2 phases. Will keep monitor on for OFF and monitor daily
	BK-148-PBC1	266023	CM	7/7/2013	EVT	REG	Checked on my events next month and started meter over.
	BK-148-PBC1	266023	CM	7/9/2013	EVT	REG	documented events no significant events will contact PG&E to see if they have any information as to the reason for the power voltage differentials for the last couple of weeks, will see what was to see if we want to continue power monitor monitoring
	BK-148-PBC1	266023	CM	7/10/2013	EVT	REG	

	BK 148 FBC1	298590	CM	12/2/2013	EVT	REG	Install new hour meter, had to punch new hole and drill new holes. Technician on rack in service
	BK-148-FBC1	[illegible]	CM	12/7/2013	EVT	REG	Repaired hour meter.
	BK 148 FBC1	298763	CM	1/6/2014	EVT	REG	pumped up manifold, adjusted settings on manifold switches, tested good, installed cap and had them [illegible] a start ck form, that boiler is running on time clock and space control stopping at desired set point. Buttoned everything up and returned to service
	BK 148 FBC1 BK 148 FBC1	[illegible] [illegible]	CM PM	3/6/2015 8/14/2015	EVT EVT	CLEAN REG	Transducer not reading properly. Cleaned valve line, transducer back in service Panel Board PM
	BK-148-FBC1	[illegible]	PM	[illegible]	EVT	REG	NULL

Attachment 1-6: Cal Water's Response to Cal Advocates' Data Request ISC-022, Attachment 2:

Craft	Asset Type	Work Type		Policy Name	Date
EMT	Panelboard	Preventive Maintenance		Panelboard Maintenance	8/1/17
CMMS WO #	District #	Station #	Temp & Weather	EMT Name	Power Co. Meter #
339458	BK 161	148 PB01	90° Sunny	Clarence Patrick	100939209

Job Safety and Job Preparation Notes

1. Please use all necessary PPE: Hearing protection required; Eye protection required; Arc Flash PPE Required when energized
2. Plan with district superintendent before any work is performed.
3. If any equipment or safety issues arise, please correct immediately before continuing.
4. Use a separate sheet for each motor.

Check Off Information	Y	N	N/A	Notes
Utility power de-energized?	☑	☐	☐	
Lockout/tagout applied?	☑	☐	☐	
Voltage and Arc Flash labels installed?	☑	☐	☐	
Panelboard cleaned/vacuumed?	☑	☑	☐	
Signs of rust or corrosion?	☐	☑	☐	
Tightened all connections?	☑	☐	☐	
Breakers/disconnects exercised?	☑	☐	☐	
Motor starters serviced?	☑	☐	☐	
Low level electrodes cleaned?	☐	☑	☐	
Overload sizing correct?	☑	☐	☐	
Motor terminations checked?	☑	☐	☐	
Control relays checked?	☑	☐	☐	
Ground connections checked? (*7)	☑	☐	☐	
Prints available?	☑	☐	☐	
Power Monitor installed?	☑	☐	☐	
Utility power re-energized?	☑	☑	☐	
IR Camera scanned for hot spots?	☐	☑	☐	
Thermographs attached to WO?	☑	☑	☐	
Motor space heaters operational?	☑	☐	☐	
Dust vacuumed from motor screens?	☑	☐	☐	
Is follow up work required?	☐	☐	☐	
Work Order written?	☐	☐	☐	
Replace RTU & PLC Battery?	☑	☐	☐	
Completed single line diagram attached?	☑	☐	☐	
Transducers checked?	☑	☐	☐	

Motor Name Plate Data

Manufacturer	U.S		
Motor I.D. (*6)	Y10 2606173-0012		
Serial #	Catalog OHS0V231.S		
Model #	0794		
H.P	50	Frame	326TP
S.F	1.15		
F.L.A.	52		

Flow Rate		Hr Mtr Read
N/A	GPM	3190.8

Suction Pressure	Discharge Pressure	
PSI	52 PSI	Off
PSI	50 PSI	Running

Off	Voltage	Running
498	A-B	487
500	B-C	490
500	A-C	489

Megger		Amps	
A OL	Ω	50	A
B OL	Ω	55	A
C OL	Ω	52	A

*** Notes**

1. Please attach all other outside testing information to the work order for future reference.
2. If possible, note why any testing information could not be performed/attained.
3. Note, if possible, where improvements in the electrical system can be made.
4. Note any possible issues you might foresee.
5. "Normal operation" = no unusual noise, vibration, hot spots, leaks, etc. and is clean of dirt, oil, moisture, etc.
6. "Motor ID" refers to the motor designation (i.e. Booster A or Well 01)
7. Check panelboard and motor ground connections. Make sure they are tight. Does motor have a ground wire?
8. Check that CMMS info is correct for Panelboard, Pump, Motor, Flowmeter, Chart Recorder, etc.
9. Collect district management signature, then attach the completed form to the work order.

Corrective Action Taken

Corrective Recommendations

Additional Comments and Budget Recommendations

California Water Service Company
Electrical Panelboard Maintenance Form

revised 11/07/07

Panelboard Data			
CMMS Work Order no:	241683	Date:	6-15-2015
District:	BAKERSFIELD	EMT (print name):	THOMAS RYAN
Station:	101 - 148	Ambient Temp:	100°F
Power Company Meter No.:	1009390209	Motor Hr Meter Reading:	21279.60

Check Off Information		
Utility power de-energized?	Yes ✓	No ___
Lockout Tagout applied?	Yes ✓	No ___
Load side of main serviced?	Yes ✓	No ___
Panel board cleaned/vacuumed?	Yes ✓	No ___
Signs of water intrusion?	Yes ___	No ✓
Tighten all connections?	Yes ✓	No ___
Breakers exercised?	Yes ✓	No ___
Disconnects exercised?	Yes ✓	No ___
Power circuit breakers serviced?	Yes ___	No ✓
Motor starters serviced?	Yes ✓	No ___
Overload relays checked?	Yes ✓	No ___
Motor-junction box checked?	Yes ✓	No ___
Control relays checked?	Yes ✓	No ___
Grounding connection checked?	Yes ✓	No ___
Prints Available?	Yes ___	No ✓
Power Monitor installed?	Yes ✓	No ___
Utility power re-energized?	Yes ✓	No ___
Scan for hot spots?	Yes ___	No ✓

Motor Data	
Motor ID (-A, -01, etc):	H050V2BLG
Motor serial no.:	DT94 - MODEL
Motor HP:	50

Megger Test:	
Phase A:	999 MΩ
Phase B:	↓
Phase C:	↓

Voltage readings:	
L1 - L2:	501
L2 - L3:	501
L1 - L3:	504

Amperage readings:	
Phase A:	50.1
Phase B:	52.3
Phase C:	50.5

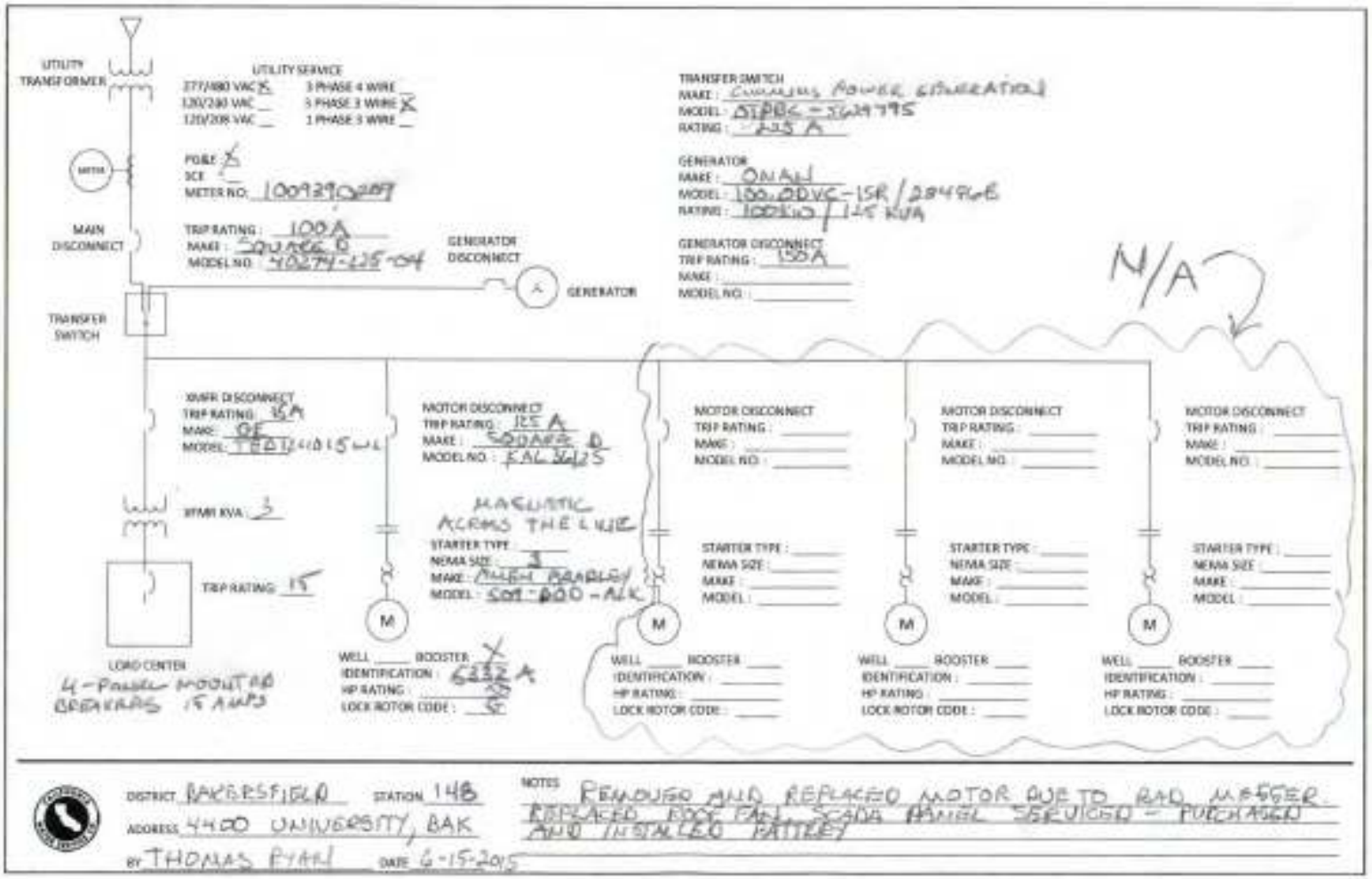
Corrective action taken: REMOVED AND REPLACED MOTOR DUE TO BAD MEGGER. REPLACED ROOF FAN

Corrective recommendations:

Budget recommendations:

Additional comments: SCADA PANEL SERVICED - NO BATTERY, PURCHASED AND INSTALLED.

District Supervisor Signature	Date	EMT Signature	Date
Ron Gibbs	6/15/15	Thomas Ryan	6/15/2015


UTILITY TRANSFORMER
UTILITY SERVICE
277/480 VAC X
120/240 VAC
120/208 VAC
3 PHASE 4 WIRE
3 PHASE 3 WIRE X
1 PHASE 3 WIRE
METER
PG&E X
SCE
METER NO. 1009390207
MAIN DISCONNECT
TRIP RATING: 100A
MAKE: SQUARE D
MODEL NO. 40274-125-04
TRANSFER SWITCH
TRANSFER SWITCH
MAKE: CUMMINS POWER GENERATION
MODEL: DTPBG-3629795
RATING: 225 A
GENERATOR
MAKE: ONAN
MODEL: 150.0DVC-15R/284968
RATING: 100KW / 125 KVA
GENERATOR DISCONNECT
TRIP RATING: 150A
MAKE:
MODEL NO.:
GENERATOR DISCONNECT
GENERATOR
N/A
XMFR DISCONNECT
TRIP RATING: 15A
MAKE: GE
MODEL: TED134015WL
XFMR KVA: 3
TRIP RATING: 15
LOAD CENTER
4-PANEL MOUNTAB BREAKERS 15 AMPS
MOTOR DISCONNECT
TRIP RATING: 125 A
MAKE: SQUARE D
MODEL NO.: FAL36125
MAGNETIC ACROSS THE LINE
STARTER TYPE:
NEMA SIZE: 3
MAKE: ALLEN BRADLEY
MODEL: 509-B00-ALK
M
WELL BOOSTER X
IDENTIFICATION: 6232 A
HP RATING: 75
LOCK ROTOR CODE: G
MOTOR DISCONNECT
TRIP RATING:
MAKE:
MODEL NO.:
STARTER TYPE:
NEMA SIZE:
MAKE:
MODEL:
M
WELL BOOSTER
IDENTIFICATION:
HP RATING:
LOCK ROTOR CODE:
MOTOR DISCONNECT
TRIP RATING:
MAKE:
MODEL NO.:
STARTER TYPE:
NEMA SIZE:
MAKE:
MODEL:
M
WELL BOOSTER
IDENTIFICATION:
HP RATING:
LOCK ROTOR CODE:
MOTOR DISCONNECT
TRIP RATING:
MAKE:
MODEL NO.:
STARTER TYPE:
NEMA SIZE:
MAKE:
MODEL:
M
WELL BOOSTER
IDENTIFICATION:
HP RATING:
LOCK ROTOR CODE:
DISTRICT BAKERSFIELD
STATION 148
ADDRESS 4400 UNIVERSITY, BAK
BY THOMAS RYAN
DATE 6-15-2015
NOTES REMOVED AND REPLACED MOTOR DUE TO BAD MEGGER. REPLACED DOOR PAIL. SCADA PANEL SERVICED - PURCHASED AND INSTALLED BATTERY

California Water Service Company
Electrical Panelboard Maintenance Form

revised 11/07/07

Panelboard Data			
CMMS Work Order no:	173821	Date:	9/26/2011
District:	101	EMT (print name):	allen norman
Station:	140	Ambient Temp:	70
Power Company Meter No.:	1008390209	Motor Hr Meter Reading:	19471

Check Off Information	
Utility power de-energized?	Yes___No_x_
Lockout Tagout applied?	X
Load side of main serviced?	Yes_X_No___
Panel board cleaned/vacuumed?	Yes_X_No___
Signs of water intrusion?	Yes___No_X_
Tighten all connections?	Yes_X_No___
Breakers exercised?	Yes_X_No___
Disconnects exercised?	Yes___No_X_
Power circuit breakers serviced?	Yes___No_X_
Motor starters serviced?	Yes_X_No___
Overload relays checked?	Yes_X_No___
Motor-junction box checked?	Yes_X_No___
Control relays checked?	Yes_X_No___
Grounding connection checked?	Yes_X_No___
Prints Available?	Yes___No_X_
Power Monitor installed?	Yes_X_No___
Utility power re-energized?	Yes___No_X_
Scan for hot spots?	Yes___No_X_

Motor Data	
Motor ID (-A, -01, etc):	B07-S332A-M
Motor serial no.:	
Motor HP:	50

Megger Test:	
Phase A:	1500
Phase B:	1800
Phase C:	1700

Voltage readings:	
L1 - L2:	499
L2 - L3:	499
L1 - L3:	500

Amperage readings:	
Phase A:	52
Phase B:	57
Phase C:	53

Corrective action taken:

Corrective recommendations:

Budget recommendations:

Additional comments: US MOTOR. AMPS- 57. FILED PITTS OFF OF STARTER CONTACTS.

District Supervisor Signature Date EMT Signature Date

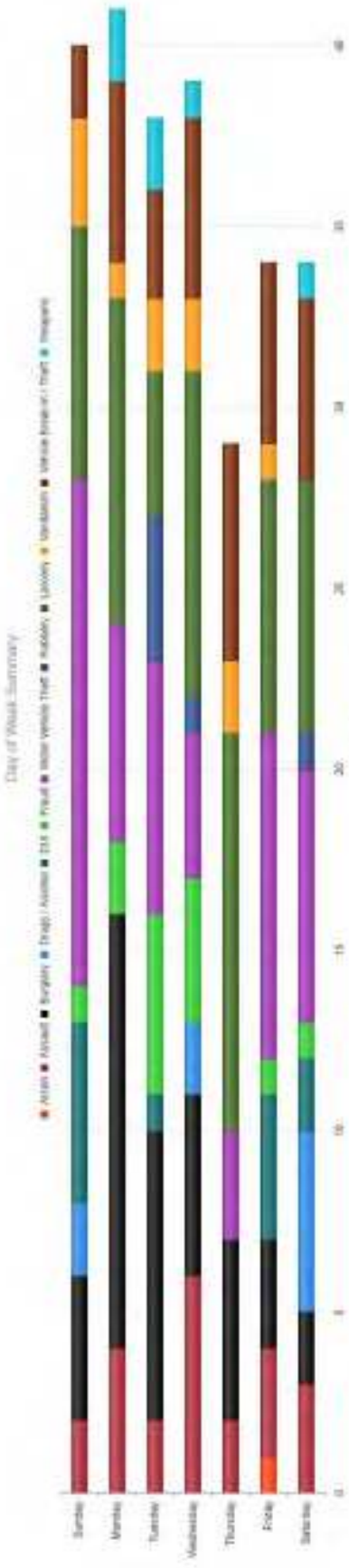
Attachment 1-7: Cal Water's Response to Cal Advocates' Data Request ISC-022

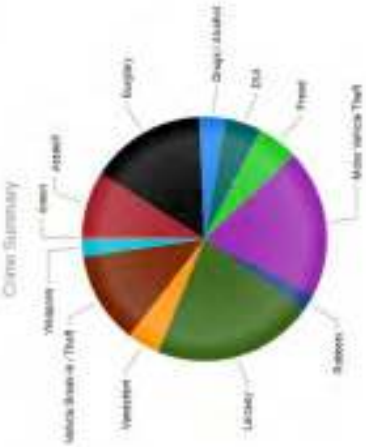
BK 148 – 4400 University Ave

This site is located in our north eastern part of the BK system, which is a general area classified by Bakersfield Police Department as a high crime zone. This station although not as heavily impacted, is in an area of high crime and is an important site to store and deliver water the surrounding community. Below is a crime map of the area surrounding.

Bakersfield Crime Map: 3/27/21 -9/22/2021 Source: https://www.crimemapping.com/map/ca/bakersfield

Attachment 1-8: Cal Water's response to Cal Advocates' data request ISC-022, Attachment 5


Day of Week Summary
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
0
5
10
15
20
25
30
35
40


Crime Summary
Burglary
Drugs - Alcohol
DUI
Fraud
Motor Vehicle Theft
Robbery
Larceny
Vandalism
Vehicle Break-in / Theft
Weapons
Other
Assault

Attachment 1-9: Cal Water's Response to Cal Advocates' Data Request ISC-032, Attachment 1:

Status	Well Code	Description	Install Ye	Age	Score	Notes
Active	BK-W-002-10	WELL 2-10	1948	73	5	
Active	BK-W-003-04	WELL 3-04	1953	68	5	
Active	BK-W-005-05	WELL 5-05	1956	65	5	
Active	BK-W-007-07	WELL 7-07	1963	58	4	
Active	BK-W-010-02	WELL 10-02	1962	59	4	
Inactive	BK-W-022-02	22-02	1957	64	5	
Active	BK-W-029-02	29-02	1951	70	5	
Active	BK-W-032-02	32-02	1954	67	5	
Inactive	BK-W-033-02	33-02	1950	71	5	
Inactive	BK-W-034-02	34-02	1966	55	4	
Inactive	BK-W-035-02	35-02	1956	65	5	
Active	BK-W-036-02	36-02	1960	61	4	
Inactive	BK-W-037-01	37-01	1939	82	5	
Inactive	BK-W-039-02	39-02	1950	71	5	
Active	BK-W-040-02	40-02	1960	61	4	
Inactive	BK-W-041-02	41-02	1953	68	5	
Active	BK-W-042-02	42-02	1952	69	5	
Active	BK-W-043-02	43-02	1964	57	4	Typo in BK PJ-145 Figure 1 - Well Age List had install year 2006.
Inactive	BK-W-044-01	44-01	1949	72	5	
Active	BK-W-047-02	47-02	1951	70	5	
Active	BK-W-049-03	Well 049-03	2020	1	1	
Active	BK-W-054-02	54-02	1968	53	4	
Active	BK-W-062-02	62-02	1987	34	3	
Inactive	BK-W-064-01	64-01	1946	75	5	
Inactive	BK-W-066-02	66-02	1962	59	4	
Inactive	BK-W-071-01	71-01	1948	73	5	
Standby	BK-W-077-02	77-02	1952	69	5	Updated status from Active well in BK PJ-145 Figure 1 - Well Age List
Inactive	BK-W-078-01	78-01	1949	72	5	
Active	BK-W-079-01	79-01	1949	72	5	
Active	BK-W-081-01	81-01	1949	72	5	
Active	BK-W-081-02	81-02	1960	61	4	
Active	BK-W-082-01	82-01	1950	71	5	
Inactive	BK-W-083-01	83-01	1950	71	5	
Active	BK-W-085-02	85-02	1962	59	4	
Active	BK-W-086-01	86-01	1950	71	5	
Inactive	BK-W-087-01	87-01	1954	67	5	
Active	BK-W-088-01	88-01	1950	71	5	
Active	BK-W-089-01	89-01	1951	70	5	
Inactive	BK-W-092-01	92-01	1952	69	5	
Inactive	BK-W-094-01	94-01	1953	68	5	
Inactive	BK-W-095-01	95-01	1953	68	5	
Inactive	BK-W-097-01	97-01	1954	67	5	

Inactive	BK-W-098-01	98-01	1954	67	5	
Inactive	BK-W-099-01	99-01	1954	67	5	
Active	BK-W-101-01	101-01	1954	67	5	
Active	BK-W-102-01	102-01	1958	63	5	
Invalid	BK-W-102-02	102-02				Typo in BK PJ-145 Figure 1 - Well Age List had Active status; well does not exist
Active	BK-W-105-01	105-01	1955	66	5	
Inactive	BK-W-106-01	106-01	1955	66	5	
Inactive	BK-W-107-01	107-01	1955	66	5	
Inactive	BK-W-108-01	108-01	1955	66	5	
Inactive	BK-W-111-01	111-01	1956	65	5	
Inactive	BK-W-112-01	112-01	1957	64	5	Updated status from Active well in BK PJ-145 Figure 1 - Well Age List
Inactive	BK-W-113-01	113-01	1956	65	5	
Inactive	BK-W-114-01	114-01	1956	65	5	
Inactive	BK-W-117-01	117-01	1956	65	5	
Inactive	BK-W-118-01	118-01	1956	65	5	
Inactive	BK-W-119-01	119-01	1958	63	5	
Inactive	BK-W-120-01	120-01	1958	63	5	
Active	BK-W-123-01	123-01	1978	43	3	Typo in BK PJ-145 Figure 1 - Well Age List had install year 1964.
Active	BK-W-123-02	123-02	1965	56	4	
Active	BK-W-125-01	125-01	1959	62	5	
Active	BK-W-126-01	126-01	1959	62	5	Well inadvertantly not included in BK PJ-145 Figure 1 - Well Age List
Inactive	BK-W-127-01	127-01	1960	61	4	
Active	BK-W-128-01	128-01	1961	60	4	
Active	BK-W-129-01	129-01	1961	60	4	
Active	BK-W-130-01	130-01	1961	60	4	
Active	BK-W-132-01	132-01	1961	60	4	
Active	BK-W-133-01	133-01	1962	59	4	
Active	BK-W-134-01	134-01	1964	57	4	
Active	BK-W-135-01	135-01	1962	59	4	
Inactive	BK-W-136-01	136-01	1961	60	4	
Inactive	BK-W-137-01	137-01	1962	59	4	Updated status from Active well in BK PJ-145 Figure 1 - Well Age List
Standby	BK-W-138-01	138-01	1978	43	3	Updated status from Active well in BK PJ-145 Figure 1 - Well Age List; Typo had install year 1963
Inactive	BK-W-139-01	139-01	1963	58	4	
Active	BK-W-140-01	140-01	1964	57	4	

Active	BK-W-141-01	141-01	1964	57	4	
Active	BK-W-142-01	142-01	1961	60	4	
Active	BK-W-143-01	143-01	1965	56	4	
Active	BK-W-144-01	144-01	1965	56	4	
Active	BK-W-145-01	145-01	1966	55	4	
Active	BK-W-146-01	146-01	1966	55	4	
Active	BK-W-146-02	146-02	1966	55	4	
Active	BK-W-146-03	146-03	1966	55	4	
Active	BK-W-146-04	146-04	1967	54	4	
Active	BK-W-146-05	146-05	1967	54	4	
Active	BK-W-149-01	149-01	1968	53	4	
Active	BK-W-150-01	150-01	1968	53	4	
Active	BK-W-151-01	151-01	1970	51	4	
Inactive	BK-W-153-01	153-01	1970	51	4	
Active	BK-W-154-01	154-01	1970	51	4	
Active	BK-W-156-01	156-01	1971	50	4	
Active	BK-W-157-01	157-01	1974	47	3	
Active	BK-W-158-01	158-01	1972	49	4	
Inactive	BK-W-159-01	159-01	1973	48	3	
Inactive	BK-W-160-01	160-01	1970	51	4	
Inactive	BK-W-161-01	161-01	1971	50	4	Updated from Active well in BK PJ-145 Figure 1 - Well Age List
Inactive	BK-W-163-01	163-01	1967	54	4	
Inactive	BK-W-164-01	164-01	1967	54	4	Updated from Active well in BK PJ-145 Figure 1 - Well Age List
Inactive	BK-W-167-01	167-01	1961	60	4	
Inactive	BKNG-W-169-01	169-01	1961	60		
Inactive	BKNG-W-172-01	172-01	1953	68		
Inactive	BKNG-W-173-01	173-01	1947	74	5	
Active	BKNG-W-174-01	174-01	1973	48	3	
Invalid	BKNG-W-174-01	174-01				Typo in BK PJ-145 Figure 1 - Well Age List had Active status; does not exist
Inactive	BKNG-W-175-01	175-01	1977	44	3	Updated status from Active well in BK PJ-145 Figure 1 - Well Age List
Active	BK-W-177-01	177-01	1978	43	3	
Active	BKNG-W-178-01	178-01	1978	43	3	
Active	BK-W-180-01	180-01	1963	58	4	
Active	BK-W-182-01	182-01	1980	41	3	
Active	BK-W-183-01	183-01	1980	41	3	
Active	BK-W-184-01	184-01	1981	40	3	
Active	BK-W-185-01	185-01	1981	40	3	
Inactive	BK-W-187-01	187-01	1982	39	3	
Active	BKNG-W-188-01	188-01	1978	43	3	
Active	BK-W-189-01	189-01	1983	38	3	

Invalid	BK-W-189-01	189-01				Typo in BK PJ-145 Figure 1 - Well Age List had Active status; well does not exist
Active	BKNG-W-190-01	190-01	1984	37	3	
Active	BK-W-191-01	191-01	1979	42	3	
Active	BK-W-192-01	192-01	1977	44	3	Typo in BK PJ-145 Figure 1 - Well Age List had install year 1987.
Inactive	BK-W-193-01	193-01	1988	33	3	
Active	BK-W-195-01	195-01	1988	33	3	
Active	BKNG-W-196-01	196-01	1988	33	3	
Active	BKNG-W-197-01	197-01	1989	32	3	
Inactive	BK-W-198-01	198-01	1960	61	4	
Inactive	BK-W-199-01	199-01	1988	33	3	
Active	BKNG-W-201-01	201-01	1990	31	3	
Active	BK-W-202-01	202-01	1992	29	2	Well inadverntly not included in BK PJ-145 Figure 1 - Well Age List
Inactive	BKNG-W-203-01	203-01	1997	24	2	
Active	BKNG-W-214-01	214-01	2001	20	2	Typo in BK PJ-145 Figure 1 - Well Age List had install year 2002.
Active	BKNG-W-217-01	217-01 (DOLE WI	2001	20	2	
Active	BKNG-W-219-01	219-01	2004	17	1	
Active	BKNG-W-220-01	220-01	2005	16	1	
Active	BK-W-224-01	224-01	2018	3	1	Well inadvertantly not included in BK PJ-145 Figure 1 - Well Age List
Active	BK-W-225-01	Well 225-01	2020	1	1	Wel inadverntly not included in BK PJ-145 Figure 1 - Well Age List

CHAPTER 2 Plant - Kern River Valley District

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service in Cal Water's Kern River Valley District.

II. SUMMARY OF RECOMMENDATIONS

- The Commission should approve $10,230 in Test Year (TY) 2023 for Cal Water to build the electrical switch break at Arden (ARD) Station 07 instead of $382,606 to overhaul/rebuild the entire station because the latter is not needed.
- The Commission should deny $120,199 and deny all funds in TY 2023 for the ARD Station 09 Rebuild and require Cal Water to resubmit its budget proposal in its next GRC application because no physical work is planned or proposed during the 2021 GRC application cycle.
- The Commission should deny Cal Water's request for $1,770,395 in TY 2023 to build a new storage tank in Kernville because it is not needed
- The Commission should deny all funds of $170,710 in TY 2023 for the Split Mountain Station (SPM) Station 5 Station Rebuild and require Cal Water to resubmit its budget proposal in its next GRC application because no physical work is planned or proposed during the 2021 GRC application cycle.

These recommendations form the basis of Cal Advocates' recommended capital budget summary presented in **Attachments 2-1, 2-2,** and **2-3.**

III. ANALYSIS

A. Specific Projects

1. *ARD Station 7 Partial Rebuild (PID: 124432)*

The Commission should approve $10,230 instead of $382,606 and deny all remaining items in the project except for the electric switch break, for Test Year (TY) 2023 for the ARD Station 7 Partial Rebuild.

In response to discovery regarding when ARD Station 7 had to be taken offline and what measures were taken, Cal Water indicated it "has taken Station 7 off service at

various times in the last 10 years due to required maintenance…"[19] and "[t]he district has completed [routine maintenance] without service interruption to customers due to careful planning and having the replacement booster pump available…. If critical issues caused a delay in completing the routine maintenance, or if the booster pump were to fail unexpectedly and the replacement pump were not available within 18 hours, the district could construct an emergency temporary connection to allow a portable booster pump connection to be utilized." Cal Water stated in response to another inquiry that "Cal Water does not have any recorded customer complaints from the past 10 years in this area of the KRV District."[20] In addition, the booster pump was taken offline for replacement earlier in the year and the zone was completely supplied by a local water storage tank without issue. Since ARD station 7 has strong back-up capabilities and plans and no history of customer complaints, there is no reason to install extra reliability through a booster pump.

The larger replacement of the panel board should be denied since the secondary booster pump it is meant to accommodate should also denied. The pump does not have to be replaced to comply with new standards since the equipment complies with the standards required at time of installation and upgrades are not required. Additionally, because the pump was replaced earlier in August 2021 and before that in April of 2019 as a result of failure, without any safety incidents,[21] it is unlikely that more outages would occur during future maintenance. The booster pump uplift should be denied since it is not in violation of codes, no safety incidents occurred during the recent replacement, and there is no need to replace a functioning pump with an expected lifetime of 25 years in three years.

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[19] Attachment 2-4: Cal Water's response to Cal Advocates' data request ISC-011, Question 3.a.i

[20] Attachment 2-5: Cal Water's response to Cal Advocates' data request ISC-030, Kern River Valley Item 1 Question 1

[21] Attachment 2-5: Cal Water's response to Cal Advocates' data request ISC-030, Kern River Valley Item 1 Question 2

2. *ARD Station 9 Rebuild (PID: 124433)*

The Commission should deny the entire proposed amount of $120,199 -for TY 2023 for the ARD Station 9 Rebuild and require Cal Water to resubmit its budget proposal in its next GRC application because no physical work is planned or proposed during the 2021 GRC application cycle.

Cal Water states that "For the 2021 General Rate Case (GRC) application, Cal Water proposes to complete only the design and permitting of the recommended solution given the significant number of unknowns, design challenges, and timing required to complete the design and secure all the necessary permits.".[22] The project should be denied and resubmitted in the 2024 GRC application since no physical work is proposed during the 2021 rate cycle. Since no physical work is proposed or planned during this rate cycle the project should be denied and resubmitted in a future GRC application. Please refer to the direct testimony of Justin Menda for a full discussion concerning treatment of design and permitting project requests in this GRC.

3. *Kernville New Storage Tank (PID: 124507)*

The Commission should deny the entire proposed amount of $1,770,395 for TY 2023 for the Kernville Storage Tank.

Cal Water stated in response to discovery about any past issues "Cal Water's Kernville [District] has not yet experienced an extended interruption of service, loss due to fire, and/or issuance of boil water notices in the last 10 years."[23] Cal Water also stated "Cal Water did not perform any quantitative risk studies using age-based conditions to show that there will be a high risk for the system in the future."[24] The new storage tank

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[22] Capital Project Justifications – Kern River Valley Report KRV PJ – 90

[23] Attachment 2-6: Cal Water's response to Cal Advocates' data request ISC-027, Kernville New Storage Tank Question 1.a

[24] Attachment 2-6: Cal Water's response to Cal Advocates' data request ISC-027, Kernville New Storage Tank Question 1.b

should, thus, be denied due to its current good condition, no past problems, and lack of support for anticipated issues.

When asked about providing the specific inspection reports, maintenance, and repair records, as well as associated costs for changing or replacing the existing pipe over the last 10 years (2011-2020), the utility replied, "Cal Water has not done any additional work other than visual inspections to the existing pipe over the last 10 years."[25] New piping would not serve any use for customers and will increase their cost burden. The new piping should be denied due to the denial of the storage tank rebuild and its current good condition.

When asked about fire safety provided by the system, Cal Water stated "The Kernville New Storage Tank project is not included as a specific wildfire project referenced in the Wildfire Risk Assessment Report due to the location and unique challenges of the Kern River Valley systems.".[26] The Wildfire Risk Assessment Report explained that "it was determined that specific wildfire prevention and preparedness recommendations for the [Kern River Valley District] would need to be developed in a separate effort."[27]. Since the fire protection measures have no specific justification and will be developed in a separate effort, they should be denied.

4. *SPM Station 5 Rebuild (PID: 124508)*

The Commission should deny the entire proposed amount of $170,710 for TY 2023 for the SPM Station 5 Rebuild and require Cal Water to resubmit its budget proposal in its next GRC application because no physical work is planned or proposed during the 2021 GRC application cycle.

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[25] Attachment 2-6: Cal Water's response to Cal Advocates' data request ISC-027, Kernville New Storage Tank Question 3.a

[26] Attachment 2-5: Cal Water's response to Cal Advocates' data request ISC-030, Kernvile New Storage Tank Question 1.

[27] Capital Project Justifications – Common Plant Report CSS PJ – 233

Cal Water states that "For the 2021 General Rate Case (GRC) application, Cal Water proposes to complete only the design and permitting of the recommended solution given the significant number of unknowns, design challenges, and timing required to complete the design and secure all the necessary permits.".[28] Since no physical work is proposed or planned during the 2021 rate cycle the project should be denied and resubmitted in a future GRC application. Please refer to the direct testimony of Justin Menda for a full discussion concerning treatment of design and permitting project requests in this GRC.

B. Non-Specific Budgets

Refer to Cal Advocate's Report on Common Plant Issues: Non-Specific Budgets by Zaved Sarkar regarding non-specific budget for 2022, 2023, and 2024.

C. Carry-Over Budget

Refer to Cal Advocate's Report on Common Plant Issues: Previously Funded Incomplete Projects by Suliman Ibrahim regarding carry over budgets & previously authorized but not in service.

IV. CONCLUSION

The Commission should make the adjustments for Cal Water's Kern River Valley District as specified below in Table 2A which compares proposed and recommended estimates.[29]

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[28] Capital Project Justifications – Kern River Valley Report KRV PJ – 110

[29] These recommended adjustments include those presented in the Cal Advocate's Report on Common Issues that affected the specific projects listed above such as Contingency adjustments.

Table 2A Kern River Valley District Cal Advocates Recommended vs. Cal Water's Proposed Budgets

Item	Recommended	Proposed	Difference
PID 124432: ARD Station 7 Partial Rebuild	$10,230	$382,606	($372,376.00)
PID 124433: ARD Station 9 Rebuild	$0	$120,199	($120,199.00)
PID 124507: Kernville New Storage Tank	$0	$1,770,395	($1,770,395.00)
PID 124508: SPM Station 5 Rebuild	$0	$170,710	($170,710.00)
Total	**$10,230**	**$2,443,910**	**($2,433,680)**

Please refer to the testimony of Suliman Ibrahim in the Report on Common Plant Issues for a full discussion concerning treatment of contingency requests in this GRC.

Attachment 2-1: Capital Budget Summary - Kern River Valley District

Kern River Valley	2022	2023	2024	Annual Average
Cal Advocates	$2,912,504	$997,301	$1,289,411	$1,733,072
CWS	$3,883,561	$3,258,329	$2,180,290	$3,107,393
CWS > Cal Advocates	$971,057	$2,261,028	$890,879	$1,374,321
Cal Advocates as % CWS	75.00%	30.61%	59.14%	55.77%

Attachment 2-2: Capital Budget Details - Kern River Valley District

2022	Work Order #	Project Description		Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00124434	KRV Arden 012 Station Rebuild		$274,632	$302,096	$27,464	90.91%
2022	00124435	KRV Bodfish 010 New Storage Tank		$1,461,827	$1,754,192	$292,365	83.33%
2022	00124511	Kernville 001 Site Access Upgrade		$64,116	$70,528	$6,412	90.91%
2022	00125506	KRV 2022 Physical Security Upgrades		$71,223	$148,174	$76,951	48.07%
2022	00123512	KRV 2022 Control Valve Overhaul		$30,742	$49,434	$18,692	62.19%
2022	00123526	KRV Tank Exterior Ladder Lifelines		$116,403	$128,695	$12,291	90.45%
2022	00124510	Kernville 006-T1 Tank Mixing		$120,921	$132,376	$11,454	91.35%
2022	00123608	KRV 2022 Control Valve Replacement		$63,731	$207,980	$144,249	30.64%
2022	00123627	SouthLake Sta. 5 Transfer Switch		$23,612	$25,974	$2,362	90.91%
2022	00123648	Arden Sta. 6 Booster Panelboard		$38,756	$42,632	$3,876	90.91%
2022	00123775	SQUM 15-B Replace Pump & Motor		$71,722	$78,894	$7,172	90.91%
2022	00124135	KRV 2022 Flowmeter Replacement		$54,272	$59,700	$5,427	90.91%
2022	00124428	KRV Kernville 001 Repl AP6 Filters		$97,536	$107,289	$9,754	90.91%
2022	00124431	KRV 001 Replace AP4 Filters		$48,768	$53,645	$4,877	90.91%
2022	00125048	KRV 2022 Analyzer Replacements		$19,883	$21,872	$1,988	90.91%
2022	00125175	KRV-KERV 2022 Sample Sites		$51,829	$74,934	$23,105	69.17%
2022	00125176	KRV-SOLA 2022 Sample Sites		$15,549	$22,480	$6,931	69.17%
2022	00125177	KRV-LBOD 2022 Sample Sites		$10,366	$14,987	$4,621	69.17%
2022	00123740	KRV 2022 Vehicle Replacemnt Program		$86,648	$95,313	$8,665	90.91%
2022	00123333	KRV 006-T1 - CP Upgrade		$5,243	$13,413	$8,170	39.09%
2022	00123285	ONYX 003-T2 - Tank Retrofits		$5,120	$5,661	$541	90.45%
2022	00123442	SQUM 007-T1 - CP Upgrade		$4,957	$12,681	$7,724	39.09%
2022	KRV0900	Meter Replacement Program		$10,539	$10,539	-	100.00%
2022	134UNSCH	Unscheduled Replacements		-	$51,834	$51,834	0.00%
2022		**Specific Total**		$2,748,396	$3,485,321	$736,925	78.86%
2022	134-NON-SP	**Non-specific Total**		$164,108	$205,136	$41,027	80.00%
2022		**Carry-Over Total**		-	$193,105	$193,105	0.00%
		TOTAL 2022		$2,912,504	$3,883,561	$971,057	75.00%

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2023	Work Order #	Project Description		Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00123105	ARD 011-T1 - CP Upgrade		$5,081	$12,999	$7,917	39.09%
2023	00124432	Arden 007 Partial Rebuild		$10,230	$382,606	$372,376	2.67%
2023	00124433	KRV Arden 009 Sta Rebuild - Design		-	$120,199	$120,199	0.00%
2023	00125507	KRV 2023 Physical Security Upgrades		$83,433	$227,281	$143,849	36.71%
2023	00123517	KRV 2023 Control Valve Overhaul		$32,875	$52,789	$19,914	62.28%
2023	00124509	KRV 005-T1 Tank Mixing		$134,872	$148,359	$13,487	90.91%
2023	00123767	BOD 104-B - Replace Pump & Motor		$32,686	$46,096	$13,410	70.91%
2023	00124138	KRV 2023 Flowmeter Replacement		$55,722	$61,294	$5,572	90.91%
2023	00124508	KRV SM 005 Sta Rebuild - Design		-	$170,710	$170,710	0.00%
2023	00124512	Bodfish 013 Vessel Replacement		$33,969	$37,366	$3,397	90.91%
2023	00124513	Bodfish 104 Vessel Replacement		$33,969	$37,366	$3,397	90.91%
2023	00124514	KRV Arden 001 Backwash Retrofit		$13,195	$13,195	-	100.00%
2023	00125056	KRV 2023 Analyzer Replacements		$30,538	$33,592	$3,054	90.91%
2023	00123610	KRV 2023 Control Valve Replacement		$45,720	$143,378	$97,659	31.89%
2023	134MRP22	KRV 2022 Main Replacement Program		-	$748,530	$748,530	0.00%
2023	134MRP23	KRV 2023 Main Replacement Program		$306,124	$748,530	$442,406	40.90%
2023	KRV0900	Meter Replacement Program		$10,802	$10,802	-	100.00%
2023	134UNSCH	Unscheduled Replacements		-	$53,130	$53,130	0.00%
2023		**Specific Total**		$829,216	$3,048,222	$2,219,006	27.20%
2023	134-NON-SP	**Non-specific Total**		$168,086	$210,107	$42,021	80.00%
2023		**Carry-Over Total**		-	-	-	0.00%
		TOTAL 2023		$997,301	$3,258,329	$2,261,028	30.61%

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2024	Work Order #	Project Description		Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00125508	KRV 2024 Physical Security Upgrades		$81,631	$216,123	$134,492	37.77%
2024	00123520	KRV 2024 Control Valve Overhaul		$34,607	$55,588	$20,981	62.26%
2024	00124141	KRV 2024 Flowmeter Replacements		$58,216	$64,038	$5,822	90.91%
2024	00125649	KRV Vault Retrofit Project		$198,861	$217,647	$18,786	91.37%
2024	00124506	Kernville 001 GAC Replacement		$71,346	$78,480	$7,134	90.91%
2024	00125058	KRV 2024 Analyzer Replacements		$10,434	$11,477	$1,044	90.91%
2024	00123611	KRV 2024 Control Valve Replacement		$56,872	$180,441	$123,569	31.52%
2024	00123742	KRV 2024 Vehicle Replacemnt Program		$42,583	$46,841	$4,258	90.91%
2024	00124258	Kern River Valley WSFMP		$109,352	$120,288	$10,935	90.91%
2024	00124350	Kern River Valley Reliability Study		$128,206	$141,026	$12,821	90.91%
2024	134MRP24	KRV 2024 Main Replacement Program		$313,777	$767,243	$453,466	40.90%
2024	KRV0900	Meter Replacement Program		$11,072	$11,072	-	100.00%
2024	134UNSCH	Unscheduled Replacements		-	$54,458	$54,458	0.00%
2024		**Specific Total**		$1,116,957	$1,964,722	$847,766	56.85%
2024	134-NON-SP	**Non-specific Total**		$172,454	$215,568	$43,114	80.00%
2024		**Carry-Over Total**		-	-	-	0.00%
		TOTAL 2024		$1,289,411	$2,180,290	$890,879	59.14%

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Attachment 2-3: Capital Budget vs. Recorded Expenditure - Kern River Valley District

Kern River Valley	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$1,273,574	100%
Cal Advocates	$2,912,504	$997,301	$1,289,411	$1,733,072	136%
CWS	$3,883,561	$3,258,329	$2,180,290	$3,107,393	244%

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Attachment 2-4: Cal Water's Response to Cal Advocates' Data Request ISC-011:

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RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Isaac Gendler Utilities Engineer	Phone: Email:	(415) 703-1225 Isaac.Gendler@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date:	**Aug 19, 2021**	Request Received from CPUC:	**August 6, 2021**
Re:	**CWS Response to ISC-011**	Requested Due Date:	**August 19, 2021**
Subj:	**KRV ARD Partial Rebuild @St7**		

Comments:

- **Full response attached. Response provided by Engineering.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – KRV Zone IV Schematic and Distribution Map**
  - **Attachment #2 – Photos**
  - **Attachment #3 – Cal Fire FRAP, ARD & SPMT**
  - **Attachment #4 – Cal Fire FRAP, Kern**

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Data Requests and Responses

1. Regarding Project ID #124432, ARD Station 7 Partial Rebuild, CWS states "the other [booster pump] is plumbed above ground." **(Capital Project Justifications – Kern River Valley Report KRV PJ – 84)**

   a. Please provide an explanation and documentation on the use of this [booster pump].

      i. If documentation is not available, please explain why not.

      Response: ARD Station 7 provides the source of water for KRV Zone IV customers (See Attachment 1). Zone IV serves 21 existing customer meter connections. Five to seven times a day, the booster pump at Station 7 pumps water to the Station 8 storage tank at the top of Deodar Drive. The Station 8 storage tank provides the pressure for the Zone IV customers. Figure 2 of the Capital Project Justifications - Kern River Valley Report (KRV PJ Book) shows the tank levels for KRV STA 08 for a typical day (KRV PJ Book Page KRV PJ-85).

      There is only one existing booster pump at Station 07 located within the underground vault (KRV PJ Book Figure 1 Page KRV PJ-84; see photo Attachment 2 to this DR response). The project justification erroneously indicated that there was a second booster pump located above ground. While Cal Water district staff remembered an abandoned booster pump at this location during a site visit in 1996, the pump was removed prior to Cal Water's acquisition of the system in 2000. The starter for the abandoned pump is located on the switch rack and is no longer working. A new starter that meets current code would need to be installed for installation of a second booster pump.

      The scope of work for the proposed project is to relocate the existing booster pump in the vault to above ground within Station 07. The project also includes installing a second booster pump on a new foundation so that the pumps can alternate operations and provide additional reliability to Zone IV.

   b. Please explain if the system can be operated with only one of the pumps activated and if so how so.

      Response: As indicated in the project justification for PID # 124432 and above, the station currently operates with one booster pump. This is due to the existing panelboard not having adequate equipment to provide a new starter, and the lack of space in the vault to install a second booster pump. The booster pump in the vault fills the tank and supplies the customer connections when the tank is not feeding directly into the system. Not having the ability to alternate between two pumps to serve the system restricts the District's ability to perform routine maintenance and provide system reliability. In the case of a pump failure or when required maintenance is needed on the pump, the District has approximately 18 hours (if the Station 8 tank is full) to repair and reinstall the booster pump, or remove and install a similar pump in its place. The district has had to plan any

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preventative maintenance or booster pump replacements carefully to make sure a backup booster and all parts are on hand to complete the repair or replacement. Because there is no existing portable booster pump connection for this district, if an emergency repair was needed or if the repairs could not be completed within 18 hours, Cal Water operations staff would have to make an emergency connection to keep customers in service; otherwise the tank would completely drain and customers would be out of water.

2. CWS states "The existing panelboard is undersized to operate both of the booster pumps at the same time." **(Capital Project Justifications – Kern River Valley Report KRV PJ – 84)**

   a. Please provide documentation demonstrating that existing panelboard is undersized to operate both booster pumps at the same time.

      i. If documentation is not available, please explain why not.

      Response: The existing switchrack currently has two starters, but only one starter is operational for the existing pump (see the photo labelled "ARD STA 7 switchrack" in Attachment #2). As stated above, the second starter is for a historical pump that was removed prior to Cal Water's purchase of the system. The replacement for the second non-working starter is required in order to have two fully operational pumps onsite. Currently, the existing switchrack does not have room for the replacement starter of a second pump. Due to the small amount of remaining space on the existing switchrack, and the wiring needed for a replacement starter, a new standalone starter on a backboard would be needed instead. The proposed work includes adding a new wireway with a standalone starter on a backboard. Further evaluation of the existing and proposed replacement starter and existing electrical equipment will be completed during the design phase.

3. CWS states "If the operating pump failed, it would leave all the customers in the zone IV and Station 8 without a reliable supply of water." **(Capital Project Justifications – Kern River Valley Report KRV PJ – 84)**

   a. Have there been intervals in the last 10 years where Cal Water had to disconnect/take offline the operating pump for an extended period due to maintenance and/or repairs?

      i. If so, please provide details of those incidents and what actions Cal Water took to maintain demand in zone IV and Station 8 of the KRV system.

      Response: Cal Water has taken Station 7 off service at various times in the last 10 years due to required maintenance. If the booster pump inside the vault needs to be removed for repairs or maintenance, the district has installed a similar pump, which takes about five to six hours to completely install. The district has completed this without service interruption to customers due to careful planning and having the replacement booster pump available during routine maintenance. During this time, the system is supplied by the Station 8 storage tank. If critical issues caused a delay in completing the routine maintenance, or if the booster pump were to fail unexpectedly and the replacement pump were not available within 18 hours, the district could construct an emergency temporary connection

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to allow a portable booster pump connection to be utilized. If that also could not be completed within 18 hours, however, the tank would be depleted and customers would be out of water.

The proposed project includes installation of permanent booster pump connections as part of the piping modifications to further reduce risk and improve system reliability.

4. CWS states "The means of egress does not meet current OSHA regulations for this type of space." **(Capital Project Justifications – Kern River Valley Report KRV PJ – 85)**.

   a. Please provide proof if CWS had ever received any citations/recommendations/warnings from the Cal OSHA telling Cal Water to make such improvements regarding worker safety

      Response: Cal Water has not received any citations/recommendations/warnings from Cal OSHA regarding this vault. Cal Water is proposing to remediate a hazardous work situation and environment before Cal OSHA issues a citation/recommendations/warning. The vault with the booster pump, altitude valve, and electrical do not meet the current Cal/OSHA regulations 1910.22 (General Requirements – Walking-Working Surfaces), 1926.403 (General Requirements – Electrical), 1910.146 (Confined Space Standard), 2340.11, 2340.12, and 2340.26 (Electrical equipment must be protected from mechanical damage and environmental deterioration).

   b. Please provide the records of the safety incidents

      i. If none can be provided, then please explain why.

         Response: As indicated in the project justification for PID # 124432, the underground vault creates unsafe working conditions when accessing the pump. The vault is a confined space (approximately 4x7 feet, 5' depth) that could become submerged. The district staff have observed up to a foot of water in the vault due to leaking of the altitude valve piping connections. Due to the aforementioned conditions, Cal Water proposes to remove the existing booster pump from the vault, and install above ground booster pumps. The above ground configuration eliminates any possibility of a Cal OSHA recordable incidence involving the underground vault, improves safety for Cal Water employees, and allows replacement of the booster pump to be completed in a safer manner.

5. CWS states "[The] existing station piping ... has become degraded from years of exposure." **(Capital Project Justifications – Kern River Valley Report KRV PJ – 85)**.

   a. Provide documentation on all inspections and conditional assessments of the existing station piping that Cal Water has performed in the last 10 years.

      Response: The existing station piping needs to be modified to accommodate the above ground booster pumps. The existing station piping is plumbed to serve a single booster pump in the underground vault. Cal Water acquired the Kern River Valley System in 2000. Based on visual inspections of piping when the booster pumps have been replaced, the piping in the vault is degraded. Re-piping will be completed to plumb the booster pump and backup booster pump to an above ground location.

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b. Provide the leak/break history, repair history and other related information on the existing station piping proposed to be replaced in excel format.
Response: Specific leak and repair history is not available for this station.

6. CWS states that the need for the installation of a manual transfer switch to accommodate backup power is that "Kern River Valley has been effected by recent Public Safety Power Shutdowns (PSPS) and is in close proximity areas at high risk of wildfires." **(Capital Project Justifications – Kern River Valley Report KRV PJ – 85)**.

   a. Please provide documentation showing that Kern River Valley Station 07 specifically is at risk of public safety power shutoffs and/or wildfires.

      i. What fire severity level is Cal Water's manual transfer switch located in according to The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program.

      ii. If it is not in a high-risk area, please explain why Cal Water believes the capital project is still justified.

      Response: As shown in Attachment #3, "Cal Fire and Resource Assessment Program (FRAP) – ARD & SPMT," and Attachment #4, "Cal Fire FRAP, Kern County," Kern River Valley Station 07 (part of the Cal Water Arden system) falls in the "Very High Fire Hazard Severity Zone." The Arden system is part of the Wofford Heights area that is just west of Lake Isabella on these maps. This map is consistent with the maps and analysis used in the "2020 California Water Service Wildfire Risk Assessment"[1] that identified the Kern River Valley system in a high wildfire risk area. This report analyzed the risk to the water systems both from wildfires and from Public Safety Power Shutoffs (PSPS) events, since the entire electrical transmission line may be shut down to the area to prevent wildfires.

7. In Alternative Analysis 1, CWS states "Installing electrical and communication instrumentation in the vault would create additional hazards during construction and throughout the pumps operational use." **(Capital Project Justifications – Kern River Valley Report KRV PJ – 85)**.

   a. Does CWS have any documentation demonstrating that shutting down the pump temporarily for construction would make the system not operational? Please provide the documentation.

      i. If no, please explain why not.

      Response: As shown on Attachment #2, the photo labelled "ARD STA 7 Inside Vault," there are flexible electrical conduits that span across the vault over the pump. This creates safety hazards for operators when working inside the vault. These conduits must also be avoided when removing and reinstalling pumps inside the vault. In addition, the conduits inside the vault pose extreme safety hazards since the buried vault has the potential to fill with water and expose the operators to electrical shock from the submerged conduits. There are also no portable booster connections at this station to connect a temporary

[1] "California Water Service Wildfire Risk Assessment", *Common Plant Justification Book*, Pages 206-208.

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above ground pump to quickly supply the system during booster pump construction or maintenance.

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Attachment 2-5: Cal Water's Response to Cal Advocates' Data Request ISC-030:

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RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Isaac Gendler Utilities Engineer	Phone: Email:	(415) 703-1225 Isaac.Gendler@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **November 12, 2021**	Request Received from CPUC: **November 04, 2021**
Re: **ISC-030**	Requested Due Date: **November 12, 2021**
Subj: **Plant Further Inquiries I**	

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Does not contain confidential information.**

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- **This response refers to the following attachments included separately:**
  - **Attachment #1 – 2019 California Fire Code Appendix B**
  - **Attachment #2 – Visalia Well Information**
  - **Attachment #3 – Example of Visalia Well Scores**

Data Requests and Responses

Bakersfield

Regarding Project ID # 124745 Storage Tank Replacement Station 147:

1. Cal Water states in its justification book that "A new 500,000-gallon welded steel tank sized to accommodate an emergency fire flow rate of 1,500 gallons per minute for 4 hours [will replace the existing 200,000 gallon tank]" **(Capital Project Justifications – Bakersfield Report BK PJ – 171).** In the response to DR ISC-023, Cal Water stated, "The station will be equipped with pumps capable of producing 2,000 gpm."

   a. Please explain this discrepancy between the fire flow rate and pump capacity.
   Response: The station's pumping capacity was proposed to meet the zone's minimum fire flow requirements, while simultaneously meeting customer demand in the rest of the zone that would be occurring during the fire flow event.

   b. Please explain why Cal Water selected a 1,500 gpm fire flow rate and provide the supporting methodology and calculations used to derive the number.
   Response: According to the 2019 California Fire Code (see Attachment #1), the fire flow requirements are based on building construction material and square footage, but in all cases shall not be less than 1,500 gpm as noted in Table B105.2. The largest fire flow requirement in the northwestern portion of the 930 zone is assumed to be the Kern County Sheriff's Department Communication Center (located at 2601 Panorama Drive). The building area is approximately 27,300 square-feet and is assumed to be Type V-B construction equipped with automatic fire sprinklers. The required fire flow for this size and type of building would be 4,500 gpm for a duration of 4 hours per Table B105.1(2) in the 2019 California Fire Code (as shown in Attachment #1). The fire flow may be reduced for buildings with fire sprinklers, but shall not be less than 1,500 gpm as noted in Table B105.2. Therefore, the zone's fire flow requirements, at minimum, was determined to be 1,500 gpm for a duration of 4 hours.

   However, there also exist residential buildings larger than 3,600 SF within the zone, which may not be equipped with automatic fire sprinklers, and therefore have a higher fire flow requirement.

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Kern River Valley

Regarding Project ID # 124432 ARD Station 7 Rebuild, PID # 124433, ARD Station 9 Station Rebuild, PID # 124434 ARD Station 12 Rebuild, # 124507 Kernville New Storage Tank, and Project ID # 124508 SPM Station 5 Station Rebuild:

1. Please provide the Customer complaints regarding pressure/service for the each plant item's zone for the past 10 years (2011-2020). Provide the data annually in an Excel format.
   Response: Cal Water does not have any recorded customer complaints from the past 10 years in this area of the KRV District.
2. Please provide any recorded safety hazards during maintenance that occurred in the past 10 years (2011-2020).
   Response: Cal Water does not currently record safety hazards during maintenance; however, the safety hazards are still present. Cal Water Operators from the KRV District go out and maintain all of the stations in the seven systems. All of these seven systems are located in remote areas where safety hazards can occur at any time. These safety hazards include tripping on above ground station piping, entering confine spaced below ground vaults, or vehicle accidents from stations being on the side of the road.

Regarding Project ID # 124433 ARD Station 9 Rebuild:

1. Cal Water stated "[Service went down] in 2014 and 2017 when the existing 2-horsepower booster pump failed and needed to be replaced," in response to **DR ISC-012 Question 2a**.
   a. Please describe how water was provided to customers during the outage.
      Response: As discussed in Cal Water's response to Data Request ISC-012 and email dated October 26, 2011 - RE: *"Responses to Questions During the Kern River Valley (KRV) District Site Visit Tour on October 12, 2021"*, ARD Station 9 serves 6 customers where 5 of the customers experienced low pressure and 1 customer, who lives above the tank, lost pressure completely. Cal Water's District Staff completed door-to-door customer notifications and offered bottled water to the 6 customers. In the end, only the one customer with no pressure requested and was provided bottled water.
2. Please provide any recorded safety hazards during maintenance that occurred in the past 10 years (2011-2020).
   Response: Cal Water does not currently record safety hazards during maintenance; however, the safety hazards are still present. As Cal Water has previously stated in the response to Data Request ISC-012 Question 1a, the layout of the station presents significant safety concerns and risk. The area where the existing booster pump is located is congested with above ground piping, and presents tripping/fall hazards to operators performing inspection and maintenance at this station.

Regarding Project ID # 124434 ARD Station 12 Rebuild:

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1. Cal Water stated, "The existing pressure vessel does not meet the minimum requirements of California Code of Regulations (CCR) Title 8, in that the vessel is not stamped in compliance with American Society of Mechanical Engineers (ASME) Code," in response to **DR ISC-026 Question 3a**.

    a. Please explain how the system is being operated without code compliance.
    Response: The pressure vessel at ARD Station 12 was acquired by Cal Water with the purchase of the Kern River Valley Water Company. The pressure vessel was required for continued reliable operation of this station. Cal Water conducted an inspection[1] and determined the vessel to be safe to remain operational until its replacement in the station rebuild project. The new vessel will be properly designed for the function of the station and will be constructed per code.

2. Cal Water states "Replacement of the existing above ground 2-inch station piping with below ground piping will... ensure that the new below ground piping will be protected by any environmental or external hazards, per Cal Water Standards and Specifications." **(Capital Project Justifications – Kern River Valley Report KRV PJ – 92)**

    a. Please provide any previous environmental or external damage that occurred to the piping in the past 10 years (2011-2020).
    Response: Cal Water does not have any records of previous environmental or external damages that occurred to the piping in the last 10 years. ARD Station 12 is located in a remote location without any surveillance. The only time Cal Water employees record such damages is if they occurred during maintenance visits. However, Cal Water can provide photos showing the existing above ground 2-inch station piping and its damages. As shown in figures 1 and 2, the pipes are wrapped with polyethylene foam and duct tape which are used to protect the pipe. The polyethylene foam is used to insulate the pipe in order to protect it from the hot summer and freezing winter climates. In the figures, you can also see that the polyethylene foam has significant wear and tear, which could have also been caused by the wildlife in the area in addition to the weather and operations activities. If the polyethylene foam was not installed, further damage would have occurred, resulting in a possible station shutdown for the sole source of supply for pressure zone VI.

[1] **Inspection report was provided in Cal Water's response to Data Request ISC-026 Attachment #1.**

Figure 1: ARD Station 12 Existing Above Ground 2-inch Station Piping

Figure 2: ARD Station 12 Existing Above Ground 2-inch Station Piping

Regarding Project ID # 124507 Kernville New Storage Tank:

1. Please provide the zone number(s) that correspond to capital recommendations in the Valley District's common plants **(Capital Project Justifications – Common Plant Report CSS PJ – 233).**
   Response: The Kernville New Storage Tank is located in Zone II and provides fire protection for Zone III as well. Cal Water would like to clarify that the Kernville New Storage Tank project is not included as a specific wildfire project referenced in the *Wildfire Risk Assessment Report* due to the location and unique challenges of the Kern River Valley systems (see additional discussion on Common Plant PJ-228); however, the potential risks of a wildfire are still present and will be addressed in this particular area by this project.

Visalia

Regarding Project ID # 123396 New Well Station:

1. Please provide a list identifying each well in the Visalia system and detailing:
    a. The well's likelihood of failure rating score according to the guidelines described in (insert heading name where guidelines found in the report here) **(Capital Project Justifications – Common Plant Report CSS PJ – 393).**
    Response: Please see Attachment #2 for the scoring associated with estimated remaining useful life
    b. What factors contributed to Cal Water's assessment of the likelihood of failure for the individual well (such as age, condition, water quality etc.).
    Response: The condition scores presented by Cal Water are primarily driven by well age compared expected life based on the statistical study described in Common Plant PJ-401. Additional factors are considered, as available, such as sand production, well casing damage, corrosion, pitting, perforation damage, hydraulic performance, etc. This data is collected through direct inspection tools, often deployed when the well is offline. These results are collected during in-depth assessments performed during a pump replacement project. Six wells, based on a limited quantity of advanced assessments were determined to be in poor condition, with scores of 4 and 5 (see Attachment # 3 for additional details of these six identified wells).

Attachment 2-6: Cal Water's Response to Cal Advocates' Data Request ISC-027

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RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Isaac Gendler Utilities Engineer	Phone: Email:	(415) 703-1225 Isaac.Gendler@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date:	**October 25, 2021**	Request Received from CPUC:	**October 15, 2021**
Re:	**ISC-027**	Requested Due Date:	**October 25, 2021**
Subj:	**KRV New Storage Tanks**		

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Contains CONFIDENTIAL (CATEGORY 4) information.**

1

- **Attachment #1 – CONFIDENTIAL Kernville Map**

storage tank that supplies the Kernville water system because the East side of Kernville does not have an operational storage tank. There were issues with a land dispute with the city starting in 2014 that ended in 2019. This land dispute resulted in Cal Water having to remove the storage tank on the East side in 2019 and abandoning the pipes in the area. Please see Attachment #1 CONFIDENTIAL (CATEGORY 4) for a map of Kernville separated by the West and East side.

3. Cal Water states "The main is subject to scour and wash-out during rain events, putting the main at high risk of failure, especially given the age of the main." **(Capital Project Justifications – Kern River Valley Report KRV PJ – 103)**

   a. Please provide the specific inspection reports, maintenance, and repair records, as well as associated costs for changing or replacing the existing pipe over the last 10 years (2011-2020).
   Response: Cal Water has not done any additional work other than visual inspections to the existing pipe over the last 10 years.

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CHAPTER 3 Plant - Selma District

I. INTRODUCTION

California Water Company did not propose any specific projects for the Selma district therefore there is no recommendation or conclusion for specific projects. Recommendations for Cal Advocates' recommended capital budget summary are presented in **Attachments 3-1, 3-2,** and **3-3**.

II. ANALYSIS

A. Non-Specific Budgets

Refer to Cal Advocate's Report on Common Plant Issues: Non-Specific Budgets by Zaved Sarkar regarding non-specific budget for 2022, 2023, and 2024.

B. Carry-Over Budget

Refer to Cal Advocate's Report on Common Plant Issues: Previously Funded Incomplete Projects by Suliman Ibrahim regarding carry over budgets & previously authorized but not in service.

Attachment 3-1: Capital Budget Summary - Selma District

Selma	2022	2023	2024	Annual Average
Cal Advocates	$302,937	$429,673	$422,826	$385,145
CWS	$2,324,421	$1,715,763	$1,749,074	$1,929,752
CWS > Cal Advocates	$2,021,484	$1,286,090	$1,326,248	$1,544,607
Cal Advocates as % CWS	13.03%	25.04%	24.17%	19.96%

Attachment 3-2: Capital Budget Details - Selma District

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2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00125485	SEL 2022 Physical Security Upgrades	$71,223	$110,244	$39,021	64.60%
2022	00123228	SEL Tank Exterior Ladder Lifelines	$8,753	$9,677	$924	90.45%
2022	00125648	SEL Well Level Monitoring	$18,317	$20,149	$1,832	90.91%
2022	00124042	SEL 2022 Customer Meter Vault Lids	$13,133	$14,446	$1,313	90.91%
2022	00123777	SEL 2022 Vehicle Replacemnt Program	$42,664	$46,930	$4,266	90.91%
2022	117MRP22	SEL 2022 Main Replacement Program	-	$595,064	$595,064	0.00%
2022	SEL0900	Meter Replacement Program	$32,400	$41,089	$8,689	78.85%
2022	117UNSCH	Unscheduled Replacements	-	$515,791	$515,791	0.00%
2022		**Specific Total**	$186,489	$1,353,391	$1,166,901	13.78%
2022	117-NON-SP	**Non-specific Total**	$116,447	$145,559	$29,112	80.00%
2022		**Carry-Over Total**	-	$825,471	$825,471	0.00%
		TOTAL 2022	$302,937	$2,324,421	$2,021,484	13.03%

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00124296	SEL 011-01 Well Renewal	$165,989	$182,588	$16,599	90.91%
2023	00123214	SEL O11-01 - Replace Pump & Motor	$60,360	$85,123	$24,763	70.91%
2023	00124089	SEL 2023 Flowmeter Replacement	$37,337	$44,805	$7,467	83.33%
2023	00124043	SEL 2023 Customer Meter Vault Lids	$13,461	$14,807	$1,346	90.91%
2023	00123778	SEL 2023 Vehicle Replacemnt Program	-	$58,553	$58,553	0.00%
2023	117MRP23	SEL 2023 Main Replacement Program	-	$609,941	$609,941	0.00%
2023	SEL0900	Meter Replacement Program	$33,210	$42,116	$8,906	78.85%
2023	117UNSCH	Unscheduled Replacements	-	$528,685	$528,685	0.00%
2023		**Specific Total**	$310,357	$1,566,618	$1,256,261	19.81%
2023	117-NON-SP	**Non-specific Total**	$119,316	$149,145	$29,829	80.00%
2023		**Carry-Over Total**	-	-	-	0.00%
		TOTAL 2023	$429,673	$1,715,763	$1,286,090	25.04%

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00125486	SEL 2024 Physical Security Upgrades	$81,631	$158,260	$76,628	51.58%

2024	00123661	SEL 006 Station Piping Overhaul	$38,637	$42,500	$3,863	90.91%
2024	00124091	SEL 2024 Flowmeter Replacement	$76,860	$92,232	$15,372	83.33%
2024	00124116	SEL 021 VFD Replacement	$64,322	$77,830	$13,508	82.64%
2024	00124044	SEL 2024 Customer Meter Vault Lids	$13,798	$15,177	$1,380	90.91%
2024	117MRP24	SEL 2024 Main Replacement Program	-	$625,190	$625,190	0.00%
2024	SEL0900	Meter Replacement Program	$25,328	$43,170	$17,842	58.67%
2024	117UNSCH	Unscheduled Replacements	-	$541,903	$541,903	0.00%
2024		**Specific Total**	$300,576	$1,596,261	$1,295,685	18.83%
2024	117-NON-SP	**Non-specific Total**	$122,250	$152,813	$30,563	80.00%
2024		**Carry-Over Total**	-	-	-	0.00%
		TOTAL 2024	$422,826	$1,749,074	$1,326,248	24.17%

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Attachment 3-3: Capital Budget vs. Recorded Expenditure - Selma District

Selma	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$1,552,148	100%
Cal Advocates	$302,937	$429,673	$422,826	$385,145	25%
CWS	$2,324,421	$1,715,763	$1,749,074	$1,929,752	124%

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CHAPTER 4 Plant - Visalia District

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for Cal Water's Visalia District.

II. SUMMARY OF RECOMMENDATIONS

- The Commission should deny Cal Water's request for $1,330,196 in Test Year (TY) 2023 to build a new Well PFAS Treatment at Station 38 because it is not needed.
- The Commission should deny Cal Water's request for $1,967,532 in TY 2023 to build a new Well PFAS Treatment at Station 55 because it is not needed.
- The Commission should deny Cal Water's request for $419,249 in TY 2023 to build a New Generator & Panelboard Replacement at Station 23 because it is not needed.
- The Commission should deny Cal Water's request for $2,980,376 in TY 2023 to build a New Well Station because it is not needed.
- The Commission should deny Cal Water's request for $498,658 in TY 2023 for land for a new well because it is not needed.

These recommendations form the basis of Cal Advocates' recommended capital budget summary presented in **Attachments 4-1, 4-2,** and **4-3**.

III. ANALYSIS

A. Specific Projects

1. *Well PFAS Treatment at Station 38 and 55 (PID: 123309 and PID: 123313)*

The Commission should deny the entire proposed amount of $1,330,196 for Test Year (TY) 2023 for the Well PFAS Treatment at Station 38 and all funds of $1,967,532 in TY 2023 for the well PFAS treatment at Station 55 because they are not necessary.

The Commission adopted a Resolution about Perfluorooctanoic acid ("PFOA") and Perfluoroocatane sulfonate ("PFOS") testing which recommended delaying approvals

for treatment plants until California establishes MCLs for PFAS.[30] Cal Water should wait until MCLs for PFAS substances are established and the treatment needs are determined before constructing a treatment plant. The Commission should not authorize funding to construct PFAS treatment plants until MCLs for PFAS substances are established and treatment needs have been determined.

2. *New Generator & Panelboard Replacement Station 23 (PID: 123954)*

The Commission should deny $419,249 in TY 2023 for the New Generator & Panelboard Replacement Station 23 because it is not needed.

In the response to discovery, Cal Water stated that "[The quantitative prediction for increased probability of risk for problems with the panelboard station 23] is not available as CWS does not perform the probability of risk analysis for this asset type."[31] The generator should be denied since it has no quantitative justification that it would make an impact on ratepayers.

Cal Water states that the panelboard should be replaced because "The panel is mounted directly on the floor, which could pose as a safety hazard in the event of potential leaks, and the possibility of any liquid coming in contact with live equipment." And "Several components within the panelboard require repair and/or replacement, and due to age, exact replacement parts are difficult to obtain. These components include the starter, motor breaker, and main breaker"[32]. In the response to DR ISC-019, Cal Water provided the inspection, maintenance, outage, and repair records and associated costs for the panelboard for the last 10 years (2011-2020). Records show no instances of issues with the panelboard being attached to the ground and the number of issues decreased over

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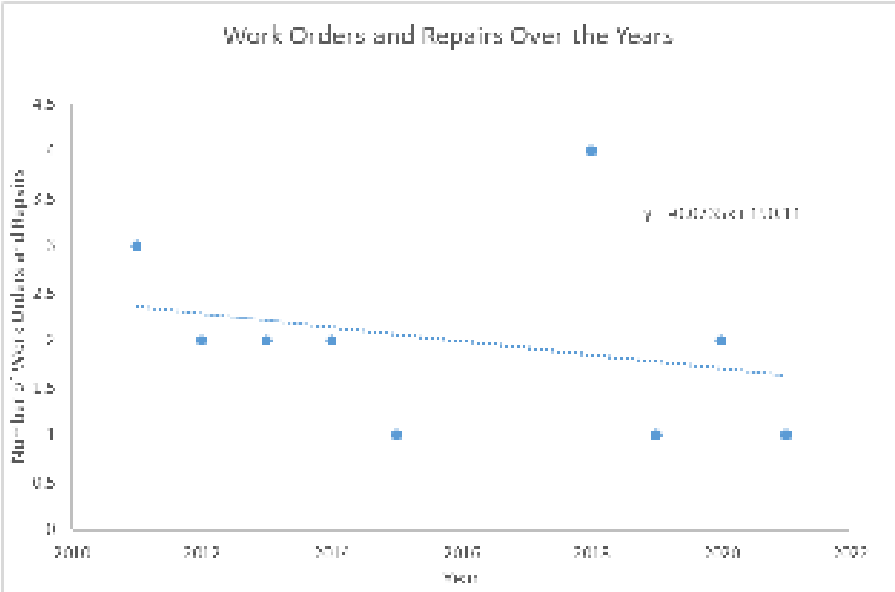
[30] California Public Utilities Commission Resolution W-5266.

[31] Attachment 4-4: Cal Water's response to Cal Advocates' data request ISC-019 Question 2B

[32] Capital Project Justifications – Visalia Report VIS PJ – 108

the years,[33] as shown in figure 4-A. The proposed panelboard replacement should, thus, be denied since it would not benefit ratepayers.

Figure 4-A: Work orders and repairs for the past 10 years (2011-2020) for VIS station 23



3. *New Well Station (PID: 123396)*

The Commission should deny $2,980,376 and deny all funds in (TY) 2023 for the new well station because it is not needed.

Plant items can operate well past the anticipated life expectancy under stable operating conditions. When asked about non-age-based failure conditions, Cal Water indicated that only "[s]ix wells, based on a limited quantity of advanced assessments were determined to be in poor condition"[34] out of 85 active wells.[35] Since this amounts to only 7.06% of wells being in confirmed poor condition for non-age-related reasons, there is insufficient evidence to support a new well.[36] Therefore, the proposal should be denied.

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[33] Attachment 4-5: Cal Water's response to Cal Advocates' data request ISC-019 Attachment 1

[34] Attachment 2-5: Cal Water's response to Cal Advocates' data request ISC-030 Visalia Question 1A

[35] Attachment 4-6: Cal Water's response to Cal Advocates' data request ISC-030 Attachment 2

[36] 6 wells/85 wells ~= 7.06%

According to Cal Water's response to DR ISC 002, the proposed storage tank at station 97 alone will be enough to close the Peak Hour Demand (PHD) gap.[37] A new well station is not necessary to assist with PHD as Cal Water asserts as justification for this project.

4. *Land for New Well (PID: 124743)*

The Commission should deny $2,980,376 and deny all funds in (TY) 2023 for the land for new well because it is not needed.

B. Non-Specific Budgets

Refer to Cal Advocate's Report on Common Plant Issues: Non-Specific Budgets by Zaved Sarkar regarding non-specific budget for 2022, 2023, and 2024.

C. Carry-Over Budget

Refer to Cal Advocate's Report on Common Plant Issues: Previously Funded Incomplete Projects by Suliman Ibrahim regarding carry over budgets & previously authorized but not in service.

IV. CONCLUSION

The Commission should make the following adjustments to Cal Water's Visalia District proposed expenses as specified below in Table 4-A which compares proposed and recommended estimates.[38]

Table 4-A Visalia District Cal Advocates Recommended vs. Cal Water's Proposed Budgets. (Direct Costs)

Item	Recommended	Proposed	Difference
PID 123309: Well PFAS Treatment at Station 38	$0	$1,330,196	($1,330,196.00)

[37] Attachment 4-7: Cal Water's response to Cal Advocates' data request ISC-002, question 1.c.i

[38] These recommended adjustments include those presented in the Cal Advocate's Report on Common Issues that affected the specific projects listed above such as Contingency adjustments.

PID 123313: Well PFAS Treatment at Station 55	$0	$1,967,532	($1,967,532.00)
PID 123954: New Generator & Panelboard Replacement Station 23	$0	$419,249	($419,249.00)
PID 123396: New Well Station	$0	$2,980,376	($2,980,376.00)
PID 124743: Land for New Well	$0	$498,658	($498,658.00)
Total	**$0**	**$7,196,011**	**($7,196,011)**

Please refer to the direct testimony of Suliman Ibrahim, Chapter 16 of the Report on Common Plant Issues, for a full discussion concerning treatment of contingency requests in this GRC.

Attachment 4-1: Capital Budget Summary - Visalia District

Visalia	2022	2023	2024	Annual Average
Cal Advocates	$4,073,275	$6,010,579	$3,263,228	$4,449,027
CWS	$14,819,008	$15,293,571	$14,107,108	$14,739,896
CWS > Cal Advocates	$10,745,733	$9,282,993	$10,843,881	$10,290,869
Cal Advocates as % CWS	27.49%	39.30%	23.13%	30.18%

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Attachment 4-2: Capital Budget Details - Visalia District

2022	Work Order #	Project Description		Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00123797	VIS 077-PT1 - Pressure Vessel Rplcm		$301,320	$301,320	-	100.00%
2022	00124689	VIS 201-PT1 - Pressure Vessel Rplcm		$298,156	$344,370	$46,214	86.58%
2022	00125328	VIS Chemical Shelter Replacement		$48,009	$52,810	$4,801	90.91%
2022	00125499	VIS 2022 Physical Security Upgrades		$71,223	$180,252	$109,029	39.51%
2022	00124298	VIS 012-01 Well Renewal		$216,593	$259,695	$43,102	83.40%
2022	00123639	VIS Tank Exterior Ladder Lifelines		$19,415	$21,465	$2,050	90.45%
2022	00124636	VIS Elev Tanks Seismic/Geotech Stud		$97,861	$108,195	$10,334	90.45%
2022	00123233	VIS 072-01 - Replace Pump & Motor		-	$82,601	$82,601	0.00%
2022	00123239	VIS 012-A - Replace Pump & Motor		$25,066	$35,350	$10,283	70.91%
2022	00124110	VIS 2022 Flowmeter Replacement		$256,145	$307,374	$51,229	83.33%
2022	00124145	VIS 300-01 - Replace Pump & Motor		$40,032	$56,456	$16,424	70.91%
2022	00124389	VIS Install SCADA at 57 and 58		$64,795	$71,274	$6,479	90.91%
2022	00124373	VIS 2022 - GAC Media Replacement		$559,097	$615,006	$55,910	90.91%
2022	00126491	2022 VIS 77 Carbon Change Outs		$129,799	$142,779	$12,980	90.91%
2022	00123943	VIS 2022 Customer Meter Vault Lids		$26,266	$28,892	$2,627	90.91%
2022	00123784	VIS 2022 Vehicle Replacement Progrm		$79,254	$232,878	$153,625	34.03%
2022	00124268	Visalia WSFMP		$286,659	$315,325	$28,666	90.91%
2022	120MRP22	VIS 2022 Main Replacement Program		$800,004	$3,504,638	$2,704,634	22.83%
2022	VIS0900	Meter Replacement Program		$306,701	$306,701	-	100.00%
2022	120UNSCH	Unscheduled Replacements		-	$2,373,934	$2,373,934	0.00%
2022		**Specific Total**		$3,626,394	$9,341,316	$5,714,922	38.82%
2022	120-NON-SP	**Non-specific Total**		$446,881	$558,601	$111,720	80.00%
2022		**Carry-Over Total**		-	$4,919,090	$4,919,090	0.00%
		TOTAL 2022		$4,073,275	$14,819,008	$10,745,733	27.49%

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2023	Work Order #	Project Description		Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00124743	VIS Property Purchase		-	$498,658	$498,658	0.00%
2023	00123309	VIS 38 - PFAS Treatment		-	$1,330,196	$1,330,196	0.00%
2023	00123954	VIS 23 Panelboard & Gen Set		-	$419,249	$419,249	0.00%
2023	00125500	VIS 2023 Physical Security Upgrades		$83,433	$318,292	$234,859	26.21%
2023	00124299	VIS 014-01 Well Renewal		$243,350	$291,776	$48,426	83.40%
2023	00123354	VIS 97 - New Storage Tank		$2,098,375	$2,744,674	$646,299	76.45%
2023	00123359	VIS 200 - New Storage Tank		$950,541	$1,140,649	$190,108	83.33%
2023	00123232	VIS 070-01 - Replace Pump and Motor		-	$84,666	$84,666	0.00%
2023	00123276	VIS 079-01 - Replace Pump & Motor		$60,036	$84,666	$24,630	70.91%
2023	00123703	VIS 052-PT1 - Pressure Vessel Rehab		-	$83,833	$83,833	0.00%
2023	00124047	VIS 30 Install ATS		$51,953	$60,006	$8,053	86.58%
2023	00124113	VIS 2023 Flowmeter Replacement		$263,604	$316,325	$52,721	83.33%
2023	00124124	VIS 042-01 Replace Pump & Motor		$45,433	$64,072	$18,639	70.91%
2023	00124143	VIS 083-01 - Replace Pump & Motor		$85,112	$120,030	$34,918	70.91%
2023	00124377	VIS 2023 GAC Media Replacement		$123,819	$136,200	$12,382	90.91%
2023	00126492	2023 VIS 77 Carbon Change Outs		$133,044	$146,349	$13,305	90.91%
2023	120MRP23	VIS 2023 Main Replacement Program		$820,004	$3,592,254	$2,772,250	22.83%
2023	00123945	VIS 2023 Customer Meter Vault Lids		$26,922	$29,615	$2,692	90.91%
2023	00123785	VIS 2023 Vehicle Replacement Progrm		$168,471	$233,669	$65,198	72.10%
2023	00126078	Sharkfin Recharge Facilities		$84,214	$92,635	$8,421	90.91%
2023	VIS0900	Meter Replacement Program		$314,368	$314,368	-	100.00%
2023	120UNSCH	Unscheduled Replacements		-	$2,433,282	$2,433,282	0.00%
2023		**Specific Total**		$5,552,679	$14,535,465	$8,982,786	38.20%
2023	120-NON-SP	**Non-specific Total**		$457,900	$572,375	$114,475	80.00%
2023		**Carry-Over Total**		-	$185,732	$185,732	0.00%
		TOTAL 2023		$6,010,579	$15,293,571	$9,282,993	39.30%

1

2024	Work Order #	Project Description		Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00123313	VIS 55 - PFAS Treatment		-	$1,967,533	$1,967,533	0.00%
2024	00123396	VIS 99 - New Well Station		-	$2,980,376	$2,980,376	0.00%
2024	00123916	VIS 62 Generator Installation		$222,955	$257,513	$34,558	86.58%
2024	00123924	VIS 72 Generator Installation		$222,955	$257,513	$34,558	86.58%
2024	00123930	VIS 81 Generator Installation		$222,432	$256,909	$34,477	86.58%
2024	00125501	VIS 2024 Physical Security Upgrades		$81,631	$266,034	$184,402	30.68%
2024	00123270	VIS 032-01 - Replace Pump & Motor		$61,869	$87,251	$25,382	70.91%
2024	00124118	VIS 2024 Flowmeter Replacement		$300,443	$360,531	$60,089	83.33%
2024	00124119	VIS 026-01 Replace Pump & Motor		$61,869	$87,251	$25,382	70.91%
2024	00124378	VIS 2024 GAC Media Replacement		$126,914	$139,605	$12,691	90.91%
2024	00126487	2024 VIS 38 Carbon Change Outs		$76,375	$84,012	$7,637	90.91%
2024	00126493	2024 VIS 77 Carbon Change Outs		$136,370	$150,007	$13,637	90.91%
2024	00123946	VIS 2024 Customer Meter Vault Lids		$27,595	$30,355	$2,760	90.91%
2024	00123786	VIS 2024 Vehicle Replacemnt Program		$89,648	$97,017	$7,370	92.40%
2024	120MRP24	VIS 2024 Main Replacement Program		$840,505	$3,682,060	$2,841,556	22.83%
2024	VIS0900	Meter Replacement Program		$322,228	$322,228	-	100.00%
2024	120UNSCH	Unscheduled Replacements		-	$2,494,114	$2,494,114	0.00%
2024		**Specific Total**		$2,793,788	$13,520,308	$10,726,521	20.66%
2024	120-NON-SP	**Non-specific Total**		$469,440	$586,800	$117,360	80.00%
2024		**Carry-Over Total**		-	-	-	0.00%
2024		**TOTAL 2024**		$3,263,228	$14,107,108	$10,843,881	23.13%

Attachment 4-3: Capital Budget vs. Recorded Expenditure - Visalia District

Visalia	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	$10,882,938	100%
Cal Advocates	$4,073,275	$6,010,579	$3,263,228	$4,449,027	41%
CWS	$14,819,008	$15,293,571	$14,107,108	$14,739,896	135%

Attachment 4-4: Cal Water's Response to Cal Advocates' Data Request ISC-019 Question 2 (excerpt)

1

2. Regarding Project ID #123954 New Generator & Panelboard Replacement Station 23 **(Capital Project Justifications – Visalia Report VIS PJ – 108)**, please provide the following.

   a. The inspection, maintenance, outage, and repair records and associated costs for the panelboard in the last 10 years (2011-2020).

      Response: Records for the last 10 years are attached (see Attachment 1). Associated costs for any repairs are not readily accessible due to the fact that field staff typically utilizes expense accounts to pay for district-wide needs.

   b. The quantitative prediction for increased probability of risk for problems with the panelboard station 23.

      If documentation is not available, please explain why not.

      Response: This documentation is not available as CWS does not perform the probability of risk analysis for this asset type.

Attachment 4-5: Cal Water's Response to Cal Advocates' Data Request ISC-019, Attachment 1 (excerpt)

1

Work Order	Priority	Status	Supervisor	Lead	Work Type	Operating District	Water System	Station	Work Order Failure Code	Location	Work Order Description	Asset Description	Job Plan	PM	Lead Craft	Response Date
149460	4	CLOSE	HOUNSELL2	DITTENBAUM	EMCLEY	VIS SITE	VIS	25	ELEC PANELBOARD	VIS-005-P001	Lost power at station	NULL	NULL	NULL	EMI	8/26/2011 8:03
164420	3	CLOSE	BRONFMLT	DRETTENBARG	ON	VIS SITE	VIS	25	ELTC-PANELTCOARD	VIS-005-P001	Power off and let SCF in, then check service lines	NULL	NULL	NULL	TMT	12/28/2011 9:42
184948	3	CLOSE	HOUNSELL2	DITTENBAUM	ON	VIS SITE	VIS	25	ELEC PANELBOARD	VIS-005-P001	Loss service at 25	NULL	NULL	NULL	EMI	12/22/2011 10:02
200070	3	CLOSE	BRONFMLT	DRETTENBARG	PM	VIS SITE	VIS	25	ELTC-PANELTCOARD	VIS-005-P001	Panelboard Preventive Maintenance	Panel Board - Ops Info: 25_01 - Mfgr: Industrial Electric	TMT_PM_N	12000101	TMT	4/17/2012 0:01
200146	2	CLOSE	HOUNSELL2	DITTENBAUM	PM	VIS SITE	VIS	25	ELEC PANELBOARD	VIS-005-P001	Panelboard Preventive Maintenance	Panel Board - Ops Info: 25_10 - Mfgr: Industrial Electric	EMI_PM_N	12000101	EMI	9/21/2012 0:01
201077	3	CLOSE	BRONFMLT	DRETTENBARG	ON	VIS SITE	VIS	25	ELTC-PANELTCOARD	VIS-005-P001	control power breaker on pond	NULL	NULL	NULL	TMT	10/15/2012 12:12
206666	3	CLOSE	HOUNSELL2	DITTENBAUM	ON	VIS SITE	VIS	25	ELEC PANELBOARD	VIS-005-P001	Starter making noise	NULL	NULL	NULL	EMI	1/8/2013 8:55
210094	3	CLOSE	BRONFMLT	DRETTENBARG	ON	VIS SITE	VIS	25	ELTC-PANELTCOARD	VIS-005-P001	burning coming from panel	NULL	NULL	NULL	TMT	4/2/2013 8:03
210604	2	CLOSE	HOUNSELL2	DITTENBAUM	ON	VIS SITE	VIS	25	ELEC PANELBOARD	VIS-005-P001	burning coming from panel	NULL	NULL	NULL	EMI	4/2/2013 8:06
231453	3	CLOSE	BRONFMLT	FARBOYO	ON	VIS SITE	VIS	25	ELTC-PANELTCOARD	VIS-005-P001	Pump cycling on and off at 25-01	NULL	NULL	NULL	TMT	3/18/2014 7:49
232467	3	CLOSE	HOUNSELL2	DITTENBAUM	ON	VIS SITE	VIS	25	ELEC PANELBOARD	VIS-005-P001	Pump cycling and stopping rapidly	NULL	NULL	NULL	EMI	3/28/2014 15:40
237078	3	CLOSE	DRETTENBARG	DRETTENBARG	ON	VIS SITE	VIS	25	ELTC-PANELTCOARD	VIS-005-P001	No power to cooler controller	NULL	NULL	NULL	TMT	7/7/2014 0:17
280425	2	CLOSE	[illegible]	DITTENBAUM	PM	VIS SITE	VIS	25	ELEC PANELBOARD	VIS-005-P001	Panelboard Preventive Maintenance	Panel Board - Ops Info: 25_10 - Mfgr: Industrial Electric	EMI_PM_N	12000101	EMI	9/21/2015 0:01
287977	4	CLOSE	AMIRELLS	FARBOYO	ON	VIS SITE	VIS	25	ELTC-PANELTCOARD	VIS-005-P001	Sr 130_025 swapped breaker	NULL	NULL	NULL	TMT	5/11/2015 12:33
353077	4	CLOSE	AMIRELLS	BARBOYO	ON	VIS SITE	VIS	25	ELEC PANELBOARD	VIS-005-P001	SCADA_025 stopped running.	NULL	NULL	NULL	EMI	3/23/2016 15:56
360108	3	CLOSE	AMIRELLS	AMPTEST	ON	VIS SITE	VIS	25	ELTC-PANELTCOARD	VIS-005-P001	Add die cell, terminals, and rewire motor control	NULL	NULL	NULL	TMT	5/25/2016 11:13
468102	2	CLOSE	AMIRELLS	AMPTEST	ON	VIS SITE	VIS	25	ELEC PANELBOARD	VIS-005-P001	Action requested: Inspection of the PLC panel. Ensure it is not operating correctly.	NULL	NULL	NULL	EMI	9/22/2016 7:50
474073	3	CLOSE	AMIRELLS	AMPTEST	ON	VIS SITE	VIS	25	ELTC-PANELTCOARD	VIS-005-P001	Rewire Memrill to operate as power Cal Water Irrigation	NULL	NULL	NULL	TMT	12/2/2016 12:13
480300	1	CLOSE	AMIRELLS	BARBOYO	ON	VIS SITE	VIS	25	ELEC PANELBOARD	VIS-005-P001	SCADA_025 drew electrical schematics	Panel Board - Ops Info: 25_10 - Mfgr: Industrial Electric	NULL	NULL	EMI	1/26/2017 7:46
484100	1	CLOSE	AMIRELLS	FARBOYO	ON	VIS SITE	VIS	25	ELTC-PANELTCOARD	VIS-005-P001	Sr 130_025 drew electrical schematics	Panel Board - Ops Info: 25_01 - Mfgr: Industrial Electric	NULL	NULL	TMT	1/26/2017 7:42
555105	2	CLOSE	AMIRELLS	AMPTEST	PM	VIS SITE	VIS	25	ELEC PANELBOARD	VIS-005-P001	Panelboard Preventive Maintenance	Panel Board - Ops Info: 25_10 - Mfgr: Industrial Electric	EMI_PM_N	12000101	EMI	9/21/2020 0:01
557201	3	COMP	AMIRELLS	AMPTEST	PM	VIS SITE	VIS	25	ELTC-PANELTCOARD	VIS-005-P001	Panelboard Preventive Maintenance	Panel Board - Ops Info: 25_01 - Mfgr: Industrial Electric	TMT_PM_N	12000101	TMT	9/21/2020 0:01
563106	4	CLOSE	AMIRELLS	AMPTEST	ON	VIS SITE	VIS	25	ELEC PANELBOARD	VIS-005-P001	Burn out in PLC is non up	Panel Board - Ops Info: 25_10 - Mfgr: Industrial Electric	NULL	NULL	EMI	12/2/2020 11:11
607111	4	APPR	AMIRELLS	AMPTEST	ON	VIS SITE	VIS	25	ELTC-PANELTCOARD	VIS-005-P001	Create electrical control color	Panel Board - Ops Info: 25_01 - Mfgr: Industrial Electric	NULL	NULL	TMT	8/5/2021 12:13

Attachment 4-6: Cal Water's Response to Cal Advocates' Data Request ISC-030, Attachment 2:

Status	Well Code	Description	Install Year	Age	Score
Active	FW-W-060-01	60-01 (Visalia)	1991	30	2
Active	OR-W-033-02	33-02	1962	59	4
Active	OR-W-042-01	42-01	1976	45	3
Active	VIS-W-007-01	WELL 7-01	1929	92	5
Active	VIS-W-011-02	WELL 11-02	1984	37	3
Active	VIS-W-012-01	WELL 12-01	1949	72	5
Active	VIS-W-013-01	13-01	1950	71	5
Active	VIS-W-014-01	14-01	1949	72	5
Active	VIS-W-015-01	15-01	1951	70	5
Active	VIS-W-016-02	16-02	2002	19	2
Active	VIS-W-019-01	19-01	1957	64	5
Active	VIS-W-020-01	20-01	1958	63	5
Active	VIS-W-022-01	22-01	1960	61	4
Active	VIS-W-023-01	23-01	1962	59	4
Active	VIS-W-024-01	24-01	1961	60	4
Active	VIS-W-025-01	25-01	1963	58	4
Active	VIS-W-026-01	26-01	1964	57	4
Active	VIS-W-027-01	27-01	1965	56	4
Active	VIS-W-030-01	30-01	1967	54	4
Active	VIS-W-031-01	31-01	1961	60	4
Active	VIS-W-032-01	32-01	1969	52	4
Active	VIS-W-034-01	34-01	1970	51	4
Active	VIS-W-036-01	36-01	1971	50	4
Active	VIS-W-037-01	37-01	1972	49	4
Active	VIS-W-038-01	38-01	1973	48	3
Active	VIS-W-039-01	39-01	1973	48	3
Active	VIS-W-040-01	40-01	1973	48	3
Active	VIS-W-041-01	41-01	1974	47	3
Active	VIS-W-045-01	45-01	1976	45	3
Active	VIS-W-046-01	46-01	1977	44	3
Active	VIS-W-047-01	47-01	1977	44	3
Active	VIS-W-048-01	48-01	1977	44	3
Active	VIS-W-049-01	49-01	1978	43	3
Active	VIS-W-050-01	50-01	1978	43	3
Active	VIS-W-051-01	51-01	1978	43	3
Active	VIS-W-052-01	52-01	1978	43	3
Active	VIS-W-053-01	53-01	1979	42	3
Active	VIS-W-055-02	VIS-W-055-02	1900	121	5
Active	VIS-W-056-01	56-01	1987	34	3
Active	VIS-W-057-01	57-01	1962	59	4
Active	VIS-W-057-02	57-02	1962	59	4
Active	VIS-W-058-01	58-01	1979	42	3
Active	VIS-W-061-01	61-01	1990	31	3
Active	VIS-W-062-01	62-01	1990	31	3
Active	VIS-W-064-01	64-01	1992	29	2
Active	VIS-W-069-01	69-01	1989	32	3

1

Active	VIS-W-070-01	70-01	1992	29	2
Active	VIS-W-072-01	72-01	1993	28	2
Active	VIS-W-077-01	Well 77-01 - BEFORE _GAC	1979	42	3
Active	VIS-W-078-01	78-01	1993	28	2
Active	VIS-W-079-01	79-01	1994	27	2
Active	VIS-W-080-01	80-01	1995	26	2
Active	VIS-W-081-01	81-01	1997	24	2
Active	VIS-W-082-01	82-01	1999	22	2
Active	VIS-W-083-01	83-01	2004	17	1
Active	VIS-W-091-01	91-01	1996	25	2
Active	VIS-W-093-01	VIS-W-093-01	2005	16	1
Active	VIS-W-094-01	VIS-W-094-01	2006	15	1
Active	VIS-W-095-01	Well 95-01	2010	11	1
Active	VIS-W-097-01	Well 97-01	2007	14	1

1

Attachment 4-7: Cal Water's Response to Cal Advocates' Data Request ISC-02 Question 1.c.i (excerpt)

i. Did CWS perform any calculations demonstrating the volume of the storage tank and/or number of pumps described above were the most economically optimal to meet PHD and minimize pressure fluctuation along the eastern edge of the system?

   a. If yes, please provide the documents supporting these calculations.
   b. If no, why not?

Response: Based on the Supply Gap Analysis, the Visalia system was identified to have a PHD deficit over 10,000 gpm. This pumping deficit to meet four hours of PHD translates to a storage deficit of over 2.5MG. In an effort to reduce this strain on the system, a 1 MG storage tank was proposed at the existing CWS VIS Station 97. The size of the tank was finalized based on utilizing the most available onsite space as shown in previously shared document (VIS PJ-77) while taking into consideration the City of Visalia height ordinances necessary to achieve site plan review approval. The pumping capacity was determined based on existing station and distribution piping in conjunction with flow velocities and head losses. The station was installed with 16" DI piping however, existing distribution restrictions fronting the station will restrict flow to approximately 2,500gpm with boosters and existing active well (VIS 97 – in service) operating. These infrastructure improvements are necessary; however, they will not fully resolve the Visalia Districts PHD deficit. This is part of a multi-year, multi-project effort to bring the water system back into compliance with Title 22 regulations.

Attachment 5-1: Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY

OF

Isaac Gendler

Q.1 Please state your name and address.

A.1 My name is Isaac Gendler, and my business address is 505 Van Ness Avenue, San Francisco, California 94102.

Q.2 By whom are you employed and what is your job title?

A.2 I am employed by the California Public Utilities Commission Public Advocates Office as a Utilities Engineer.

Q.3 Please describe your educational and professional experience.

A.3 I received a Bachelor of Science Degree in Mechanical Engineering from San Jose State University in May 2019.

I have been with the Public Advocates Office – Water Branch since September 2020.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am responsible for analyzing and writing about the condition of plant infrastructure and equipment in the Bakersfield, Kern River Valley, Selma, and Visalia districts as well as rate base for all of California Water System's districts.

Q.5 Does that complete your prepared testimony?

A.5 Yes.

Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie L. Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	Niamh Murphy
Witness(es)	:	

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

REPORT ON PLANT FOR CHICO, OROVILLE, MARYSVILLE, WILLOWS AND DIXON DISTRICTS

California Water Service Company
General Rate Case
A.21-07-002

San Francisco, California
February 4, 2022

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MEMORANDUM

The Public Advocates Office at the California Public Utilities Commission ("Cal Advocates") examined application material, data request responses, and other information presented by California Water Service Company ("Cal Water" or "CWS") in Application ("A.") 21-07-002 to provide the California Public Utilities Commission ("Commission" or "CPUC") with recommendations in the interests of ratepayers for safe and reliable service at the lowest cost. Ms. Niamh Murphy prepared this report under the general supervision of Program Manager Richard Rauschmeier, and Program & Project Supervisor Syreeta Gibbs, and Project Lead Brian Yu. Marybelle Ang and Caryn Mandelbaum are Cal Advocates legal counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any particular issue connotes neither agreement nor disagreement of the underlying request, methodology, or policy position related to that issue.

CHAPTER 1 Chico Plant

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for CWS's Chico District.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a capital budget of $4,644,309 for 2022, $4,776,060 for 2023, and $5,111,831 for 2024 for CWS's Chico District.[1]

The estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding sample sites, control valve overhauls and replacements, SB 1396 service line replacements, water quality analyzers, meter vault lid replacements, pressure vessel replacements, main replacements, pump and motor replacements, physical security upgrades, vehicle replacements, unscheduled and non-specific projects.

III. ANALYSIS

The Chico District recorded $10,484,473 per year in average gross plant additions for the most recent four-year period 2015-2020.[2]

The following discussion presents analyses and recommended adjustments to CWS's requested capital budget for specific projects, non-specific projects, and carry-overs below.

Additionally, contingency has been set to 0% for all projects. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Plant Issues for further discussion on contingency.

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[1] Attachment 1-6: Chico RO Tables, Table 2-B. See Attachment 1-6: Chico RO Tables, Table 2-A for Chico's Capital Budget Summary.

[2] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant. See Attachment 1-6: Chico RO Tables, Table 2-C for Chico's Capital Budget vs Recorded Expenditure comparison.

1 **A. Specific Projects**

2 **1. Station 7 PFAS Treatment Installation**

3 The Commission should deny Cal Water's request for $1,264,436 to install a new
4 Per- and polyfluoroalkyl substances (PFAS) treatment system at Station 7 because Cal
5 Water is currently able to meet its Title 22 source capacity requirements without the
6 Station 7 well.

7 In 2013, 2014 and 2015, the perfluorooctanesulfonic acid (PFOS) levels in Station
8 7's water were higher than response levels for PFOS set by the Division of Drinking
9 Water (DDW).[3] The well is currently inactive.[4] Cal Water states that as of October
10 2021, the well was removed from its property records and has been destroyed.[5] Cal Water
11 is required by the California Code of Regulations, Title 22 § 64554 to maintain a certain
12 level of capacity.[6] The Chico district meets the source capacity and peak hourly demand
13 (PHD) requirements.[7] The Chico district has 5.5 MG of storage, which is about nine
14 times the amount required to meet the PHD.

15 Cal Water exceeds the Title 22 capacity requirements in its Chico district, even
16 without the Station 7 well in service. Installing a PFAS treatment system onto a well that
17 is not needed is an imprudent cost that would unnecessarily burden ratepayers. The
18 Commission should deny Cal Water's request for a $1,264,436 PFAS treatment station

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[3] A.21-07-002, CH_2021_GRC_Justification_Book_FINAL, pp.CH PJ-45 and CH PJ-48.

[4] Attachment 1-2: California Water Service Co. – Chico Public Water System No. 0410002, FY 2021 Sanitary Survey Inspection Report, dated June 1, 2021, p. 3.

[5] Attachment 1-3: Cal Water Response to DR NMH-013 Attachment #1, Cell F8.

[6] California Code of Regulations, 22 CCR § 64554(a) available at {HYPERLINK https://govt.westlaw.com/calregs/Document/I09869AC5E2E24845946DA6392BB8ED5F?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)&bhcp=1 }.

[7] Attachment 1-2: California Water Service Co. – Chico Public Water System No. 0410002, FY 2021 Sanitary Survey Inspection Report, dated June 1, 2021, p. 2-3.

because the entire well is not needed to meet capacity requirements and has been destroyed.

2. Station 51 Carbo Tetrachloride Treatment Information

The Commission should deny Cal Water's request for $1,090,731 to install a new Granular Activated Carbon (GAC) treatment system at Station 51 because Cal Water is able to meet its Title 22 source capacity requirements without the Station 51 well.

In 2017, the carbon tetrachloride levels in Station 51's water were higher than the maximum contaminant level (MCL) for carbon tetrachloride set by the Division of Drinking Water (DDW).[8] The well is inactive and slated for destruction.[9] Cal Water is required by the California Code of Regulations, Title 22 § 64554 to maintain a certain level of capacity.[10] The Chico district meets the source capacity and peak hourly demand (PHD) requirements.[11] The Chico district has 5.5 MG of storage, which is about nine times the amount required to meet the PHD.

Cal Water exceeds Title 22 capacity requirements in its Chico district, even without the Station 51 well in service. Installing a GAC treatment system onto a well that is slated for destruction and not needed is another imprudent cost Cal Water's customers would bear the burden of in rates. The Commission should deny Cal Water's request for a $1,090,731 GAC treatment station because the entire well is unnecessary and is slated for destruction.

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[8] A.21-07-002, CH_2021_GRC_Justification_Book_FINAL, pp.CH PJ-53 and CH PJ-55.

[9] Attachment 1-2: California Water Service Co. – Chico Public Water System No. 0410002, FY 2021 Sanitary Survey Inspection Report, dated June 1, 2021, p. 4.

[10] California Code of Regulations, 22 CCR § 64554(a) available at {HYPERLINK https://govt.westlaw.com/calregs/Document/I09869AC5E2E24845946DA6392BB8ED5F?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)&bhcp=1 }.

[11] Attachment 1-2: California Water Service Co. – Chico Public Water System No. 0410002, FY 2021 Sanitary Survey Inspection Report, dated June 1, 2021, p. 2-3.

3. RTU and Flowmeter on PRVs from 2015

The Commission should deny Cal Water's request for an additional $490,621 to add a previously approved project into rate base again because the project was mismanaged across multiple GRCs.

In the 2015 GRC, Cal Water was authorized a total of $384,307 to replace flow meters from 2016 to 2018.[12] Cal Water acknowledged a mistake while calculating the original budget and spent significant time attempting to acquire permits for the flow meter installations. Cal Water also forgot to add the project to the carryover project budget in its 2018 GRC and failed to ask for funding from its Capital Program Management Committee in 2019.[13] In this GRC, Cal Water requests to add this previously approved GRC project into the capital budget again.

This project has already been funded through rates in the 2015 GRC settlement agreement. It was mismanaged from start to finish and approving a new budget for the same project would expose ratepayers to additional financial burden through rates. Ratepayers should not be required to fund projects over and over without ever realizing any benefit. Additionally, the Commission is tasked with acting as a substitute for competition,[14] and in a competitive market, Cal Water would not be able to recover the costs of mismanaged projects. In order to protect ratepayers, the Commission should deny Cal Water's request to add additional budget to rate base after blatantly mismanaging the project.

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[12] D.16-12-042, Exhibit A. Settlement Agreement, D. CHICO: ADVANCE CAPITAL BUDGET SUMMARY TABLE, pp.320-323.

[13] A.21-07-002, CH_2021_GRC_Justification_Book_FINAL, p.CH PJ-98.

[14] "Our objective through regulation is to act as a substitute for competition." D.96-04-050 citing D.86-08-083.

4. Station 50 Rebuild Design

The Commission should deny Cal Water's request for $171,699 to design and permit a station rebuild because this budget does not reflect the full rate impact for this project and conflicts with the Commission's authorized rate case plan.

The Commission-authorized rate case plan mandates that capital project proposals must include a budget for the entire project.[15] Cal Water's proposal to split the budget for a single project across two GRCs does not provide the entire budget for the project and obscures the true rate impact. It is impossible to determine if this budget is reasonable for a project of this scope because Cal Water has not provided the entire project's scope. Cal Water requests a budget solely for the design and permitting stage of a station rebuild. The construction budget for this project would be requested in Cal Water's 2024 GRC.[16] The design and permitting budget includes a 20% contingency factor.[17]

Approving the budget solely for project design could expose ratepayers to funding unreasonable costs though higher rates. If in the next GRC the construction portion of the project is not approved, ratepayers would have wasted money on the design portion of a project that was never completed. Since Cal Water did not provide the full scope of the entire project in this GRC, Cal Advocates cannot determine with accuracy if the entire project is reasonable. It is irresponsible to approve the budget of part of a project without reviewing the entire proposal, as it puts the ratepayer at risk of financing uncertain investments through rates.

Cal Water claims that this proposal to split the budget allows the final budget to be more accurate, yet even the budget solely for planning includes a high contingency factor

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[15] "[P]roposals for major capital projects presented in the application must include need analysis, cost comparison and evaluation, conceptual designs, and overall budget." D.04-06-018, p.15.

[16] A.21-07-002, CH_2021_GRC_Justification_Book_FINAL, p. CH PJ-61.

[17] A.21-07-002, CH_2021_GRC_Justification_Book_FINAL, p. CH PJ-95.

of 20%.[18] Splitting the project into two budgets does not solve the problem of poor scoping and budget analysis, but simply prolongs it over multiple GRCs.

See Justin Menda's testimony on proposed Design and Permit Only Projects chapter in Chapter 17 of Cal Advocates' Report on Common Plant Issues for further discussion.

The Commission should deny Cal Water's budget request to plan for a project that is not fully requested until the next GRC, because the full impact on rates cannot be determined without the complete project scope and it contradicts the Commission-authorized rate case plan.

5. Station 64 Wildfire Pump Storage Design

The Commission should deny Cal Water's request for $352,220 to design and permit a pump storage facility because this budget does not reflect the full rates impact of this project and conflicts with the Commission's authorized rate case plan.

See Chapter 1 Section III.A.4 of this report for further discussion.

6. Water Supply and Facilities Master Plan

The Commission should approve a budget of $293,825 for Chico district's Water Supply and Facilities Master Plan (WSFMP).

Cal Water requests a budget of $323,207 to complete Chico's WSFMP. This budget includes 600 hours of labor and a 10% contingency cost.[19] The study will be conducted by outside resources as Cal Water asserts that it does not have enough resources to complete the study on its own.[20]

The added 10% contingency cost should be removed from the estimate. See Suliman Ibrahim's testimony on Cal Advocates' Report on Common Plant Issues,

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[18] A.21-07-002, CH_2021_GRC_Justification_Book_FINAL, p. CH PJ-65.

[19] A.21-07-002, CH_2021_GRC_Justification_Book_FINAL, p. CH PJ-79.

[20] A.21-07-002, CH_2021_GRC_Justification_Book_FINAL, p. CH PJ-76.

Chapter 16, for further discussion on contingency. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve a budget of $293,825 for Cal Water's Chico WSFMP.

7. Water Supply Reliability Study

The Commission should approve a budget of $133,838 for Chico district's Water Supply Reliability Study.

Cal Water requests a budget of $144,529 to complete Chico's Reliability Study. This budget includes a 10% contingency cost.[21]

The added 10% contingency cost should be removed from the estimate. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Plant Issues for further discussion on contingency. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve a budget of $133,838 for Cal Water's Chico Water Supply Reliability Study.

B. Non-Specific Budgets

Refer to Cal Advocate's RO Tables in the Executive Summary and Results of Operations Tables report for Chico's non-specific budget for 2022, 2023, and 2024.

C. Carry-Over Budget

1. Station 11

The Commission should remove the requested revised cost of $733,590 carryover budget for the Station 11 rebuild because this project has already been funded through rates twice.

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[21] Attachment 1-4: Cal Water Response to DR NMH-011, Q.1.a.

The 2015 GRC Settlement agreement approved a budget of $578,613 to rebuild Station 11.[22] This amount was funded by customers in authorized rates for the full three-year rate cycle 2016 to 2019. Similarly, the 2018 GRC Settlement agreement approved a budget of $587,473 to rebuild Station 11.[23] Cal Water has already been funded a total of $1,166,086 for six years in customer rates to rebuild Station 11.

In this GRC, Cal Water requests $733,590 for the previously funded, but not completed station rebuild.[24] The station was originally slated for completion in 2017.[25] Four years later, Cal Water has still not completed this project. Cal Water's customers should not have to fund another $733,590 through rates for a project that they have already funded for six years under the assumption it would be providing service. Ratepayers should not have to pay over and over for projects that they receive no benefit from.

The Commission should remove $733,590 from Chico district's requested carryover budget, to protect ratepayers from paying for the same project twice with no tangible benefits. If and when Cal Water completes this project, it can request in a subsequent general rate case to recover all reasonable and prudent costs.

IV. CONCLUSION

The recommendations presented above have been incorporated in the calculations for the recommended Plant in Service as shown in Cal Advocate's RO Tables included in the Executive Summary and Results of Operations Tables report.

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[22] D.1612042, Exhibit A, p.220.

[23] D.2012007, Attachment 1, Settled Advance Capital Budget, p. CH-ACB-1.

[24] A.21-07-002, Chico RO Booklet, CHRO2021, Attachment A, RO Plant Table 3, p. 120.

[25] D.1612042, Exhibit A, p.220.

CHAPTER 2 Oroville Plant

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for CWS's Oroville District.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a capital budget of $1,135,027 for 2022, $1,276,576 for 2023, and $1,010,651 for 2024 for CWS's Oroville District.[26]

The estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding sample sites, control valve overhauls and replacements, flowmeter replacements, water quality analyzers, meter vault lid replacements, tank retrofits, main replacements, pump and motor replacements, physical security upgrades, meter replacements, well renewals, unscheduled and non-specific projects.

III. ANALYSIS

The Oroville District recorded $1,558,488 per year in average gross plant additions for the most recent four-year period 2015-2020.[27]

The following discussion presents analyses and recommended adjustments to CWS's requested capital budget for specific projects, non-specific projects, and carry-overs below.

Additionally, contingency has been set to 0% for all projects. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Plant Issues for further discussion on contingency.

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[26] Attachment 2-2: Oroville RO Tables, Table 2-B. See Attachment 2-2: Oroville RO Tables, Table 2-A for Oroville's Capital Budget Summary.

[27] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant. See Attachment 2-2: Oroville RO Tables, Table 2-C for Oroville's Capital Budget vs Recorded Expenditure comparison.

A. Specific Projects

1. Station 17 – New Well Design

The Commission should deny Cal Water's request for $474,496 to design and permit a new well because this budget does not reflect the full rates impact of this project.

See Chapter 1 Section III.A.4 of this report for further discussion of the unknown impact to rates this incomplete budget could have.

Cal Water's Oroville District currently meets all Title 22 supply requirements.[28] It is unreasonable to include this project budget in rates because it lacks information about the entire scope of the project and is unnecessary to meet Title 22 supply requirements.

The Commission should deny Cal Water's request for $474,496 to design and permit a new well because this budget does not reflect the full rates impact of this project.

2. Water Supply and Facilities Master Plan

The Commission should approve a budget of $131,912 for Oroville district's Water Supply and Facilities Master Plan (WSFMP).

Cal Water requests a budget of $380,155 to complete Oroville's WSFMP. This budget includes a $280,000 consultancy cost, 350 hours of labor and a 10% contingency cost.[29] The study will be conducted by outside resources as Cal Water asserts that it does not have enough resources to complete the study on its own.[30]

Cal Water has classified Oroville's WSFMP as a "low" cost category.[31] Cal Water's consultancy cost for "low" cost category districts is $80,000.[32] The consultancy cost line item of this budget should therefore be corrected from $280,000 to $80,000.

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[28] Attachment 2-1: California Water Service Co. – Oroville, Public Water System No. 0410005, December 2020 Inspection Report, p. 2.

[29] A.21-07-002, ORO_2021_GRC_Justification_Book_FINAL, p. ORO PJ-40.

[30] A.21-07-002, ORO_2021_GRC_Justification_Book_FINAL, p. ORO PJ-37.

[31] A.21-07-002, ORO_2021_GRC_Justification_Book_FINAL, p. ORO PJ-42.

[32] A.21-07-002, ORO_2021_GRC_Justification_Book_FINAL, p. ORO PJ-43.

The added 10% contingency cost should be removed from the estimate. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Plant Issues for further discussion on contingency. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve a budget of $131,912 for Cal Water's Oroville WSFMP.

3. Water Supply Reliability Study

The Commission should approve a budget of $133,838 for Oroville district's Water Supply Reliability Study.

Cal Water requests a budget of $144,529 to complete Oroville's Reliability Study. This budget includes a 10% contingency cost.[33]

The added 10% contingency cost should be removed from the estimate. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Plant Issues for further discussion on contingency. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve a budget of $133,838 for Cal Water's Oroville Water Supply Reliability Study.

B. Non-Specific Budgets

Refer to Cal Advocate's RO Tables included in the Executive Summary and Results of Operations report for Oroville's non-specific budget for 2022, 2023, and 2024.

IV. CONCLUSION

The recommendations presented above have been incorporated in the calculations for the recommended Plant in Service as shown in Cal Advocate's RO Tables in the Executive Summary and Results of Operations Tables report.

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[33] Attachment 1-4: Cal Water Response to DR NMH-011, Q.1.a.

CHAPTER 3 Marysville Plant

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for CWS's Marysville District.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a capital budget of $1,273,742 for 2022, $1,336,361 for 2023, and $728,354 for 2024 for CWS's Marysville District.[34]

The estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding flowmeter replacements, water quality analyzers, meter vault lid replacements, main replacements, meter replacements, physical security upgrades, vehicle replacements, SB 1398 Service Line replacements, unscheduled and non-specific projects.

III. ANALYSIS

The Marysville District recorded $1,227,243 per year in average gross plant additions for the most recent four-year period 2015-2020.[35]

The following discussion presents analyses and recommended adjustments to CWS's requested capital budget for specific projects, non-specific projects, and carry-overs below.

Additionally, contingency has been set to 0% for all projects. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Plant Issues for further discussion on contingency.

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[34] Attachment 3-3: Marysville RO Tables, Table 2-B. See Attachment 3-3: Marysville RO Tables, Table 2-A for Marysville's Capital Budget Summary.

[35] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant. See Attachment 3-3: Marysville RO Tables, Table 2-C for Marysville's Capital Budget vs Recorded Expenditure comparison.

A. Specific Projects

1. Water Supply and Facilities Master Plan

The Commission should approve a budget of $112,300 for Marysville district's Water Supply and Facilities Master Plan (WSFMP).

Cal Water requests a budget of $123,530 to complete Marysville's WSFMP. This budget includes 200 hours of labor and a 10% contingency cost.[36] The study will be conducted by outside resources as Cal Water asserts that it does not have enough resources to complete the study on its own.[37]

The added 10% contingency cost should be removed from the estimate. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Plant Issues for further discussion on contingency. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve a budget of $112,300 for Cal Water's Marysville WSFMP.

2. Water Supply Reliability Study

The Commission should approve a budget of $133,838 for Marysville district's Water Supply Reliability Study.

Cal Water requests a budget of $144,529 to complete Maryville's Reliability Study. This budget includes 200 hours of labor and a 10% contingency cost.[38]

The added 10% contingency cost should be removed from the estimate. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Plant Issues for further discussion on contingency. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

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[36] A.21-07-002, MRL_2021_GRC_Justification_Book_FINAL, p. MRL PJ-44.

[37] A.21-07-002, MRL_2021_GRC_Justification_Book_FINAL, p. MRL PJ-41.

[38] Attachment 1-4: Cal Water Response to DR NMH-011, Q.1.a.; A. 21-07-002; MRL_2021_GRC_Justification_Book_FINAL, p. MRL PJ-61

The Commission should approve a budget of $133,838 for Cal Water's Marysville Water Supply Reliability Study.

B. Non-Specific Budgets

Refer to Cal Advocate's RO Tables in the Executive Summary and Results of Operations Tables report for Marysville's non-specific budget for 2022, 2023, and 2024.

C. Carry-Over Budget

1. Remove budget for Army Corp of Engineers Levee work

The Commission should reject Cal Water's attempt to include a $248,081 advice letter project budget in the Marysville carry-over budget.

In the previous GRC, Cal Water requested a budget to move a pipeline that was in the Army Corps of Engineers right-of-way for levee work with the completion date in 2021. The Commission approved a capped budget of $248,081 and for this project to be treated as an advice letter project, rather than included in the last GRC's rates, due to the project scope uncertainty.[39] Although previously anticipated to be complete and providing service prior to the current general rate case, Cal Water has not started, much less completed this project at the time of filing its current Application.

In this GRC, Cal Water requests that this project be incorporated as a carry-over project with a budget of $284,736 for solely direct costs in 2024.[40] Cal Water did not provide any current projections for when the Army Corps of Engineers would begin their levee work. In accordance with the previous rate case decision, this project should not be included in rate base until Cal Water receives an update from the Army Corps of Engineers about the finalized plans for the levee.

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[39] Attachment 3-1: D.20-12-007, Attachment 1, Chapter 15, Section H.1.a, at p. 148. The approved budget includes direct and indirect costs.

[40] A.21-07-002, Marysville RO Booklet, file "MRL RO2021 Final", Attachment C, p. 169.

Cal Water's customers should not have to pay for projects that may never come to fruition, especially for a project as uncertain in scope as this one. Once Cal Water has a clear scope of the actual work that will need to be done and the work's actual timeline, it can revisit the need to request a budget for the project.

The Commission should reject Cal Water's attempt to include $248,081 associated with this advice letter project in the Marysville carry-over budget.

2. Remove Non-Specific Cost overrun

The Commission should remove $350,421 of non-specific direct cost overrun from Marysville's carryover budget.

In the previous GRC, the Commission authorized $128,656 direct cost in 2021 for non-specific budget for the Marysville district.[41] The Commission decided that "[i]n its next GRC, Cal Water must provide justifications demonstrating the reasonableness of capital projects that exceed the non-specific capital budget."[42]

In this GRC, Cal Water requests a $479,077 direct cost budget for non-specific projects that have not yet been completed. This is more than three times the authorized non-specific budget for this district. Cal Water did not provide justification for the expenses that exceeded the non-specific capital budget.[43]

Cal Water failed to meet the criteria established by the Commission in the previous GRC's settlement agreement. Allowing Cal Water to recover this excess $350,421 without a reasonableness review could expose ratepayers to excessive and burdensome rates for projects that may not benefit them.

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[41] D.20-12-007, Attachment 1, Attachment 10, Table 11, p.17.

[42] Attachment 3-2: D.20-12-007, Attachment 1, Chapter 13: Common Plant Issues, Section K. Non-specific Capital Budget, p. 114.

[43] A.21-07-002, MRL RO 2021 Final, Attachment E – Detail of non-specific carryover projects, p. 174. Cal Water provided justification for a PSPS event project and a GAC treatment plant, both of which are not included in the requested $565,141. Cal Water did not provide any justification for the $565,141 requested amount.

The Commission should remove $350,421 of unjustified non-specific cost overrun from Marysville's carryover budget to protect ratepayers from unreasonable projects funded through rates.

IV. CONCLUSION

The recommendations presented above have been incorporated in the calculations for the recommended Plant in Service as shown in Cal Advocate's RO Tables in the Executive Summary and Results of Operations Tables report.

CHAPTER 4 Willows Plant

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for CWS's Willows District.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a capital budget of $949,653 for 2022, $733,838 for 2023, and $563,395 for 2024 for CWS's Willows District.[44]

The estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding flowmeter replacements, water quality analyzers, meter replacements, main replacements, pump and motor replacements, physical security upgrades, vehicle replacements, well renewals, unscheduled and non-specific projects.

III. ANALYSIS

The Willows District recorded $2,182,737 per year in average gross plant additions for the most recent four-year period 2015-2020.[45]

The following discussion presents analyses and recommended adjustments to CWS's requested capital budget for specific projects, non-specific projects, and carry-overs below.

Additionally, contingency has been set to 0% for all projects. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Plant Issues for further discussion on contingency.

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[44] Attachment 4-1: Willow's RO Tables, Table 2-B. See Attachment 4-1: Willow's RO Tables, Table 2-A for Willow's Capital Budget Summary.

[45] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant. See Attachment 4-1: Willows RO Tables, Table 2-C for Willow's Capital Budget vs Recorded Expenditure comparison.

A. Specific Projects

1. Water Supply Reliability Study

The Commission should approve a budget of $106,916 for Willows district's Water Supply Reliability Study.

Cal Water requests a budget of $115,456 to complete Willows' Reliability Study. This budget includes 200 hours of labor and a 10% contingency cost.[46]

The added 10% contingency cost should be removed from the estimate. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Plant Issues for further discussion on contingency. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve a budget of $106,916 for Cal Water's Willows Water Supply Reliability Study.

B. Non-Specific Budgets

Refer to Cal Advocate's RO Tables in the Executive Summary and Results of Operations Tables report for Willows' non-specific budget for 2022, 2023, and 2024.

C. Carry-Over Budget

1. Removal of non-specific cost overrun

The Commission should remove $197,116 of non-specific direct cost overrun from Willows' carryover budget.

In the previous GRC, the Commission authorized $56,100 direct cost in 2021 for a non-specific budget for the Willows district.[47] The Commission decided that "[i]n its next GRC, Cal Water must provide justifications demonstrating the reasonableness of capital projects that exceed the non-specific capital budget."[48]

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[46] Attachment 1-4: Cal Water Response to DR NMH-011, Q.1.a.

[47] D.20-12-007, Attachment 1, Attachment 10, Table 11, p.18.

[48] Attachment 3-2: D.20-12-007, Attachment 1, Chapter 13: Common Plant Issues, Section K. Non-

In this GRC, Cal Water requests a $253,216 direct cost budget for non-specific projects that have not yet been completed. This is more than four times the authorized non-specific budget for this district. Cal Water did not provide justification for the expenses that exceeded the non-specific capital budget.[49]

Cal Water failed to meet the criteria established by the Commission in the previous GRC's settlement agreement. Allowing Cal Water to recover this excess $197,116 without a reasonableness review could expose ratepayers to excessive and burdensome rates for projects that may not benefit them.

The Commission should remove $197,116 of unjustified non-specific cost overrun from Willow's carryover budget to protect ratepayers from unreviewed projects funded through rates.

IV. CONCLUSION

The recommendations presented above have been incorporated in the calculations for the recommended Plant in Service as shown in Cal Advocate's RO Tables in the Executive Summary and Results of Operations Tables report.

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specific Capital Budget, p. 114.

[49] A.21-07-002, WIL RO 2021 Final, Attachment E – Detail of non-specific carryover projects, p. 165. Cal Water provided justification for the installation of two chromium treatment plants, the costs of which were covered by a $5 million DDW grant. Cal Water did not provide justification for the $300,948 amount.

CHAPTER 5 Dixon Plant

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for CWS's Dixon District.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a capital budget of $637,776 for 2022, $902,657 for 2023, and $558,389 for 2024 for CWS's Dixon District.[50]

The estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding meter replacements, main replacements, physical security upgrades, meter vault lid replacements, tank retrofits, unscheduled and non-specific projects.

III. ANALYSIS

The Dixon District recorded $2,992,687 per year in average gross plant additions for the most recent four-year period 2015-2020.[51]

The following discussion presents analyses and recommended adjustments to CWS's requested capital budget for specific projects, non-specific projects, and carry-overs below.

Additionally, contingency has been set to 0% for all projects. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Plant Issues for further discussion on contingency.

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[50] Attachment 5-1: Dixon RO Tables, Table 2-B. See Attachment 5-1: Dixon RO Tables, Table 2-A for Dixon's Capital Budget Summary.

[51] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant. See Attachment 5-1: Dixon RO Tables, Table 2-C for Dixon's Capital Budget vs Recorded Expenditure comparison.

A. Specific Projects

1. Water Supply Reliability Study

The Commission should approve a budget of $133,838 for Dixon district's Water Supply Reliability Study.

Cal Water requests a budget of $144,528 to complete Dixon's Reliability Study. This budget includes 200 hours of labor and a 10% contingency cost.[52]

The added 10% contingency cost should be removed from the estimate. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Issues for further discussion on contingency. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve a budget of $133,838 for Cal Water's Dixon Water Supply Reliability Study.

2. Water Supply and Facilities Master Plan

The Commission should approve a budget of $151,524 for Dixon district's Water Supply and Facilities Master Plan (WSFMP).

Cal Water requests a budget of $237,751 to complete Dixon's WSFMP. This budget includes 500 hours of labor and a 10% contingency cost.[53] The study will be conducted by outside resources as Cal Water asserts that it does not have enough resources to complete the study on its own.[54]

Cal Water has classified Dixon's WSFMP as a "moderate" cost category.[55] Cal Water states that districts are assigned different cost categories based on their size and

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[52] A.21-07-002, DIX_2021_GRC_Justification_Book_FINAL.pdf, p. DIX PJ – 43.

[53] A.21-07-002, DIX_2021_GRC_Justification_Book_FINAL, p. DIX PJ-27.

[54] A.21-07-002, DIX_2021_GRC_Justification_Book_FINAL, p. DIX PJ-24.

[55] A.21-07-002, DIX_2021_GRC_Justification_Book_FINAL, p. DIX PJ-28.

complexity.[56] Cal Water also states that more complex systems require a more in-depth analysis.[57] Cal Water did not provide a Dixon-specific description of relative system complexity, nor any justification for why Dixon is classified as a moderate cost category. In the absence of adequate system complexity information, the Dixon district should be classified using size as a metric. The Dixon district's size is closest to the district size used in the "low" cost category.[58] The consultancy cost line item of this budget should therefore be changed from the $140,000 "moderate" cost category to the $80,000 "low" cost category.

The added 10% contingency cost should be removed from the estimate. See Suliman Ibrahim's testimony on contingency in Chapter 16 of the Report on Common Plant Issues for further discussion on contingency. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve a budget of $151,524 for Cal Water's Dixon district WSFMP.

B. Non-Specific Budgets

Refer to Cal Advocate's RO Tables in the Executive Summary and Results of Operations Tables report for Dixon's non-specific budget for 2022, 2023, and 2024.

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[56] A.21-07-002, DIX_2021_GRC_Justification_Book_FINAL, p. DIX PJ-28.

[57] "More complex district (and complexity can stem from both system operations and regional supply issues) will require a more robust analysis from consultants." A.21-07-002, DIX_2021_GRC_Justification_Book_FINAL, p. DIX PJ-29.

[58] A.21-07-002, DIX_2021_GRC_Justification_Book_FINAL, p. DIX PJ-29, Table 2. The "moderate" cost category uses the Los Altos Suburban WSFMP as the cost basis, and the "low" cost category uses the Willows WSFMP as the cost basis. The Lost Altos District has 24,392 service connections, Willows has 3,099 service connections, and Dixon has 3,582 service connections. Dixon is much closer in size to the Willows district than the Los Altos District. Service connection data from the 2020 Annual Report, Schedule D-4 for each respective district.

C. Carry-Over Budget

1. Removal of non-specific cost overrun

The Commission should remove $314,744 of non-specific cost overrun from Dixon's carryover budget.

In the previous GRC, the Commission authorized $135,932 direct cost in 2021 for non-specific budget for the Dixon district.[59] The Commission decided that "[i]n its next GRC, Cal Water must provide justifications demonstrating the reasonableness of capital projects that exceed the non-specific capital budget."[60]

In this GRC, Cal Water requests a $450,675 direct cost budget for non-specific projects that have not yet been completed. This is more than three times the authorized non-specific budget for this district. Cal Water did not provide justification for the expenses that exceeded the non-specific capital budget.[61]

Cal Water failed to meet the criteria established by the Commission in the previous GRC's settlement agreement. Allowing Cal Water to recover this excess $314,744 without a reasonableness review could expose ratepayers to excessive and burdensome rates for projects that may not benefit them.

The Commission should remove $314,744 of unjustified non-specific cost overrun from Dixon's carryover budget to protect ratepayers from unreviewed projects funded through rates.

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[59] D.20-12-007, Attachment 1, Attachment 10, Table 11, p.17.

[60] Attachment 3-2: D.20-12-007, Attachment 1, Chapter 13: Common Plant Issues, Section K. Non-specific Capital Budget, p. 114.

[61] A.21-07-002, DIX RO 2021 Final, Attachment E – Detail of non-specific carryover projects, p. 166. Cal Water provided a brief description of the 2019 and 2020 non-specific carryover projects, but did not provide justification for the 2021 non-specific carryover overrun.

IV. CONCLUSION

The recommendations presented above have been incorporated in the calculations for the recommended Plant in Service as shown in Cal Advocate's RO Tables in the Executive Summary and Results of Operations Tables report.

Attachment 1-1: Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY OF NIAMH MURPHY

Q.1 Please state your name and address.

A.1 My name is Niamh Murphy, and my business address is 505 Van Ness Ave, San Francisco, CA 94102.

Q.2 By whom are you employed and what is your job title?

A.2 I am employed by the Commission as a Utilities Engineer in the Water Branch of the Public Advocates Office.

Q.3 Please describe your educational and professional experience.

A.3 I graduated from University of Washington with a Master's degree in Civil Engineering in 2019. In 2016, I graduated from UC Berkeley with a B.S. in Environmental Science and a minor in Energy Resources. I joined the Public Advocates Office Water Branch in 2020. I prepared and submitted testimony in A.21-01-003, SJWC's 2021 GRC Application and A.21-07-001, Great Oaks Water Company's 2021 GRC Application.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am reviewing plant additions for the Chico, Marysville, Oroville, Willows and Dixon Districts and the following common plant issues; pump and motor replacement, cathodic protection systems, control valve overhaul and replacement, water quality analyzers, SB 1398 service line replacements, water quality sample sites and Special Request #14.

Q.5 Does that complete your prepared testimony?

A.5 Yes.

Attachment 1-2: Chico 2021 Sanitary Survey Inspection Report

Water Boards

State Water Resources Control Board
Division of Drinking Water

June 1, 2021

California Water Service Company
1720 North First Street
San Jose, CA 95112

Attention: Sophie James – Director of Water Quality

SUBJECT: CALIFORNIA WATER SERVICE CO. – CHICO PUBLIC WATER SYSTEM NO. 0410002, FY 2021 SANITARY SURVEY INSPECTION REPORT

On April 27, 2021, James Reade from the Division of Drinking Water (Division), met with Loni Lind to complete a sanitary survey inspection of California Water Service Company's (CWS) Chico domestic water system.

The CWS Chico water system appears to be well operated and maintained in accordance with Drinking Water Regulations.

No significant deficiencies were noted during the inspection.

If you have any questions, please call James Reade at (530) 339-1991, or me at (530) 224-4861.

R. Crenshaw

Reese B. Crenshaw, P.E.
Valley District Engineer
DRINKING WATER FIELD
OPERATIONS BRANCH

Enclosures

cc: Loni Lind, Water Quality Program Manager, Cal. Water Service Co., Chico

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF DRINKING WATER
ANNUAL INSPECTION REPORT

Purveyor California Water Service Company (CWS) - Chico System Number 0410002
Person(s) Contacted/Position Loni Lind, Water Quality Project Manager & Mathew Meninga, Superintendent
Date of Inspection April 27, 2021 Reviewing Engineer James M. Reade, P.E.
Previous Annual Inspection July 16 & 17, 2018 – by YH & SS District Engineer Reese B. Crenshaw, P.E.

A. INTRODUCTION

1. Permit Status (Date Issued/Amendment Purpose)

Full: A permit was issued to CWS on February 18, 1966, for the following:
Wells 1-01* to 35-01
Tanks 1 – 4
*Chlorination at Wells 1-01 and 1-02
Distribution system

Amendment(s): Permit amendments were issued as follows:
**2/5/79 – Well Stations 53-01, 54-01, 55-01, 56-01
**7/31/81 – Well Stations 57-01, 58-01
**5/27/83 – Well Stations 59-01, 60-01 (since destroyed)
A1 – 7/15/86 – Well Station 16-01 air stripper
A2 – 12/6/88 – Well Stations 63-01 and 64-01
A3 – 6/15/90 – Well Station 61-01
A4 – 9/12/90 – Well Stations 37-52 (45 since destroyed), 62-01, 65-01, abandon Well Stations 02-01, 10-01, 43-01
A5 – 4/3/92 – carbon filtration at Well Station 46-01
A6 – 7/29/96 – Well Station 67-01
A7 – 5/4/98 – State-owned cemetery wells and treatment system
A8 – 12/16/98 – Well Stations 68-01 and 69-01
A9 – 1/3/02 - Well Stations 70-01 and 71-01
A10 – 2/4/2004 – Well Station 72-01
A11 – 9/6/06 – Well Station 75-01
A12 – 1/22/07 – Well Station 76-01
A13 – 9/28/07 – carbon filtration at Well Station 40-01
A14 – 9/19/08 – Well Station 79-01
A15 – 2/20/13 – Tank Station 81-01 Pressure Zone 350
A16 – 3/7/13 – Well Station 80-01
A17 – 2/2/13 – Well Stations S3 & S4
A18 – 9/24/15 – Well Station 52-01
A19 – 3/17/16 – Reservoir, Pumps, and Hydro Tank at Station 79
A20 – 11/9/16 – Activate Well 16-01 & bypass GAC system at Well 40-01
A21 – 12/20/16 – Lead sampling in school
A22 – 4/28/17 – Station 82 – 0.75 MG tank

* Wells 01-01 and 01-02 (since destroyed) were dug wells used only during emergencies.
** Amendment not numbered.

Are the permit provisions complied with? The base permit has no provisions, but some of the permit amendments do (Amendment A7 & A17). Provisions are being complied with and verified via monthly monitoring reports.

Is the permit up to date? No. There is no permit amendment for the GAC treatment at Station 21-01 or the new Well 9-03 station. A permit amendment and supporting information has been submitted for both of these items.

2. Changes in System

Since last annual inspection: Well 9-03 station has been completed.

Planned future changes: The System is going through a major project to separate the water main across highway 99 into east and west sections. Currently, the System has a combined zone and it is difficult to maintain pressure in the upper portion of the zone, due to the higher elevation.

3. **Consumer & Production Data** (from 2019 Annual Report)

Number of service connections 29,283

Number with meters 29,283

Approximate population served: 104,908

Water produced during recent 12-month period (January – December 2019) 6,560 MG

Maximum month: 872.1 MG (August) Maximum day: not reported in 2019

4. **Past Water Production Data**

Table 1 – Water Use Data

Year	Max. Month MG	Max. Day x1.5 gpm	Report Max. Day MG	Max. Day gpm	GPM PC**	Total Conn.	Meter Conn.	Flat Conn.	Source Capacity gpm	Max. Pop.
2009	1,290	43,347	46.7	32,431	0.91	35,828	23,464	12,364	45,705	100,323
2010	773*	25,974	44.0	30,556	1.10	27,855	19,703	8,152	45,705	101,391
2011	1,159	38,945	44.6	30,972	1.14	27,275	20,974	6,301	46,905	95,519
2012	1,172	39,382	40.9	28,403	1.05	26,925	23,017	3,908	47,880	97,274
2013	1,150	38,626	40.65	28,229	1.01	28,051	26,689	1,362	46,490	98,689
2014	1,005	33,770	37.44	25,972	1.18	28,687	28,687	0	46,490	100,435
2015	637.2*	21,412	23.54	16,349	0.76	28,249	28,249	0	46,490	102,155
2016	783.5	27,204	42.23	29,330	1.02	28,878	28,878	0	46,490	104,295
2017	877.2	29,474	43.09	29,928	1.06	28,202	28,202	0	46,490	105,660
2018	863.8	29,026	42.51	29,518	1.02	28,910	28,910	0	43,885	103,842
2019	872.1	30,282	Not rep.	30,282	1.03	29,283	29,283	0	42,885	104,908
				5 year Avg. =	0.98					

* This value is as reported on the eAR, but looks low.

** Gallons per minute per service connection (GPMPC) is based on reported maximum month.

Discussion & appraisal: Wells are equipped with vacuum breakers of various sizes, depending on the size of the water main. They are also equipped with Rossum sand testers that are emptied as needed. Throughout the lifetime of the well, sand production can increase or vary. The sand testers provide a visual way to observe how much sand a well is producing, and whether a sand separator should be installed. Long-term production of sand accelerates wear on the impellor and can clog meters and valves. Monitoring sand production is beneficial for determining the health status of the well.

Wells are equipped with a water level gauge that measures static and pumping water levels. All wells are hooked up to SCADA. The majority of wells are capable of being remotely controlled through SCADA, including setting pressure ranges, observing flow rates, pressure readings, and water level. SCADA is used to obtain daily water production readings every twenty-four hours and those values are recorded by operators and hand entered into a database. Chlorination equipment is located inside a locked housing structure. The housing structures are equipped with eye wash stations that are tested monthly. The housing structures are ventilated and spare chlorine drums are kept on site. Diagrams of individual well house components and piping are located in each pump room. Pressure set points are changed regularly to allow different wells to turn on and off. Well houses were all clean and kept free of debris. Each well is equipped with a water level gauge, though it is unknown whether they were properly calibrated at the time of inspection and providing an accurate water level reading.

CWS has been completely metered since 2014. The highest reported max since that time is 30,282 gpm (2019), and that is the value referenced as the highest daily production. This is less than the total source capacity of 42,885 gpm and therefore meets the T22 §64554 source capacity requirement (based on a system-wide analysis). Peak hourly demand (1.5 x MDD) is 45,423 gpm. The water system must be able to meet at least 4 hours of PHD through a combination of source capacity and storage. Four hours of PHD requires 0.61 MG of

storage ((44,892 gpm – 43,885 gpm) x 240 minutes). The water system has 5.55 MG of storage and therefore meets the PHD requirement as well.

B. **Source Data** (shaded rows denote wells not in use).

Table 2 – Source Data

Well No.	Flow (gpm)	Location	Auxiliary Power	Status	Comments
01-04	*220*	*Across from 229 Orient*	*None*	*Destroyed*	*Oil lube; outside (no well house). 35 hp motor. Collocated with Tanks 1&2. Has had low (≤ 1.1 ppb) levels of PCE.*
03-03	*300*	*212 Cherry St.*	*None*	*Destroyed*	*Oil lube. 40 hp motor. At tank 4 (old yard)*
04-02	*300*	*Sycamore St between 7th & 8th St*	*None*	*Inactive*	*Submersible pump. (slated for destruction)*
05-02	620	Next to 1613 Locust St	Direct drive (natural gas).	Active	Oil lubed, 75 hp motor. **SCADA.**
07-04	*745*	*Next to 1161 E 10th St.*	*None*	*Inactive*	*Water lube. 75 hp motor. Inactive until it is determined whether treatment is feasible for high PFOS. SCADA*
08-01	790	Across from 116 E 6th Ave.	None	Active	Water lube. Next to Tank 3, **SCADA**
09-03	800	515 Olive St.	None	Active	Water lube. 75 hp turbine motor, **SCADA**
11-01	550	Next to 325 W 16th St.	None	Active	Water lube. 50 hp motor. **SCADA**
12-01	580	Next to 667 E 1st Ave	None	Active	Water lube. 50 hp motor. **SCADA.**
13-01	*460*	*Corner of W 12th St & Chestnut St*	*None*	*Inactive*	*Oil lube. SCADA equipment present but not connected. (slated for destruction)*
14-01	500	Next to 1812 Spruce St	None	Standby	Oil lube. 50 hp motor. Off during winter. Low levels of PCE (≤ 3.4 ppb); nitrate consistently over ½ MCL (≤ 31 ppm). **SCADA**
15-01	*610*	*Next to 1041 Deveny St*	*None*	*Inactive*	*GAC removed to 21-01. SCADA equipment present but not connected. (slated for destruction)*
16-01	735	Next to 1448 Sherman Ave.	None	Active	Air stripper removed. **SCADA.** 30 hp well motor and 60 hp booster (after filtration).
17-01	675	Next to 2125 Iroquois	None	Active	Water lube, sand separator, and 60 hp motor. Low, but consistent, detections of various organic chemicals (cis-1,2-DCE; PCE; 1,3-dichloropropane; 2,2-dichloropropane). **SCADA**
18-01	575	Fir St between 8th & 9th St park & ride	None	Active	Water lube. 60 hp motor. Off during winter. **SCADA**
19-01	820	Across from 560 Cohasset	None	Active	Water lube. 60 hp motor. **SCADA**
20-01	675	Across from 636 Bryant Ave	None	Active	Water lube. 60 hp motor. **SCADA**
21-01	580	Between 1559 & 1575 Citrus Ave	None	Active	Water lube. 60 hp motor. **SCADA.** Single vessel GAC treatment for PCE (GAC originally at Station 15-01).
22-01	*600*	*Next to 6 Montclair Dr.*	*None*	*Inactive*	*Oil lube. 60 hp motor (new in spring of 2008). Operates mainly during summer months. Produces sand for a while after startup. SCADA*
23-01	800	Next to 387 Humboldt	Diesel generator	Active	Water lube. 75 hp motor. Runs during periods of high demand. **SCADA**
24-01	640	Next to 1395 East Lindo Ave	None	Standby	Water lube. **SCADA.** 60 hp motor. Used to have total coliform hits on raw samples, but this has not been a problem recently. Still has online chlorine analyzer set to shut well off if chlorine drops below approx. 0.5 ppm.
25-01	*800*	*Cohasset Rd, just N of E Ave*	*Diesel generator*	*Inactive*	*Oil lube. 75 hp motor.* ***SCADA***
26-01	670	Next to 455 Larch St.	None	Active	Water lube. 75 hp motor. Always on. **SCADA**
27-01	800	E Lassen between Esplanade & Santos	None	Active	Water lube. 75 hp motor. Operates on demand. **SCADA**
28-01	645	Across from 805 Madrone	None	Active	Water lube. 75 hp motor. **SCADA**

Well No.	Flow (gpm)	Location	Auxiliary Power	Status	Comments
29-01	700	Across from 1741 Neal Dow Ave	None	Active	Oil lube. 75 hp motor. Operates seasonally. **SCADA**
30-01	900	Next to 2604 White Ave	None	Inactive	Submersible pump with 75 HP motor. PFOS **SCADA**
31-01	780	Next to 1164 E. Ave.	None	Active	Water lube. **SCADA**. 75 hp motor. Runs continuously during summer. Water looks greenish at start up, so pumps to waste until color clears.
32-01	760	Next to 1379 E Ave	Diesel generator	Active	Water lube. **SCADA**. 75 hp motor. Operates year round.
33-01	720	Next to 1975 Hooker Oak	Direct drive (gasoline)	Active	Water lube. **SCADA**. 75 hp motor. Sand separator, but well no longer producing sand.
34-01	715	Across from 1041 Sheridan	Direct drive (gasoline)	Active	Water lube. **SCADA**. 75 hp motor. Conservation garden.
35-01	630	Next to 825 E 20th St	None	Active	Water lube. **SCADA**. 75 hp motor. Operates continually.
37-01	725	Next to 1067 Lupine Ave.	None	Active	Water lube. 75 hp motor. Operates on demand. Set to run often. **SCADA**.
38-01	800	Next to 1038 Palmetto	None	Active	Water lube. 75 hp motor. **SCADA**.
39-01	760	Next to 893 Kern St.	Generator. Switched from direct drive.	Active	Water lube. 75 hp motor. **SCADA**
40-01	690	Behind 120 Menlo Way	None	Active	Water lube. 60 hp motor. Outside (no well building). Two-vessel GAC installed in 2007. GAC treats cis-1,2-DCE, 1,1-DCE, and 1,1-DCA. Nitrate is consistently around ½ MCL. Operates continuously. **SCADA**.
41-01	*870*	*Next to 3650 Morrow Ln.*	*None*	*Inactive*	*Water lube. 100 hp motor. PFOS To remain inactive until treatment is installed.* ***SCADA***
42-01	850	Behind 55 Rose Ave	Direct drive (gasoline)	Active	Water lube. **SCADA**. 75 hp motor. Operates during high demand. Gasoline motor on auxiliary drive does not work and will not be fixed.
44-01	615	Corner of Boeing & Marauder	Diesel generator	Active	Water lube, 75 hp motor (VFD). Pressure tank is no longer used. **SCADA**
46-01	550	Next to 620 Hickory St.	None	Active	Water lube. 75 hp motor. Single GAC vessel removes PCE. Operates continuously. **SCADA**
47-01	*860*	*Next to 2471 Guynn*	*Direct drive (natural gas)*	*Inactive*	*Oil lube. 75 hp motor.* ***SCADA***
48-01	*900*	*Behind 1055E Lassen Apts.*	*None*	*Inactive*	*Water lube. 75 hp motor. Operates during high demand. Nitrates consistently high (≤ 43 ppm) but below MCL.* ***SCADA***
49-01	600	Next to 1656 Manzanita	None	Active	Water lube. 75 hp motor. Operates continuously. **SCADA**
50-01	790	Next to 800 Bruce St.	None	Active	Water lube. 100 hp motor. Pressure tank for surge. Booster pump/sump not used. **SCADA**
51-01	*830*	*Next to 123 West 22nd St*	*None*	*Inactive*	*Oil lube. 75 hp motor. (slated for destruction)*
52-01	940	Across from 2382 Alba Ave	Direct drive (diesel)	Active	Water lube. 75 hp motor. GAC filtration removal of TCE, PCE, and cis-1,2-DCE consistently detected at low levels. **SCADA**
53-01	890	Across from 2090 Notre Dame Blvd	Direct drive (diesel)	Active	Water lube. 100 hp motor. Operates daily. **SCADA**
54-01	900	Next to 4 Vermillion Cr.	None	Active	Water lube. 100 hp motor. **SCADA**
55-01	*(1030)*	*Next to #3 Willowbrook*	*Direct drive (diesel)*	*Inactive*	*Oil lube.* ***SCADA***
56-01	865	Next to 3211 Silverbell Dr	Direct drive (diesel)	Active	Water lube. 75 hp motor. **SCADA**
57-01	750	Springfield & Heritage Oak Dr	None	Active	Water lube. 100 hp motor. **SCADA**
58-01	*610*	*Across from 3030 Sandi Dr*	*None*	*Inactive*	*Oil lube.*
59-01	750	Next to 876 St. Amant	Diesel	Active	Water lube. **SCADA**. 75 hp motor.

Well No.	Flow (gpm)	Location	Auxiliary Power	Status	Comments
			generator		
61-01	770	Next to Hwy 99, behind Chico mall	None	Active	Water lube. **SCADA**. 100 hp motor. Onsite chlorine generation replaced by conventional hypochlorination.
62-01	870	Next to 1457 Eaton Rd	None	Active	Water lube. **SCADA**. 75 hp motor. Onsite chlorine generation. Continuous operation.
63-01	1070	Across from 626 W. Shasta	None	Active	Water lube. **SCADA**. 75 hp motor.
64-01	760	Across from 1423 Marauder St	See 44-01	Active	Water lube. **SCADA**. 75 hp motor (VFD). 5,000-gallon pressure tank (no longer used). 44-01 auxiliary power supports this well.
65-01	1160	Next to154 Picoline	None	Active	Water lube. **SCADA**. 150 hp motor. Pressure tank (3,000-gallon) for surge.
67-01	1300	Next to1201 Yosemite	Diesel generator	Active	Water lube. **SCADA**. 150 hp motor. Operates daily. Serves Tank 74 via Booster Station 73 and Zone 475.
S1 & S2	330	SW corner of Chico Cemetery	None	Active	These wells are owned by the Dept. of Toxic Substances Control. Both wells have submersible pumps. GAC treatment (two vessels). Operate continuously. **SCADA**
S3 & S4	400	Chico High and Junior High schools	None	Active	These wells are owned by the Dept. of Toxic Substances Control. Both wells have submersible pumps. GAC treatment (two vessels). Operate continuously. **SCADA**
68-01	*1250*	*Across from 1934 W Sacramento*	*None*	*Inactive*	*Slated for destruction.*
69-01	1070	Next to 318 Newport Dr	None	Active	Water lube. **SCADA**. 100 hp motor.
70-01	830	Behind 1777 Manzanita (fire station)	Diesel generator	Active	Water lube. **SCADA**. 125 hp motor. 2,000-gallon pressure tank.
71-01	1250	Corner of Flying V and La Rocco	None	Active	Water lube. **SCADA**. 150 hp motor.
72-01	1000	Ceanothus Ave. near Colonial Dr.	Diesel generator	Active	Water lube. **SCADA**. 150 hp motor. Designed for High (475) Zone but currently feeds Main (350) Zone. 10,000-gallon pressure (surge) tank.
75-01	1500	at Valley Court	Diesel generator	Active	Water lube. **SCADA**. 200 hp motor. 10,000-gallon pressure tank.
76-01	1300	NE corner of Preservation Oak Dr. and E 20th Street	Diesel generator	Active	Water lube. **SCADA**. 200 hp motor.
79-01	1,250	SE corner of Springfield Dr. and Bedford Dr.	Diesel generator	Active	150 hp motor. **SCADA**.
80-01	1,200	Degarmo Drive and Penzance Ave in north Chico	Diesel generator	Active	125 HP submersible. **SCADA**.
Total	**42,885**	**← Active wells**			

* Flow measurements are taken every 24 hours using SCADA, and totalizing flow readings are sent to a server where operators hand-enter values to a database for daily, monthly, and yearly totals. The System is scheduled to upgrade to ClearSCADA in August of 2019, which will allow totalizing flow measurements to be taken and stored in the system without any human interface.

Discussion & appraisal (i.e., does source capacity comply with Waterworks Standards?) Yes, see discussion in Section A.4, above.

At the time of the inspection, 55 wells were on active status and two were on standby. There are currently 13 wells that are inactive, but not yet destroyed and all are physically disconnected from the distribution system. An RP device provides protection from the irrigation line and an air gap separates the pump-to-waste line that runs to the sewer.

C. TREATMENT

1. Surface Water Sources

There are no surface water sources.

2. Groundwater Sources

Is continuous disinfection provided? Yes, water leaving each well station is disinfected using sodium hypochlorite.

Describe facilities: The Chico District uses a single type of chlorine solution pump, the Alldos Model 208 (or equivalent Grundfos brand—both made by Grundfos-Alldos Company). These pumps have a two-stage system that first pumps chlorine solution from the bulk tank to a cylinder built into the pump. The second stage pumps the solution from the cylinder into the well discharge piping. A 12.5% chlorine solution is pumped into the discharge line from the well. For wells that have GAC treatment for VOCs, hypochlorination is applied downstream from the treatment.

If disinfection is not provided, are provisions & connections for emergency chlorination provided per DDW guidelines? Disinfection is provided.

Discussion & appraisal: The hypochlorination systems appear to be well operated and maintained. Wells (24-01, 64-01, and 40-01) with recurring bacteria problems (absent for fecal/E. coli) in the raw water have signs on the switchgear at the wellhead that tell the operator what specific higher chlorine residual to maintain and are equipped with alarms that automatically shut off if the hypochlorination feed is lost. Hypochlorite solution older than 180 days is discarded because of the potential for perchlorate formation. Hypochlorite is NSF 61 certified.

3. Other Treatment or Blending Facilities

Describe facilities & parameters treated/blended (i.e. iron, & manganese, fluoridation, nitrate, corrosion control, organics, etc. Due to groundwater contamination from several different plumes in the Chico urban area, seven wells have been impacted to the point where treatment is necessary. The California Department of Toxic Substances Control and the Regional Water Quality Control Board have been involved in cleanup efforts. CWS has seven treatment systems for removing TCE, PCE, or other VOCs from groundwater supplies. Treatment systems are summarized in Table 3 below.

Table 3 – VOC Treatment

Station	Contaminant	Treatment Type
21-01	PCE	single vessel GAC
46-01	PCE	single vessel GAC
52-01	PCE	duel vessel GAC
S Wells	PCE cis-1,2-DCE	dual vessel GAC

4. Describe Records Maintained of Treatment

CWS maintains records of chlorine usage, water production, and chlorine residuals at each well site. Per prior agreement with CWS, those records are not submitted to the Division. However, distribution system chlorine residual levels are checked and results submitted in quarterly reports in accordance with the Disinfection Byproducts Rule (RAA MCL chlorine residual) and with monthly bacteriological reports per the Total Coliform Rule. CWS typically maintains chlorine residuals of 0.5 to 0.8 ppm chlorine in the distribution system.

Wells 21-01, 46-01, 52-01, S-1, S-2, S-3 and S-4 are sampled monthly for constituents being treated. Raw, treated, and if applicable, intermediate samples are collected. A report of sampling results is submitted monthly to the Division and includes information on water produced and the status of GAC filter change out. CWS operators take samples.

D. STORAGE DATA

Table 4 - Storage Data

Name	Type	Capacity (MG)	Zone	Comments	Inspected/Cleaned/ Re-coated
Tank 1	Steel	0.10*	Main	Elevated tank Installed 1905	2016/2016/2010
Tank 2	Steel	0.15*	Main	Elevated tank Installed 1913	2013/2013/2006
Tank 3	Steel	0.30*	Main	Elevated tank with pump station	2013/2013/2007
Tank 4	Steel	0.30*	Main	Elevated tank Installed 1950	2014/2014/2008
Tank 66-1	Steel	0.50	475	Ground level tank Installed 1974	2016/2016/NA
Tank 66-2	Steel	0.50	475	Ground level tank Installed 2003	2015/2015/NA
Tank 74-1	Steel	0.50	635	Ground level tank Installed 2003	2015/2015/NA
Tank 79-1	Steel	1.50	475	Ground level tank Installed 2015	2016/2016/NA
Tank 81-1	Steel	1.50	Main	Ground level tank Installed 2011	2013/2013/NA
Tank 82-1	Steel	0.75	475	Ground level tank Installed 2017	2017/2017/NA
Total		**5.55**			

* Elevated tanks are no longer connected to the system. Tanks 1 and 2 will remain as historical construction. Tanks 3 and 4 will be destroyed. Capacity not counted in total.

Does storage capacity comply with Waterworks Standards? Yes. See discussion under Section A.4, above.

Are all data sheets completed & on file? Yes, refer to the permit and amended permit reports.

Are Title 22 coating procedures adhered to? Yes.

Discussion & appraisal (i.e., were reservoirs coated, cleaned &/or inspected last year? Plans for re-coatings, cleanings &/or inspections? See above table. The tanks are inspected every five years and coatings applied as necessary. Tanks have active cathodic protection.

STA 66, 3252 Shadybrook Ln. consists of two 500,000-gallon storage tanks, two 10,000-gallon hydropneumatic tanks, two booster pumps (each booster has a dedicated Mercoid pressure switch), and two onsite generators. One is located outside and the other inside the pump room. The outdoor generator is a Cummins, with fuel storage directly below the generator. The indoor generator is a Kohler Power System generator, with 500-gallons of diesel fuel storage located outside with proper secondary containment.

E. TRANSMISSION FACILITIES

Describe transmission facilities: Two sections of transmission main exist. One is a raw water transmission main, approximately 0.6 miles long, from Well S4 to the GAC system. The other is the pipeline connecting the main water system to the Airport pressure zone. This pipeline has an automatic valve, normally shut, that opens in the event of significant loss of pressure on either side.

Are there low-head lines? No. Cal Water has a re-pressurizing valve to ensure the raw water main from S4 remains pressurized when the well isn't running.

Discussion & appraisal: N/A.

F. DISTRIBUTION SYSTEM

1. Pressure Zones

Table 5 - Pressure Zones

Pressure Zone Name	Pressure Range	Water Sources	Storage Capacity	No. of Conn.
Main (350)	45 to 95	Wells	2.35 MG	92%
Intermediate Zone "A"	65 to 80	From 475 Zone	None	<1%
Intermediate Zone "B"	65 to 80	From 475 Zone	None	<1%
Upper (475)	60 to 115	Wells 33, 50, 65, 67, & 76	1.00 MG	5%
Higher (635)	55 to 75	From 475 Zone	0.50 MG	1%
Airport System (400)	55 to 75	Wells 44 & 64	None	1%
Highest (795)	115 to 140	From 475 Zone	H-P tank	1%
Dayton Road (325)	65 to 75 (has PRV)	From 350 Zone	None	< 1%

Discussion & appraisal: System pressures are slightly higher along the west edge of Chico, as this is the lowest part of town. Construction of the highest zone (795) has been completed; a new 680 Zone is proposed but is on hold. A comprehensive system pressure survey is done yearly by CWS placing electronic transducer-recorder devices on fire hydrants for a couple of days. Wells S3 and S4 have lines that run to the S1-S2 treatment plant and that have pressure maintained by a line (protected with backflow device) from distribution system. Two new pressure zones have been added to the distribution system; Intermediate Zone "A" and Intermediate Zone "B". See details in the table above.

2. Booster or Reducing Stations

Table 6 – Booster Stations

Station	Status	Number of Pumps	Power (HP)	From Zone	To Zone	Comments
66-01 A&B	Daily	2	30	475	635	10,000 gal pressure tank
66-01 C&D	Daily	2	40	475	795	10,000 gal pressure tank
73-01 A&B	Daily	2	40	475	635	2,500 gal pressure tank
8-01	Daily	1	25	350	350	At Tank 3. No backup generator.
81-01	Daily	3	50/50/100	350	350	5,000 gal pressure tank. Flow (at 60 psi) is 1000 gpm for each of 50 HP pumps and 2000 gpm for 100 HP.

Discussion & appraisal: Booster pump Station 66-01 A&B and Station 66-01 C&D are each located adjacent to the ground level storage tanks 66-1 and 66-2. At each station, except 8-01 and 81-01, water is pumped from storage into a higher pressure zone. Each booster station is equipped with a backup diesel generator, and each is plumbed for a third pump if additional capacity is required in the future. Booster pump Station 73-01 A&B is located at 100 Delaney Drive. The station pumps water from the 475 Zone to Station 74, Tank 1, in the 635 Zone. Station 73-01 is equipped with a backup diesel generator.

3. Mains

Table 7 – Distribution System Materials

Material	Amount %	Size	Condition	Comments
Steel	5	Varies	Fair	Size varies from 2 to 12-inches
Ductile Iron	17	Varies	Good	for all mains.
AC	44	Varies	Good	
PVC (C900)	25	Varies	Good	Being used for new 6- & 8-inch lines
Airport - Cast iron	9	Varies	Good	All of Airport service area mains are cast iron. This is the only cast iron in the distribution system.

The Chico District has approximately 1,971,200 lineal feet (373.3 miles) of distribution line.

Discuss leak history during past 12 months: In 2019, a total of 194 breaks or leaks were reported. All breaks or leaks were investigated and repaired in accordance with AWWA C651-14 requirements.

Are Distribution facilities constructed in accordance with Waterworks Standards? The water system is said to be generally built in accordance with the Waterworks Standards in effect at the time of construction.

Describe water main & sewer line separation practices: CWS staff ensure facilities are constructed in accordance with Waterworks Standards and separation requirements. CWS staff are familiar with Waterworks Standards and work closely with the City of Chico on new projects. CWS reports that USA marking is done in field and encroachment permits are obtained as needed from the City of Chico. CWS reports that normally water lines <12 inches in diameter are designed in field and water lines >12 inches are designed by CWS Engineering Unit in San Jose.

Extent of lead pipes, joints, &/or lead solder used in distribution system & present policy: There are no known lead components in the distribution system.

Discussion & appraisal: Reportedly, the CWS main replacement program is based on the number of leaks and the size of the pipe. The replacement and capital improvement plan is regulated by the PUC and every three years main replacement projects are approved via rate payer advocacy.

G. WATER QUALITY & MONITORING

1. Bacteriological Monitoring

Description of program: The most recent BSSP was submitted in November 2017 and is up to date. A minimum of 25 samples are collected weekly from representative locations throughout the distribution system, designed to preserve appropriate dispersion of sample sites. Distribution staff collect all bacteriological samples following proper sampling procedure. Repeat sample locations are at customer hose bibs and are located within the required five service connections of each routine dedicated sample location. Raw water bacteriological monitoring (enumerated) is done quarterly on all active and standby wells. For any total coliform (TC) positives that are over 50 MPN/100 mL, the test schedule for that well changes from quarterly to weekly and stays weekly until there are six consecutive negative results, after which the station is placed back on a quarterly schedule. A well with a quarterly TC result over 50 MPN/ 100 mL is immediately shut down and super-chlorinated. A bacteriological sample is then collected, and if results are negative, the well is placed back into service and put on a weekly sampling schedule until there are six consecutive negative weekly results. CWS will sometimes use FGL lab in Chico for bacteriological testing. CWS has filed a Groundwater Rule Monitoring Plan with the Division.

Sampling plan approved & current (do we have a copy?) Yes, the plan is current (November 13, 2017), and there is a copy on file at the Division's Redding office.

Controlling factor is population or service connections? Population dictates a minimum of 25 samples per week.

Number of samples per month or week required? 25 per week.

MCL violations in past year? There were no positive routine bacteriological samples in the last 12 months.

Discussion & appraisal: CWS Chico District, appears to have an adequate bacteriological monitoring program. Raw bacteriological samples are collected from wells on a quarterly basis. Wells that have been prone to positive results are sampled more frequently, sometimes weekly. Raw water results are submitted to the Division. Items of note: CWS has been in the process of converting well in the Chico area from oil-lubed pumps to water-lubed pumps. At the time of this report, only few oil-lubed well pumps remain in operation. Older water-lubed wells in the system use a tube that is plumbed into the distribution piping just below the chlorine injector. As a result, chlorinated water does go back into the well, but only when the well is supplying water to the distribution system. If the well is pumping to waste, the operators must spray the pump with hand-pumped water from the distribution system. The more recently replumbed wells use a 1/4inch line to run a continuous drip of distribution water back into the well. The purpose for this configuration is so the well pump can be operated when diverted from the distribution system, should the operator have a need to pump to waste (for maintenance, testing, etc.).

2. Chemical Monitoring

Description of program: CWS maintains its own internal tracking system for chemical source monitoring, which is periodically checked against monitoring schedules produced from the Division's WQI database. CWS's laboratory in San Jose analyzes the samples for general mineral, inorganic, and volatile organic compounds (VOCs). The CWS lab is ELAP certified (Certificate No. 1621). Pesticides and radiological analysis are not done by the CWS lab, but are contracted out to a different State certified laboratory.

Seven VOC groundwater plumes have been identified in Chico. These are (primary contaminants in parentheses):

Central Plume (PCE), Chico Municipal Airport Plume (TCE), North Central Plume (PCE, 1,2-DCE), North Valley Cleaners Plume (PCE, 1,2-DCE), Skyway Plume (PCE, TCE), Southwest Plume (PCE), and Victor/20th Street Plume (TCE). The table below shows which active wells have had VOC detections.

Table 8 – Wells With Ongoing Detections of Regulated VOCs*

Well	Contaminant	Results ppb	MCL ppb	Comments
08-01	PCE	≤ 0.81	5	First detected in 2005. Appears stable.
14-01	PCE	≤ 0.68	5	Appears stable at < 2 µg/L.
16-01	PCE	≤ 0.63	5	Raw water hasn't been above MCL since 1988. GAC. Active.
17-01	cis-1,2-DCE	≤ 0.86	5	Usually below 1.0 ppb
	PCE	≤ 0.5	5	ND since 2017
21-01	PCE	≤ 8.9	5	GAC
40-01	cis-1,2-DCE	≤ 1.4	6	GAC – Typically less than 2 ppb
	1,1-DCA	≤ 0.5	5	GAC – Typically less than 1 ppb
	1,1-DCE	≤ 0.5	6	GAC – Typically less than 1 ppb
46-01	PCE	≤ 9.85	5	GAC – Typically 7 to 14 ppb
52-01	PCE	0.68	5	Typically less than 1 ppb
	cis-1,2-DCE	3.4	6	Started to increase, reaching as high as 9 ppb back in 2015. Results in 2020 range between 3.4 & 5.7 ppb
S-1 Well	PCE	≤ 22	5	GAC. Typically less than 100 ppb.
	Styrene	≤ 0.5	100	Less than 1 ppb since 2015
S-2 Well	TCE	1.5	5	GAC
	PCE	180	5	GAC – As high as 1000 ppb in 2004
	cis-1,2-DCE	≤ 0.5	6	GAC – ND since 2005
	Styrene	≤ 0.5	100	

Well	Contaminant	Results ppb	MCL ppb	Comments
S-3 Well	PCE	14	5	GAC
S-4 Well	PCE	3.2	5	GAC

* Table updated July 2019.

Who collects samples? CWS operators collect chemical samples.

Discussion & appraisal: Chemical monitoring appears to be generally up to date. Sources which are tested monthly almost always show up as due for sampling in the Division's WQIR database report.

3. **Other Organics**

Description of program: The following wells are classified as vulnerable to agricultural chemicals (class = CLGA--community-large-groundwater-agricultural) and, as such, are tested every three years for selected SOCs (synthetic organic chemicals): 08-01, 16-01, 17-01, 21-01, 32-01, 39-01, 42-01, 46-01, 49-01, 54-01, 59-01, 62-01, 63-01, 64-01, 69-01, and 70-01. The SOCs tested are: Atrazine, Bentazon, Carbofuran, Dinoseb, Diquat, Endothall, Glyphosate, Molinate, Simazine, Thiobencarb, 1,2,3-TCP, and 2,4-D. According to the Division's WQI database, which currently contains chemical data back to the 1980s, SOCs have not been detected in any of the sources tested, other than as described below.

1,2,3-trichloropropane (1,2,3 TCP) has been detected in Well 22-01 (8 samples; 2010 to 2012) at levels ranging from 0.006 - 0.008 ppb. Cal Water has notified the Butte County Board of Supervisors, by letter, that 1,2,3-TCP is present. Well 22-01 is currently inactive.

Discussion & appraisal: Samples have not been taken from Well 47 as it has been under repair since 2013 and is currently inactive. DWSAPs were last done in 2001, 2002, and 2003 for source wells that existed at the time. Wells that have been constructed since then, have had their own DWSAPs performed.

4. **Disinfection Byproducts**

Description of program: CWS has been monitoring for disinfection byproducts since January 2003. Monitoring was quarterly until after the third quarter of 2004, when it became annual. Prior to 2004 there were no detections of HAA5, and TTHMs were detected at very low levels. CWS began routine quarterly sampling under the Stage 2 DPBR in 2012 (6 sample sites). Of the six Stage 2 DBP sample locations, the highest LRAA for TTHM's and HAA5's for the last year are 0.7 ppb and non-detectable, respectively, as of the first quarter of 2021.

Discussion & appraisal: In compliance.

5. **Radiological**

Description of program: Cal Water has completed initial radionuclides monitoring, in conformance with Title 22, §64442. Radionuclides have not been a compliance issue.

6. **Additional Monitoring**

Description of program (Physical quality of distribution system, corrosion, lead monitoring, etc.) CWS Chico system has a large proportion of asbestos cement pipe. Title 22, §64432.2, requires that the distribution system be tested for asbestos within the compliance period (currently January 2020 thru December 2022). CWS reports that asbestos testing has been done from the distribution system and shows results below the MCL of 7 MFL (million fibers per liter). CWS is due for sampling within the current compliance period.

7. **Lead and Copper Monitoring**

Cal Water is on a three-year schedule for lead and copper sampling. Lead and copper samples were last collected in August 2020. The lead 90th percentile value was non-detect and the value for copper was 0.14 mg/L. The next round of sampling is due by the end of September 2023.

8. **Is an approved water quality monitoring plan on file** (T22 §64416)? (i.e., briefly summarize plan & needed additions) Section 64416 requires that a water system with more than 10,000 service connections prepare a sampling plan to the Division for monitoring the quality of water (except for bacteriological quality). A water quality monitoring plan was given to the 2015-2016 inspector. The plan outlines the testing/monitoring schedules for all sample points throughout the distribution system, and includes the day, time, and parameter being tested. Reportedly, the plan is still valid as of the date of this inspection report.

H. OPERATION & MAINTENANCE

1. **Planning & Personnel**

Are system improvements made in accordance with the Waterworks Standards? CWS reports that all improvements are made in accordance with the Waterworks Standards. If water/sewer separation standards cannot be met, CWS requests a waiver in writing with mitigation measures from a professional engineer claiming equivalent protection is provided. Thus far, all waiver requests have been approved in writing.

Does the utility have up-to-date distribution system maps? System maps are up-to-date. CWS maintains a detailed, bound system atlas and hard copies in CWS utility trucks.

Is up-to-date copy of system schematic on file? A copy of a system schematic is in the permit file with a supplement showing the recently constructed pressure zones.

What is the minimum grade requirement? Grade 5 Distribution Operator and Grade 2 Treatment Operator.

Certified Personnel ? A list of certified operators is provided by CWS in the electronic annual report.

Discussion & appraisal: Satisfactory. CWS – Chico's Chief Operator is George Barber. He has passed the D5 exam and is awaiting his certificate. He passed the exam several months ago, however; had to wait until he had a full 2 years of D4 experience to receive his certificate. CWS has stated that Mike Mares, a D5 operator from their San Jose office, will also be available on call in the event of an emergency.

2. **Cross-Connection Control Program**

Name of cross-connection control inspector(s): John Graham is Cal Water's cross-connection control specialist. John completed USC FCCHR training in 2002. His certification number is 10376.

Is there a copy of the cross-connection control ordinance on file? Regarding cross-connection control, CWS is governed by the CPUC's Rule 16, a copy of which is in our files. Rule 16 can also be found on CWS's web site, at https://www.calwater.com/docs/rates/rules/rule_16.pdf

Discussion & appraisal: Plan checking for proposed new service connections is done to determine if a backflow protection device is required. CWS sends letters on an annual basis to all customers with backflow protection requiring that their devices be tested and repaired/replaced as needed, and for the test results to be sent to CWS. Customers with backflow devices are provided a list of qualified testers and given a certain amount of time to have devices tested. Customers that do not have backflow devices tested on time may have their water service shut off. CWS has dedicated backflow inspectors. One goal of the program is to have every non-residential customer checked every 5 – 7 years. CWS also trains meter readers to review potential need for backflow protection while reading meters. CWS reports that the Chico water system does not have a connection to any wastewater treatment plant. CWS requires trucks hauling water for construction purposes to have an air-gap on the feed side. CWS is diligent in maintaining a robust backflow protection program that meets Title 17 requirements.

According to the 2019 Annual Report to the Division, there are 3,297 backflow devices in the Chico District, of which 3,297 devices were tested in 2019. The number of devices that failed and were repaired or replaced is 144. The number of new devices added in 2019 is 133.

3. **Complaints**

Table 9 – 2015 Complaints Summary

Type	Number	Comments
Taste and Odor	18	
Color	0	
Turbidity	13	
Visible Organisms	0	
Pressure (High or Low)	51	
Waterborne Illness	0	
Other	0	
Total	**82**	All complaints were investigated.

Discussion & appraisal: Customer complaints are received by the clerical staff, who inform maintenance crews. Complaints are followed up within 24 hours. Records of complaints are kept on monthly summary sheets. The complaints tabulated above were taken from the 2019 Annual Report.

4. **Emergency Response**

Is an up-to-date emergency notification plan on file? Yes, received 6/14/2019.

Emergency response plan: An emergency response plan (ERP) was submitted in June 2004 and updated in March 2006. The ERP appears satisfactory.

Notification of DWP of significant system problems: The Chico district office of CWS maintains very good communications with the Division.

Discussion & appraisal: CWS works diligently to prepare for and respond to problems and emergencies. Required emergency plans for the Chico District are updated as needed.

5. **Main Disinfection Program**

Describe main disinfection program (i.e., method, contact time, chlorine residual, bacteriological tests, records) for new & repaired mains: CWS reports to follow American Water Works Association (AWWA) Standard C651 for disinfection of new and repaired water mains. Field distribution foreman ensure disinfection is done.

Does the main disinfection program comply with AWWA specifications? Yes.

Discussion & appraisal: Satisfactory.

6. **Valve Maintenance Program**

Describe program: There are an estimated 9,538 valves in the Chico water system. Of these, 134 were exercised in 2019. CWS adheres to a target of 20% of total system valves exercised each year over a 5-year period. Additional exercising takes place on an as-needed basis.

Are number & location of valves satisfactory? (i.e., mainline, ARVR, blowoff valves, etc.) Yes. CWS reports that the Chico water system has an adequate number of valves in suitable locations.

Discussion & appraisal (i.e., are valves recorded on maps available to field crews? Are all valves located with valve covers raised to grade?) Yes, valves are indicated on maps and appear to be constructed with covers raised to grade.

7. **Flushing**

Describe flushing program (i.e. dead ends, records, etc.) According to the 2019 Annual Report, dead ends are flushed as needed.

Approximate number of dead ends 1,278 Number with flushing valves 959 with blowoffs.

Discussion & appraisal: Satisfactory

I. OVERALL SYSTEM APPRAISAL

The Division finds the CWS Chico Public Water System to be well operated and maintained in accordance with regulations relating to drinking water in Division 4, Title 22, California Code of Regulations. The distribution system and facilities were found to be in good condition and well operated. Reports and records show the water system is in compliance with the regulations and MCLs. Water system staff are certified at level's required for the water system and remediate deficiencies as needed.

J. APPENDIX

System Deficiency Record

Report Updated by: James M. Reade P.E.

5/28/2021
Date

SYSTEM DEFICIENCY RECORD
NAME OF SYSTEM: Cal-Water Chico SYSTEM NO. 0410002

DATE NOTED	DESCRIPTION OF DEFECT OR HAZARD	*Priority Code	DATE REPORTED	DATE CONFIRMED
6/27-28/12	No new deficiencies noted			
4/23-24/13	Station 19: Replace fine mesh on end of pump-to-waste line. Station 29: Uncover end of pump-to-waste and install flap gate, or other means of precluding access by animals. Station 61: Repair broken flapper on pump-to-waste.14 Stations: Have single-walled heat exchanger plumbed to water mains. Some are protected by RPs, some are not. Cal Water is investigating the issue.	3		6/29/14
5/28-29/14	See attached Inspection Notes page. There is a list of items to correct at nine sites.	3		4/26/16
7/8/2015	No new deficiencies noted.			
4/26/2016	No new deficiencies noted.			
7/18/2018	No new deficiencies noted.			
4/27/2021	No new deficiencies noted.			

***Priority Code:**

1. Serious health hazard; corrective action must be taken immediately.
2. Critical system or operational defect and/or potential health hazard; must be corrected as soon as possible.
3. System or operational defect and/or potential contamination hazards of lesser public health significance. Must be corrected as workload permits.
4. System or operational defect and/or potential health hazard - costly to correct - to be included in any long-range water improvement project.

R = Recommended

Attachment 1-3: Cal Water Response to DR NMH-013

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Niamh Murphy Utilities Engineer	Phone: Email:	(415) 703-2107 niamh.murphy@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **November 15, 2021** Re: **NMH-013** Subj: **Inactive Wells and Tanks**	Request Received from CPUC: **November 5, 2021** Requested Due Date: **November 15, 2021**

Comments:

- **Full response attached.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – NMH-013 Wells Data**

Data Requests and Responses

1. For each of the following wells, please provide the remaining amount of rate base as it is today and the amount that will remain in 2023.
    a. Chico well 01-04
    b. Chico well 03-03
    c. Chico well 04-02
    d. Chico well 07-04
    e. Chico well 13-01
    f. Chico well 15-01
    g. Chico well 22-01
    h. Chico well 25-01
    i. Chico well 30-01
    j. Chico well 41-01
    k. Chico well 47-01
    l. Chico well 48-01
    m. Chico well 51-01
    n. Chico well 55-01
    o. Chico well 58-01
    p. Chico well 68-01
    q. Willows well 2-01
    r. Oroville well 09-01
    s. Marysville well 13-01

Response: In our 2021 GRC, Cal Water lists rate base for all districts by asset account, not by individual assets. Attachment #1 contains the installation cost (Column C), depreciated cost (Column D), and net plant value (Column E) for the assets noted below as of October, 2021. Values noting 0 for a given asset means that the respective well or tank has been removed from Cal Water's continuing property records. Cal Water is assuming the depreciation rate proposed in this rate case (Column H) to forecast the remaining net plant value in 2023 (Column G). For Oroville, Cal Water believes the reference should be 901-01 instead of 09-01.

2. For Willows tank 1, please provide the remaining amount of rate base as it is today and the amount that will remain in 2023.

Response: Please refer to Cal Water's response to Question 1, above.

NMH-013 Wells and Tank Data

Q.1 Various Wells

Wells Location	Accumulated Cost	Accumulated Reserve	Net Plant Value as of October'21	Status as of October'2021	AS of 1/1/2023	Depr. Rate
a. Chico well 01-04	0	0	0	Well is destroyed and removed from Property Records	0	
b. Chico well 03-03	0	0	0	Well is destroyed and removed from Property Records	0	
c. Chico well 04-02	22,810	22,810	0	Well is in the process of being removed from Property Records	0	
d. Chico well 07-04	7,987	7,987	0	Well is destroyed and removed from Property Records	0	
e. Chico well 13-01	7,644	7,644	0	Well is in the process of being removed from Property Records	0	
f. Chico well 15-01	10,031	10,031	0	Well is in the process of being removed from Property Records	0	
g. Chico well 22-01	11,150	11,150	0	Fully Depreciated	0	
h. Chico well 25-01	14,050	14,050	0	Fully Depreciated	0	
i. Chico well 30-01	22,094	22,094	0	Fully Depreciated	0	
j. Chico well 41-01	16,500	16,500	0	Fully Depreciated	0	
k. Chico well 47-01	32,024	32,024	0	Fully Depreciated	0	
l. Chico well 48-01	31,581	31,581	0	Fully Depreciated	0	
m. Chico well 51-01	73,320	73,320	0	Fully Depreciated	0	
n. Chico well 55-01	54,612	54,612	0	Well is in the process of being removed from Property Records	0	
o. Chico well 58-01	69,563	69,563	0	Fully Depreciated	0	
p. Chico well 68-01	131,030	107,916	23,114		17,993	3.35%
q. Willows well 2-01	1,461	1,461	0	Well is in the process of being removed from Property Records	0	
r. Oroville well 09-01 (901-01)	0	0	0	Well is in the process of being removed from Property Records	0	
s. Marysville well 13-01	21,442	21,851	(409)	Fully Depreciated	(409)	

Q.2 For Willows tank 1

Asset Location	Accumulated Cost	Accumulated Reserve	Net Value in Plants as of October'21	Status as of October'2021	AS of 1/1/2023	Depr. Rate
STA 011-TANK 1 500 NORTH AIRPORT ROAD <WILLOWS>	1,321.11	206	1,115	-	1,069	3.02%

Attachment 1-4: Cal Water Response to DR NMH-011

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	Public Advocates Office		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Niamh Murphy Utilities Engineer	Phone: Email:	(415) 703-2107 niamh.murphy@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	California Water Service Company		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: October 20, 2021	Request Received from CPUC: October 11, 2021
Re: Response to NMH-011	Requested Due Date: October 20, 2021
Subj: Reliability Study	

Comments:

- Full response attached. Response provided by Engineering. Does not contain confidential information.
- This response refers to the following attachments included separately:
  - Att 1 - 124344_Cost_Estimate
  - Att 2 - 124352_Cost_Estimate
  - Att 3 - 124353_Cost_Estimate
  - Att 4 - 124390_Cost_Estimate

Data Requests and Responses

1. Please provide detailed cost estimates for the proposed Chico, Marysville, Oroville and Willows water supply reliability studies.
    a. For each of the reliability studies, how much of the total requested cost is contingency?
    Response: Cost estimates for the proposed water supply reliability studies are attached (see Attachments). Contingency for each reliability study is calculated as 10% of the base cost (Contractor and Labor Costs) and ranges from $9,928 to $12,428.
    b. For each of the reliability studies, how much of the total requested costs is labor?
    Response: The total requested cost is all labor either done in-house or by external consultants.
    c. Are labor costs associated with the reliability studies in-house labor or external labor costs?
    Response: Cal Water will complete some labor in-house, however the majority of the work will be done by consultants, see Attachments for cost breakdowns.
2. Refer to CH_2021_GRC_Justification_Book_FINAL.pdf, pg CH PJ-79. The cost estimates for Chico's Water Supply and Facilities Master Plan include a labor estimate. Is this labor cost in-house labor or external labor?
    a. If it is in-house labor, will this labor be conducted during employee's regular time or overtime?
    Response: In-house labor is conducted by salaried union employees. Cal Water's collective bargaining unit agreement for salaried employees does not allow for overtime.
    b. If it is external labor, what company will Cal Water be hiring?
    Response: The formal process of bidding and evaluating proposals will be completed as part of the project. Therefore, the final consulting company has not been determined. There are numerous qualified consulting companies that could successfully bid on this task.

Attachment 1-5: Cal Water Response to DR NMH-013

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Niamh Murphy Utilities Engineer	Phone: Email:	(415) 703-2107 niamh.murphy@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **November 15, 2021** Re: **NMH-013** Subj: **Inactive Wells and Tanks**	Request Received from CPUC: **November 5, 2021** Requested Due Date: **November 15, 2021**

Comments:

- **Full response attached.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – NMH-013 Wells Data**

Data Requests and Responses

1. For each of the following wells, please provide the remaining amount of rate base as it is today and the amount that will remain in 2023.
    a. Chico well 01-04
    b. Chico well 03-03
    c. Chico well 04-02
    d. Chico well 07-04
    e. Chico well 13-01
    f. Chico well 15-01
    g. Chico well 22-01
    h. Chico well 25-01
    i. Chico well 30-01
    j. Chico well 41-01
    k. Chico well 47-01
    l. Chico well 48-01
    m. Chico well 51-01
    n. Chico well 55-01
    o. Chico well 58-01
    p. Chico well 68-01
    q. Willows well 2-01
    r. Oroville well 09-01
    s. Marysville well 13-01

Response: In our 2021 GRC, Cal Water lists rate base for all districts by asset account, not by individual assets. Attachment #1 contains the installation cost (Column C), depreciated cost (Column D), and net plant value (Column E) for the assets noted below as of October, 2021. Values noting 0 for a given asset means that the respective well or tank has been removed from Cal Water's continuing property records. Cal Water is assuming the depreciation rate proposed in this rate case (Column H) to forecast the remaining net plant value in 2023 (Column G). For Oroville, Cal Water believes the reference should be 901-01 instead of 09-01.

2. For Willows tank 1, please provide the remaining amount of rate base as it is today and the amount that will remain in 2023.

Response: Please refer to Cal Water's response to Question 1, above.

AutoSave Off | NMH-013 Attachment #1 - NMH-013 Wells and Tank Data - Protected View | Search (Alt+Q)

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I13

NMH-013 Wells and Tank Data

Q.1 Various Wells

Wells Location	Accumulated Cost	Accumulated Reserve	Net Plant Value as of October'21	Status as of October'2021	AS of 1/1/2023	Depr. Rate
a. Chico well 01-04	0	0	0	Well is destroyed and removed from Property Records	0	
b. Chico well 03-03	0	0	0	Well is destroyed and removed from Property Records	0	
c. Chico well 04-02	22,810	22,810	0	Well is in the process of being removed from Property Records	0	
d. Chico well 07-04	7,987	7,987	0	Well is destroyed and removed from Property Records	0	
e. Chico well 13-01	7,644	7,644	0	Well is in the process of being removed from Property Records	0	
f. Chico well 15-01	10,031	10,031	0	Well is in the process of being removed from Property Records	0	
g. Chico well 22-01	11,150	11,150	0	Fully Depreciated	0	
h. Chico well 25-01	14,050	14,050	0	Fully Depreciated	0	
i. Chico well 30-01	22,094	22,094	0	Fully Depreciated	0	
j. Chico well 41-01	16,500	16,500	0	Fully Depreciated	0	
k. Chico well 47-01	32,024	32,024	0	Fully Depreciated	0	
l. Chico well 48-01	31,581	31,581	0	Fully Depreciated	0	
m. Chico well 51-01	73,320	73,320	0	Fully Depreciated	0	
n. Chico well 55-01	54,612	54,612	0	Well is in the process of being removed from Property Records	0	
o. Chico well 58-01	69,563	69,563	0	Fully Depreciated	0	
p. Chico well 60-01	131,030	107,916	23,114		17,993	3.35%
q. Willows well 2-01	1,461	1,461	0	Well is in the process of being removed from Property Records	0	
r. Oroville well 09-01 (901-01)	0	0	0	Well is in the process of being removed from Property Records	0	
s. Marysville well 13-01	21,442	21,851	(409)	Fully Depreciated	(409)	

Q.2 For Willows tank 1

Asset Location	Accumulated Cost	Accumulated Reserve	Net Value In Plants as of October'21	Status as of October'2021	AS of 1/1/2023	Depr. Rate
STA. 011 TANK 1 500 NORTH AIRPORT ROAD <WILLOWS>	1,321.11	206	1,115	-	1,069	3.02%

Attachment 1-6: Chico Capital Budget Summary

Table 2-A	Capital Budget Summary – Chico District			
Chico	**2022**	**2023**	**2024**	**Annual Average**
Cal Advocates	$ 4,644,309	$ 4,776,060	$ 5,111,831	$ 4,844,067
CWS	$ 12,436,764	$ 9,989,321	$ 10,643,612	$ 11,023,232
CWS > Cal Advocates	$ 7,792,454	$ 5,213,261	$ 5,531,782	$ 6,179,165
Cal Advocates as % CWS	37.34%	47.81%	48.03%	43.94%

Table 2-B Capital Budget Details – Chico District

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Carry-Over Total	-	[illegible]	[illegible]	[illegible]
		TOTAL 2022	$ 4,644,309	[illegible]	[illegible]	[illegible]

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
[illegible]		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Carry-Over Total	[illegible]	[illegible]	[illegible]	[illegible]
		TOTAL 2023	[illegible]	[illegible]	[illegible]	[illegible]

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
2024	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
2024		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
2024		Carry Over Total				[illegible]
		TOTAL 2024	[illegible]	[illegible]	[illegible]	[illegible]

Table 2-C	Capital Budget vs. Recorded Expenditure – Chico District				
Chico	**2022**	**2023**	**2024**	**Annual Average**	**% of Recorded**
2015-2020	--	--	--	$ 10,484,473	100%
Cal Advocates	$ 4,644,309	$ 4,776,060	$ 5,111,831	$ 4,844,067	46%
CWS	$ 12,436,764	$ 9,989,321	$ 10,643,612	$ 11,023,232	105%

Attachment 2-1: Oroville 2020 Sanitary Survey Inspection Report

Water Boards

State Water Resources Control Board
Division of Drinking Water

APR 26 2021

California Water Service Company
1720 North First Street
San Jose, CA 95112

Attention: Sophie James, Director of Water Quality

Subject: **California Water Service Co. – Oroville, Public Water System No. 0410005, December 2020 Inspection Report.**

On December 28, 2020, Terri Parham of my staff met with Loni Lind, Water Quality Program Manager, and Greg Silva, Operator, to inspect Cal Water's public water system in Oroville. The water system is in general compliance with regulatory requirements and is professionally operated and maintained. Minor deficiencies were found during the inspection. A copy of the inspection report and System Deficiency Record are enclosed.

If you have any questions, please call me at (530) 224-4861, or Terri Parham at (530) 224-2052.

Reese B. Crenshaw, P.E.
Valley District Engineer
Drinking Water Field Operations Branch

Enclosures

cc: Sophie James

State Water Resources Control Board
Division of Drinking Water

Inspection Report

Purveyor Cal Water Service Company – Oroville System **System Number** 0410005
Person(s) Contacted/Position George Barber, District Manager; Matthew Meninga, Superintendent

Date of Inspection December 28, 2020 **Reviewing Engineer** Terri L. Parham, PE
Previous Annual Inspection 04/21/2017 by Paul Rowe, PE **District Engineer** Reese B. Crenshaw, PE

A. INTRODUCTION

1. Permit Status (Date Issued/Amendment Purpose)

Full The State of California Department of Health Services issued a domestic water supply permit on February 24, 1976, to the California Water Service Company (**Cal Water**) for the Oroville area system for the following:

Sources: Well 2, Well 5, Well 10, Western Pacific Well, Miocene Canal, State Canal
Treatment: Coagulation-Sedimentation, Fluoridation, Filtration, Disinfection
Storage: Cherokee Reservoir (raw water), Oroville Reservoir (sedimentation basins), Clearwell Tank, High Duty Reservoir
Distribution System

Amendment(s)
- Chlorine generation system (07/01/2000)
- Lead sampling in schools (12/20/2016)
- Fluoride 0.6 to 1.2 with optimal at 0.7 (06/04/2020)
- Sedimentation basin bypass for cleaning (12/23/2020)

Are the permit conditions complied with? Yes
Is the permit up to date? Yes
List data sheets on file (permit, files, etc.) Data sheets are in the permit file.

2. Changes in System

Since last annual inspection: The WTP electrical panels have been replaced (3 total); a 20-inch pipe has been installed from Cherokee Reservoir in place of the raw water ditch. A new hydropneumatics tank was installed for the Ranch Golden Zone replacing the old tank that was there. Well 9-01 was destroyed in the summer of 2020.

Planned future changes: Well 10 (Station 10) is currently on stand-by with GAC filtration proposed for the spring of 2021 in addition to a new back-up generator and 800 gpm well. Station 2 is on stand-by currently and will possible be destroyed due to PFOA/PFOS. Station 1 & 3: Station 1 will be removed and existing structure used for storage only. Three new booster pumps will be installed at Station 3 along with new electrical and back-up generator. The old booster pumps at Station 3 will be destroyed.

3. Consumer & Production Data (2019 Annual Report)

Number of active service connections: 3,503 **Meters:** 3,503
Approximate population served: 10,698
Water produced during calendar year 2019 757.5 MG
Maximum month: 137.6 MG in August 2019
Maximum day: 5.068 MG on August 27, 2019

4. Past Water Production Data

Table 1 – Water Use Data

1	2	3	4	5	6	7	8	9	10	11
Year	Max. Month (MG)	Max. Day Calc. 1.5x (gpm)	Report Max. Day (MG)	Max. Day (MDD) (gpm)	GPM PDPC	No. of Total Conn.	No. of Meter Conn.	Flat Conn.	Source Capacity	Pop.
2010	175.5	5,897	6.43	4,465	1.25	3,578	3,312	266	7,740	9,550
2011	160.9	5,407	6.34	4,403	1.24	3,548	3,438	110	7,740	10,428
2012	168.2	5,652	6.28	4,361	1.27	3,439	3,438	1	7,740	10,383
2013	166.2	5,585	6.06	4,208	1.06	3,976	3,958	18	7,740	10,370
2014	141.0	4,738	5.70	3,958	1.14	3,458	3,458	0	7,740	10,508
2015	120.5	4,049	7.57	5,257	1.52	3,463	3,463	0	7,740	10,517
2016	129.2	4,341	4.98	3,458	1.00	3,455	3,455	0	7,740	10,543
2017	133.9	4,499	4.77	3,313	0.97	3,404	3,404	0	7,740	10,556
2018	133.4	4,483	4.73	3,285	0.94	3,500	3,500	0	7,740	10,560
2019	137.6	4,624	5.07	3,521	1.00	3,505	3,505	0	5,340	10,698
				5-Year Average	1.09					

Discussion: Unless daily flows are accurately measured and recorded (e.g., using SCADA), maximum day production for each year is estimated using a two-step process. First, a 1.5X factor is applied to each year's maximum reported month's production and the resultant value converted from the reported units (million gallons) to the standard unit of demand (gallons per minute). These values are shown in columns 2 and 3 in Table 1, above. Second, reported daily maximum production days (directly measured or estimated, depending on the water system's capabilities) for each year are listed in column 4 and converted to gallons per minute as shown in column 5. The highest value between column 3 and column 5 is considered the maximum day production for the year in question. The maximum calculated or reported day's production over the past 10-year period—taken from columns 3 or 5—is the maximum day demand (MDD) as defined in the Drinking Water Regulations (§64554, T22, CCR).

At Cal Water Oroville, all water produced by the surface water treatment plant is measured and recorded directly in SCADA, and all water produced by the wells is read manually from flow meters at each station. During winter (October - May), there are times the surface water plant may not run, and all water produced is from the well field. During the summer months (June - September), when MDD occurs, the surface water treatment plant comprises 80% - 90% of all production. Since nearly all summertime water production is accurately recorded in SCADA, it is reasonable to take the MDD value from column 5.

From the fifth column in Table 1, MDD is 5,257 gpm (year 2015). The peak hourly demand (PHD = 1.5 x MDD) is therefore 7,886 gpm. (MDD and PHD are defined in §64554, Title 22, California Drinking Water Regulations.) The regulations require that MDD be met by source capacity and that four hours of PHD be met by a combination of source capacity, storage capacity, or an additional source(s) of supply. The Cal Water Oroville water system has enough source capacity (5,340 gpm) to meet MDD (5,257 gpm) but requires an additional amount of storage to meet four hours of PHD. The amount of storage required is equal to PHD (7,886 gpm) minus source capacity (5,340 gpm) times four hours (240 minutes) = (7,886 gpm – 5,340 gpm) X 240 min = 611,040 gallons. The MDD is met by source capacity alone but does not meet the PHD with source capacity alone. The water system overall does however, meet the MDD and PHD with the 2.0 MG High Duty Tank.

Water demand per service connection averaged 1.09 gpm/sc/day during the most recent 5-year period, consistent with historical data. The Cal Water Oroville water system meets all Title 22 source and storage capacity requirements.

B. SOURCE DATA

Table 2 – Source Data

Sources	Status	Capacity	Comments
GROUNDWATER			
Well 02-01	*Stand-by*	800 gpm	On October 7, 2019, Loni Lind, Water Quality Program Manager, requested Well 02-01 be changed from active to stand-by status as recent PFOS and PFOA test results exceeded the response levels. Well 02-01: 100 HP Layne & Bowler pump; sodium hypochlorite; fluoridation equipment; food grade oil lubricant; vertical turbine; retrofitted with a completely new water lubed pump, pump column, and motor. According to Greg Silva the capacity is 300 gpm lower.
Well 05-01	**Active**	300 gpm	30 HP Byron Jackson pump, sodium hypochlorite, fluoridation equipment, water lubricant. Vertical turbine
Well 10-01	*Stand-by*	800 gpm	Well 10-01 has been changed from active to stand-by due to Boron exceeding the Notification Levels. Well 10-01: 75 HP Layne & Bowler pump, sodium hypochlorite, fluoridation equipment, water lubrication. Adjacent to new skate park. Vertical turbine.
Western Pacific Well 09-01	*Destroyed*		
Total Well Field Capacity (Active)		**300 gpm**	
SURFACE WATER			
Filter Plant	**Active**	5,040 gpm (Rated for 7.26 MG)	Treatment capacity is dictated by the design filter loading rate (4.0 gpm/ft^2) and a total filter area (1,260 ft^2). Cal Water purchases most of its raw water from PG&E (up to 6,300 gpm). Raw water (up to 5,000 gpm) can also be purchased from Butte County, which has an annual allocation of approximately 27,000 acre-feet of Lake Oroville water from the State Water Project. All raw surface water, regardless of contracted source, comes from Lake Oroville and is delivered via the Thermalito Powers Canal (Pump Station 14). A 20-inch pipe from Cherokee Reservoir conveys the water to the treatment plant.
Total Surface Water Capacity (Active)		**5,040 gpm**	
TOTAL SOURCE CAPACITY		**5,340 GPM**	
INTERTIES			
Thermalito Water and Sewer District	Emergency Treated Water	**Rated at 1,500 gpm**	Emergency interconnection with eight-inch meter.

Discussion & appraisal (i.e., does source capacity comply with Waterworks Standards?): Yes, see discussion in Section A.4.

C. TREATMENT

1. Surface Water Sources

Watershed: The watershed is everything upstream of Pump Station 14 and consists of the Thermalito Powers Canal, Thermalito Diversion Pool, Lake Oroville, and the Feather River drainage which feeds it. In the past, the primary source of surface water (PG&E) was diverted from the West Branch Feather River and routed around Lake Oroville through a series of conveyances. But the primary (PG&E) and secondary (Butte County) water contracts consist of Lake Oroville water.

A positive benefit from delivering all water via the Thermalito Powers Canal is a reduction in LT2 bin classification from Bin 2 to Bin 1 (the former PG&E conveyance has a Bin 2 classification, while the Thermalito Powers Canal has a Bin 1 classification, based on Cryptosporidium testing).

Are there significant sewage hazards? Cal Water is in the process of updating the Watershed Sanitary Survey to reflect the operational changes and hopes to complete it by the end of 2021. The Thermalito Powers Canal's source of water is Lake Oroville, where body contact recreation occurs. One potential sewage hazard could be illegal dumping or leaks from houseboats on the lake, however; such discharges would be very diluted at the intakes in the canal.

Is there significant recreation? There is significant recreation on Lake Oroville and tributary waters.

Has a sanitary survey been conducted? Yes – Cal Water has completed a detailed sanitary survey, followed by three updates, the most recent one was completed in 2015, of which the Division has a digital copy. The sanitary survey was revised to consider the Lake Oroville/Thermalito Powers Canal watershed.

Treatment classification: The water treatment plant is classified as full conventional treatment (rapid mix, flocculation, sedimentation, filtration, and disinfection), though, the rapid mix and flocculation processes are not strictly conventional as they lack an engineered rapid mix chamber (high shear rate) and flocculation paddle wheels (low energy addition). Being conventional filtration treatment, the plant qualifies for Section 64653(b) for removal credits of 2.5 log for Giardia and of 2 log for virus. Disinfection treatment must provide at least 0.5 log inactivation of Giardia cysts and 2.0 log inactivation of viruses.

Describe treatment process (i.e., chemicals, dosages, flocculation & sedimentation, contact time, filter media, media depth, alarms): Pump Station 14 takes water from Thermalito Powers Canal and pumps it—via a 342-foot, 24-inch diameter pipe—to a 40-inch diameter pipe that feeds the treatment plant and/or Cherokee Reservoir (2.65 MG raw water storage reservoir). The 40-inch pipe becomes a 24-inch pipe at a small (Cal Water owned) building near the intersection of Cherokee Road and the canal water service road. The 24-inch pipe (886 feet) empties into a concrete lined ditch that flows the final 850 feet to the treatment plant headworks. Cal-Water is currently in the process of constructing a pipeline to replace this ditch.

Coagulant is injected at the headworks, just prior to the sedimentation/flocculation basins. Flash mixing occurs in a wooden chamber/flume contrivance, containing a small, motorized mixer. The coagulant being used is Hyper+Ion 1090, a NSF 61 listed polyaluminum hydroxychloride compound manufactured in Pittsburg, California, by Chemtrade Solutions LLC. The coagulant dosage is manually set and typically ranges between 3.5 mg/L and 5.5 mg/L. A streaming current meter drawing from the headworks can over-ride the manual set point, if the streaming current exceeds pre-set limits. Sedimentation consists of three gunite-lined basins in series, each basin divided into several chambers. The treatment plant is shut down two to three times a year so that the sedimentation basins can be cleaned. Chlorine is added after the final settling basin, prior to the filters (pre-chlorination). The sedimentation basins gravity feed four conventional down-flow gravity filters having a total surface area of 1,260 ft^2. The filters are dual media, each consisting of (top to bottom): anthracite (18"); sand (9"); and gravel support media (12"). Online turbidimeters continuously monitor individual filter effluent, and another turbidimeter monitors combined filter effluent. Online turbidimeters are verified weekly using a bench-scale turbidimeter (Hach 2100N) and are also calibrated quarterly to a Formazin standard. Lime can be added to raise pH if it falls much below 7.9. Filtered water is disinfected with chlorine solution (post-chlorination) and fluoridated using sodium fluoride saturators. The fluoride concentration in finished water typically ranges from 0.7 mg/L to 0.9 mg/L. Finished water is provided chlorine contact time in a 450,000-gallon clearwell and thereafter flows by gravity or pumping to the distribution system. A ClorTec salt-generation chlorine feed system creates 0.8% strength chlorine solution that is injected before and after the filters.

Describe records maintained of treatment: Daily records are kept of chemicals added, dosages, and the physical characteristics of raw and treated water. Cal Water submits a monthly summary of operating records.

Is filter to waste provided? Each filter is sent to waste for 15 minutes after backwashing.

Is reclaimed backwash water returned to headworks? (Treatment & settling time provided) Filter backwash water and filter to waste water is discharged to a settling lagoon. After settling, backwash water is returned to the headworks. A totalizing flow meter measures and records the quantity of returned backwash. On December 27, 2005, Cal Water submitted a Recycling Rule Notification Form. The recycle return system includes automated controls that do not allow the recycle water return to exceed 10% of the flow rate. Cal Water reports that it meets the requirements of the USEPA's Filter Backwash Recycling Rule and the goals of the Cryptosporidium Action Plan.

Are design criteria met? If not, what facilities are needed? Yes.

Are performance standards met? Yes, according to monitoring reports.

Sampling: Individual and combined filter effluents are monitored by online turbidimeters, which are regularly verified and calibrated quarterly.

Are operations criteria met? (i.e., filtration rate, operation plan, etc.) Yes.

Standby replacement: Cal Water has spare chemicals and feed equipment on hand for emergency use.

Redundant backup: Reportedly, Cal Water has numerous pumps, spare parts, and feed equipment available for emergency use.

Standby power: In 2016, Cal Water replaced the old 30 kw gasoline generator with a new 250 kw diesel generator which is on standby at the surface water treatment plant. The generator has a 40-gallon diesel tank and is sized to run the entire treatment plant.

Disinfection of surface water sources: Pre-filtered and filtered water are chlorinated with an 0.8% wt. strength sodium hypochlorite solution. The solution is generated onsite using two 100-lb per day ClorTec CT-200 electrolysis units. Chlorine levels at the clearwell outlet are continuously measured by a HACH CL17 on-line chlorine analyzer. Grab samples are taken once in the morning and once in the afternoon from both the clearwell and from the post-filter sump and analyzed for chlorine.

Standby feeders: Emergency backup chlorination facilities are available.

"CT" values

Residuals: Normally, a free chlorine residual of between 0.4 to 0.7 mg/L is maintained in the distribution system. Residuals may be less in the vicinity of operating wells (usually 0.3 to 0.5 mg/L).

Time: To provide the necessary time for meeting the required ½-log CT (for Giardia), Cal Water uses the combined volumes of piping, basins (e.g., 3 of the 4 gravity filters), and clearwell from the pre-chlorination point to the first customer. The qualifying segments are reported monthly on an Excel CT reporting form. A baffling factor of 0.10 is used for the clearwell.

CT: The worst-case actual CT and required CT are calculated and reported for each day. The calculation includes the lowest water level in the clearwell, the highest flow rate, and the worst-case temperature and pH.

pH range: 7.7 to 8.2

Temperature range: 5 to 31°C

Are distribution residuals $\geq$ 0.2 mg/L 95%? Yes

Alarms: The surface water treatment plant has alarms for high and low chlorine residual, high turbidity, and abnormal streaming current readings. After hours, the "on-call" duty operator receives alarm notifications on a cell phone. The surface water plant and the well sites have intrusion sensors with remote alerts.

Discussion & appraisal: The surface water treatment plant is classified as a conventional water treatment plant. Filtration and disinfection compliance are documented and reported.

2. **Groundwater Sources**

Is continuous disinfection provided? Yes.

Describe facilities: 12.5% sodium hypochlorite solution injected using diaphragm pumps. Both LMI and PulsaTron brands are used.

Discussion & appraisal: Groundwater sources cycle on and off based on the pressure demands of the distribution system, as programmed into SCADA. Local mercoid switches serve as backup. Groundwater sources are used exclusively whenever the surface water treatment plant is down (e.g., for planned maintenance). The

distribution system has an intertie with Thermalito Irrigation District which can be activated in case of emergencies.

3. **Other Treatment or Blending Facilities**
Describe facilities & parameters treated/blended (i.e. iron, & manganese, fluoridation, nitrate, corrosion control, organics, etc.): Cal Water fluoridates all sources using sodium fluoride saturators and submits monthly fluoridation records to the Division. Naturally occurring fluoride concentrations in the groundwater range from ND to 0.46 mg/L. Naturally occurring fluoride concentrations in the surface water are typically ND.

4. **Describe Records Maintained of Treatment**
Describe record keeping and if they are submitted to this office: The following operational records are submitted to the Division: raw and finished water turbidity (daily grab sample), free chlorine residual and dosage, worst case daily CT calcs based on hourly averages, coagulant and lime dosage, filter pressure drops, backwash totals, and filter rates (gpm/ft^2), pH, temperature, and fluoridation treatment records (all production rates and fluoride dosages). The average distribution system fluoride level for 2019 was 0.77 mg/L.

D. STORAGE DATA

Table 3 – Storage Data

Name	Type	Capacity	Zone	Comments
Tank 16 High Duty	Steel	2.0 MG	High duty	Serves water to the high duty pressure zone. Has common inlet-outlet. Serves Rancho Golden subarea and has PRV.
	Total	**2.0 MG**		Only the high duty tank counts toward total storage cap.

Does storage capacity comply with Waterworks Standards? Yes. See Section A.4.
Are all data sheets completed & on file? Yes.
Are Division coating procedures adhered to? Yes.
Discussion & appraisal (e.g., were reservoirs coated, cleaned &/or inspected last year? Plans for re-coatings, cleanings &/or inspections?) The inside of the clearwell was coated in 2011. It was inspected and cleaned in 2013. The High Duty Tank received an exterior coating of epoxy/urethane in 2013. The interior above the high water line was painted in 2013. The interior below high water line is original (1968). The tank was last inspected in 2013. The reservoirs (tanks) appear to be in good external condition. Staff reported the water storage tanks are inspected every five years.

E. TRANSMISSION FACILITIES

Describe transmission facilities: There are no transmission facilities in the distribution system.
Are there low-head lines? No.
Discussion & appraisal: N/A

F. DISTRIBUTION SYSTEM

1. **Pressure Zones**

Table 4 - Pressure Zone Data

Pressure Zone Name	Pressure Range	Water Sources	Storage Capacity	No. of Conn.
Rancho Golden (470)	40 to 80	Treatment plant & Tank 15	none	5 to 10%
High (435-1)	60 to 80	Treatment plant and 1 well	2.0 MG	60 to 70%
Low (325)	60 to 80	Treatment plant	none	25 to 30%

**** Sta 7 has been disconnected from the system***

Discussion & appraisal: There are three main pressure zones.

2. Booster/Lift Stations

Table 5 – Booster Station Data

Station	No. Pumps	Capacity (gpm)	From Zone	To Zone	Comments
Station 1*	2	1,000 & 1,400	325-1	470	Operation by level in High Duty Tank
Station 3*	1	1,200	325-1	470	High Duty
Station 11	2	400 & 1,000	325	435-1	For the nearby cannery, mostly in summer. The cannery also needs Well #2 to operate to keep pressure high as possible.
Station 15	2	350 & 350	Plant	470	To distribution system
Station 14	2	5,000 & 3,000	Thermalito Powers Canal	Plant	Pumps raw water from Thermalito Powers Canal (has backup generator)

**** Station 1 & Station 3 will be combined with new designation of Station 3***

Discussion & appraisal: ***Stations 1 & 3*** are in the Low Zone 325 and boost to the High Zone 435. The boosters are triggered by Tank 16 levels. The pumps are programmed in a lead/lag sequence based on pressure, and can pump simultaneously, if needed. Station 1 and Station 3 will be combined and become Station 3 only. These improvements will take place in 2021 and will include new booster pumps, back-up generator and associated appurtenances.

Station 11 has two pumps that pump water to Pressure Zone 435-1 from Pressure Zone 325. The two pumps are programmed for lead/lag operation and can also pump simultaneously as needed. Station 11 is next to the cannery and helps maintain steady pressure.

Station 15 includes the treatment plant which is located at the top of the system (elevation wise) and Tank 15 with with two pumps that provide additional water pressure for a small area (Rancho Golden) adjacent to the treatment plant. The booster pumps at Station 15 pull a side stream and pressurize it into the 470 zone (Rancho Golden) area. Cal Water has also installed a pressure-regulating valve to supply the lower zone from the higher zone, if necessary.

Station 14 includes two raw water intake pumps at the Thermalito Powers Canal and moves water to the treatment plant.

3. Mains

Table 6 – Distribution System Materials

Material	Amount	Size	Condition	Comments
Steel	13%	Varies	Fair	None
Ductile cast iron	25%	Varies	Good	All new mains are ductile cast iron, percentage rising
AC	45%	Varies	Good	Being replaced, percentage decreasing
PVC	12%	Varies	good	None

Discussion & appraisal: All pipe lineal footages for respective pipe diameters as provided in Table 6 are included in Cal Water's Annual Report. The system had approximately 60 miles of water main.

Discuss leak history in 2019 (mains & connections): The water system reported 31 service connection leaks and 9 water main leaks/breaks in 2019.

Are Distribution facilities constructed in accordance with Waterworks Standards? Reportedly, the distribution system is constructed in accordance with the Waterworks Standards.

Describe water main & sewer line separation practices: Cal Water follows water main separation criteria specified in the Waterworks Standards.

Extent of lead pipes, joints, &/or lead solder used in distribution system & present policy: None.

Discussion & appraisal: Cal Water replaces mains on the basis of size and leak history. AC mains are being replaced with ductile cast iron and/or with PVC pipe depending on pipe size (larger DI and smaller PVC). Cal Water coordinates water main separation issues with the City of Oroville and for Butte County for the review of the locations of proposed sewer and proposed water lines.

G. WATER QUALITY & MONITORING

1. Bacteriological Monitoring

A. Distribution System: Description of program: Cal Water collects four routine bacteriological samples per week (16 to 18 samples per month) from designated sample taps. Sampling days are Mondays, Tuesdays, and/or Wednesdays. Designated repeat sample locations are within five service connections upstream and downstream of each routine sample location, as required. Bacteriological samples are collected by Cal Water personnel and analyzed at Cal Water's ELAP-certified laboratory in San Jose.

Sampling plan approved & current (do we have a copy?) On December 28, 2020, Cal Water submitted an updated Bacteriological Sample Siting Plan for routine monitoring for the distribution system. This plan is still up to date.

Controlling factor is population or service connections? The population reported for 2019 was 10,698, and the number of active service connections was 3,505. Both population and number of service connections require 3 samples per week. Cal Water's collects four weekly samples, which exceeds the minimum requirement.

Number of samples per month or week required? A minimum of 3 samples.

MCL violations in past year? No violation and no routine positive results.

Discussion & appraisal: In compliance.

B. Raw Water Monitoring: Description of program: Raw water bacteriological samples are taken every quarter from each of the well sites. Cal Water also samples the surface water source monthly as required in the Title 22 regulations.

Sampling plan approved & current (do we have a copy?) On September 30, 2009, a form was submitted by Cal Water acknowledging responsibility under the Ground Water Rule to collect triggered samples from wells.

Discussion & appraisal: Satisfactory.

2. Chemical Monitoring

Description of program: In addition to chemical monitoring requirements specified in the Drinking Water Regulations, Cal Water monitors Well 5-01 quarterly for tetrachloroethylene (aka perchloroethylene or PCE), and other VOCs. It has been reported that PCE was first detected in Well 5-01 in 1989 at a concentration of 0.7 µg/L. According to Division files, there have been no instances of an MCL exceedance since 1989. The MCL for tetrachloroethylene is 5 µg/L. Other VOCs historically detected in Well 5-01 include toluene (detected twice, 1989 and 1991) and trichlorofluoromethane (detected over 20 times but not since 1997).

Cal Water monitors the stand-by Well 10-01 for Boron. The notification level for Boron is 1,000 µg/L. The highest boron concentration to date is 1,900 µg/L, from a sample collected in September 2014. Well 10 is on stand-by until a granular activated carbon (GAC) vessel is installed to reduce the levels of Boron. Cal Water expects to install the vessel in the spring of 2021.

PFOS has been detected at Stations 2 & 10 while PFOA has been detected at Station 5.

Who collects samples? Operators.

Discussion & appraisal: Satisfactory. Cal Water manages chemical data using a LIMS (laboratory information and management system) software, which in addition to generating test schedules, can record, store, and retrieve analytical results, as well as transfer the results electrically (EDT) to the Division of Drinking Water. Monitoring results for VOCs and boron are included in Consumer Confidence Reports.

3. **Other Organics**
Description of program: There is no organic chemical monitoring other than that described above.

4. **Disinfectant Residual and Disinfection By-products Precursors**
Description of program: Disinfectant residual, TOC, and alkalinity are tested monthly. Reported values show that distribution chlorine residual never approaches 4 mg/L, treated water TOC is consistently less than 2 mg/L, and alkalinity averaged around 40 mg/L in 2019.
Discussion & appraisal: Satisfactory.

5. **Disinfection Byproducts**
Description of program: Cal Water conducts routine monitoring (Table C) under the Stage 2 Disinfection Byproduct Rule (DBPR). Four dual sample sets are taken at four locations each calendar quarter.
Discussion & appraisal: Maximum long-term running annual averages (LRAA) during each quarter of 2019, ranged from 30 µg/L to 40 µg/L (TTHMs) and 23 µg/L to 30 µg/L (HAA5s). All results were below ½ the respective MCLs of 80 µg/L for TTHM and 60 µg/L for HAA5.

6. **Fluoride Monitoring**
Description of program (Physical quality of distribution system, corrosion, lead monitoring, etc.): At each fluoride treatment plant, operators monitor the volume of water treated, the amount of chemical used, calculate dosages, and take daily fluoride samples. The fluoride monitoring program also includes a daily distribution sample for all well sources that are in operation.
Discussion & appraisal: Cal Water maintains an average fluoride concentration of approximately 0.57 to 0.95 in the distribution system. The average reported fluoride concentration in the distribution system reported for 2019 was 0.80.

7. **Lead and Copper Monitoring**
Description of program (Physical quality of distribution system, corrosion, lead monitoring, etc.) The most recent, 2019- lead and copper monitoring (30 samples) resulted in 90th percentile values as follows: lead, non-detect (< 5 µg/L), and copper, 100 µg/L. Both results are well below the respective action levels of 15 µg/L for lead and 1,300 µg/L for copper. Lead and copper monitoring is due next in 2022.

8. **Additional Monitoring**
Description of program (Physical quality of distribution system, corrosion, lead monitoring, etc.): Cal-Water has identified and tested water sources in 2019 and earlier that would be more likely to have Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS) compounds present. While there is no MCL which has been established for these compounds, DDW has announced lower response levels (RL) for PFOA an PFOS (10 ppt for PFOA, and 40 ppt for PFOS) from the previous level of 70 ppt combined. The notification levels (NL) are 5.1 ppt for PFOA and 6.5 ppt for PFOS. It was reported that 98% of Oroville's water comes from the surface water treatment plant, which showed no detection of PFOA.

Discussion & appraisal: Well 02-01 had a detection of 170 ppt and was changed to stand-by status. Cal Water stated this well will only be used only in case of emergency.

H. OPERATION & MAINTENANCE

1. **Planning & Personnel**
Are system improvements made in accordance with the Waterworks Standards? Yes.
Does the utility have up-to-date distribution system maps? Yes, in the office and in each field vehicle.
Is up-to-date copy of system schematic on file? Yes – see the bacteriological sample siting folder.

Is up-to-date copy of operations plan on file? The 2002 Operations Plan has had several updates and currently needs additional updates due to staffing changes. The Division recommends that Cal Water develop a digital copy of the operations plan in order to simplify the ongoing update process.

What is the minimum grade requirement? Cal Water is required to have a minimum Grade T4 Water Treatment Operator and, because population is over 10,000, must have a minimum Grade D3 Distribution Operator (operator grades last confirmed on 12/28/20). Operators are listed below.

Table 7 – Personnel

Name	Title	Treatment Grade	Distribution Grade
George Barber	Chief Operator	4	4
Gregory A. Silva	Operator	4	4
Matthew D. Gipson	Operator	3	3
Michael L. Hanson	Operator	3	2
Timothy G. Miller	Operator	3	3
Lisa Slattery	Operator	2	2

2. Cross-Connection Control Program

Name of cross-connection control inspector(s): Jason Beesley (#2567) is Cal Water's cross-connection control program coordinator in Northern California.

Is there a copy of the cross-connection control ordinance on file? A copy of PUC Rule 16 (effective 3/9/90) is in the Division's file (Main folder 2 of 2, file date, 3/15/16). It is also available on the Internet at: https://www.calwater.com/docs/rates/rules/rule_16.pdf

Discussion & appraisal: According to the 2019 Annual Report, there are 296 backflow prevention devices in the system, 1 of which is not on service connections, and 1 air gap. All devices were tested in 2019. Nineteen (19) devices failed and were repaired or replaced in 2019.

With very few exceptions, customers own the backflow devices and are responsible for testing them. Letters are mailed in February. If an owner fails to test the device by a certain deadline, Cal Water issues a notice of service shutoff. Compliance is tracked with Tokay software. Applications for new business services are assessed to determine if backflow protection is required.

3. Complaints

Describe complaint program: Each complaint is noted on a card and filed. Complaints are handled by operators in the field. All customer complaints are responded to individually within one hour of receiving the complaint. Detailed records of all complaints and corrective actions are maintained in the Cal Water Customer Care and Billing Database (CC&B) as well as at the Cal Water customer center. The below table summarizes complaints for calendar year 2019.

Table 8 – Complaints Summary (2019)

Type	Number	Comments
Taste and odor	2	
Color	0	
Turbidity	1	
Visible organisms	0	
Pressure (high/low)	5	
Water Outages	0	
Illnesses (water borne)	0	
Other	0	
Total	**8**	

Discussion & appraisal: Satisfactory.

4. **Emergency Response**
   Is an up-to-date emergency notification plan on file? Yes, dated 7/15/20.
   Emergency response plan: Cal Water has a comprehensive statewide Emergency Response Plan for all of its water systems. A copy of this plan was provided to the Division in December 2020.
   Notification to the Division of significant system problems: No significant problems.
   Discussion & appraisal: Satisfactory.

5. **Main Disinfection Program**
   Describe main disinfection program (i.e., method, contact time, chlorine residual, bacteriological tests, records) for new & repaired mains: Cal Water usually repairs mains while without losing pressure. Whenever a portion of the system must be de-pressurized, Cal Water follows the Waterworks Standards and AWWA Standard C651-05.
   Does the main disinfection program comply with AWWA specifications? Cal Water reports that the disinfection program complies with AWWA specifications.
   Discussion & appraisal: Satisfactory.

6. **Valve Maintenance Program**
   Describe program: The water system has 1,341 valves, ranging from 1.25 to 30 inches in size. Cal Water reports the valves are exercised once every five years with the last time being in 2017 for the five-year period. Additional exercising takes place on a "as needed" basis. Twenty-seven (27) valves were exercised in 2019 for isolating leak repairs and other maintenance.
   Are number & location of valves satisfactory? (i.e., mainline, ARVR, blow-off valves, etc.): Yes. Cal Water reports having sufficient number and placement of valves to isolate areas of the distribution system affected by planned and unplanned outages.
   Discussion & appraisal (i.e., are valves recorded on maps available to field crews?: Field vehicles each have a current distribution atlas.

7. **Flushing**
   Describe flushing program (i.e., dead-ends, records, etc.): Currently, lines are being flushed on an as-needed basis.
   Approximate number of dead ends: 129 **Percent with flushing valves:** 70%
   Discussion & appraisal: Cal Water reported the dead ends are flushed annually, with portions of main being flushed throughout the year as needed.
8. **Emergency Backup Power**
   Discussion & appraisal: Cal Water has emergency power at Station 10. In addition to the water treatment plant generator, the raw water intake at Station 14 has an emergency back-up generator for the booster pumps.

9. **Supervisory Control and Data Acquisition System (SCADA)**
   Discussion & appraisal: The surface water treatment plant, wells, High Duty Tank, and booster stations are connected to a SCADA system.

I. OVERALL SYSTEM APPRAISAL

The California Water Service Company's Oroville Public Water System is in general compliance with Drinking Water Regulations. The water system facilities appear clean, orderly, and secure. Cal Water has certified operators and staff who operate and maintain the surface water treatment plant, well sources, and distribution system in a professional manner.

J. APPENDIX

System Deficiency Record (Attached after this page)

Report prepared by: Terri L. Parham, PE
Water Resource Control Engineer

SYSTEM DEFICIENCY RECORD

Name of System: Cal Water Service - Oroville System System No. 0410005

Date Noted	Description of Defect or Hazard	Order No.	Reported Corrected	Confirmed Corrected
3-30-10	Disconnect Rancho Golden clearwell bypass pump. (cross connection) (see photo)	3	Determined not be a cross-connection	Determined not be a cross-connection
3-30-10	Cathodic protection cover plates are deteriorated and could be leaking (clearwell?)	3	Fall 2011	3/10/2014
2-23-11	Submit a new Emergency Notification Plan to reflect recent personnel changes.	3	(ENP template emailed to Cal Water on 10/16/12 and 8/2013)	8/23/2013
2-23-11	Investigate and if necessary, repair the leaking check valve at Station #3.	3		Not leaking on 2-23-12.
2-23-12	Delinquent monitoring for SOCs in Well 10-01.	3	11/28/2012	3/19/2012
3-19-13	No new deficiencies noted	- -	-- -- --	-- -- --
3-10-14	An update to the watershed sanitary survey must be completed as soon as practically possible	2		
4-2-15	An asbestos sample is due for the water treatment plant. Needs to be collected from distribution system.	3		3-8-16
5-31-17	No deficiencies noted			
12-28-20	The 2002 Operations Plan has had several updates and currently needs additional updates due to staffing changes. The Division recommends that Cal Water develop a digital copy of the operations plan in order to simplify the ongoing update process.	3		

Order No. *:

1. Serious health hazard; corrective action must be taken immediately.
2. Critical system or operational defect and/or potential health hazard; must be corrected as soon as possible.
3. System or operational defect and/or potential contamination hazards of lesser public health significance. Must be corrected as workload permits.
4. System or operational defect and/or potential health hazard - costly to correct - to be included in any long-range water improvement project.

Attachment 2-2: Oroville Capital Budget Summary

Table 2-A	Capital Budget Summary – Oroville District			
Oroville	**2022**	**2023**	**2024**	**Annual Average**
Cal Advocates	$ 1,135,027	$ 1,276,576	$ 1,010,651	$ 1,140,751
CWS	$ 1,467,635	$ 2,334,943	$ 1,410,242	$ 1,737,607
CWS > Cal Advocates	$ 332,609	$ 1,058,367	$ 399,591	$ 596,856
Cal Advocates as % CWS	77.34%	54.67%	71.67%	65.65%

Table 2-B Capital Budget Details – Oroville District

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Carry Over Total	[illegible]	[illegible]	[illegible]	[illegible]
		TOTAL 2022	[illegible]	[illegible]	[illegible]	[illegible]

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Carry Over Total	-	-	-	[illegible]
		TOTAL 2023	[illegible]	[illegible]	[illegible]	[illegible]

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Carry Over Total	-	-	-	[illegible]
		TOTAL 2024	[illegible]	[illegible]	[illegible]	[illegible]

Table 2-C	Capital Budget vs. Recorded Expenditure – Oroville District				
Oroville	**2022**	**2023**	**2024**	**Annual Average**	**% of Recorded**
2015-2020	--	--	--	$ 1,558,488	100%
Cal Advocates	$ 1,135,027	$ 1,276,576	$ 1,010,651	$ 1,140,751	73%
CWS	$ 1,467,635	$ 2,334,943	$ 1,410,242	$ 1,737,607	111%

Attachment 3-1: D.20-12-007, Attachment 1, Chapter 15, Section H.1.a, pg. 148

1 2. 2018 NON-SPECIFIC BUDGET

2 See the discussion in the "2018 Non-Specific Budget" section for the Bayshore Area.

3 H. MARYSVILLE: DISCUSSION OF CERTAIN PROJECTS

4 1. ADVICE LETTER PROJECTS

5 a) 117409 – Army Corps Phase 3

6 ISSUE: Cal Water requested $239,499 in 2021 to relocate 120 feet of concrete lined and
7 coated ("CL&C") pipe that will be impacted by the Army Corps of Engineers' levee system
8 upgrade project in Marysville area because the pipeline is in the Corps' right-of-way.
9 The Public Advocates Office did not support this project because the Army Corps of
10 Engineers has not completed its levee design at this time, leaving the timeline and the need for
11 Cal Water to relocate its pipelines speculative. Public Advocates Office recommended instead
12 that the Commission allow it as an advice letter project with a cap of $239,499 (in direct costs),
13 and require Cal Water to demonstrate that the project is needed due to the Army Corps of
14 Engineers' levee modification.
15 RESOLUTION: The Parties agree that Cal Water can go forward with this project as an
16 advice letter project if and when the Army Corps of Engineers informs Cal Water that the
17 pipeline must be moved. The Parties agree to treat the project as an advice letter project, with
18 a cap of $248,081 (reflecting direct costs and overhead costs), which will be increased by the
19 Commission's adopted IDC/AFUDC.[121]
20 References: Exhibits CW-48C, pp. 50-57; PA-06C, pp. 33-34; CW-106C, pp. 186.

21 I. OROVILLE: DISCUSSION OF CERTAIN PROJECTS

22 1. ADVICE LETTER PROJECTS

23 a) 114525– Merge Station 1 & 3 Rebuild

24 ISSUE: Oroville Stations 1 and 3 are both aging booster pump stations and are located in
25 close proximity to one another. Cal Water proposed to improve operational efficiency and

[121] For ALs proposed as ACB in this 2018 GRC, the methodology for calculating the total capital cost cap is described in Chapter 12 (General Capital Issues).

Attachment 3-2: D.20-12-007, Attachment 1, Chapter 13: Common Plant Issues, Section K. Non-specific Capital Budget, p. 114.

K. NON-SPECIFIC CAPITAL BUDGET (80% OF CAL WATER'S APPLICATION)

ISSUE: Cal Water proposed "non-specific" capital budgets for its Customer Support Services ("CSS") and each operating district using a methodology that projects future non-specific capital spending based on spending from the previous five years (after outlier projects are removed). Non-specific capital projects are reactive in nature and develop during any given year to respond to facility or equipment failures, to maintain normal business operations, or to address work items that came up during the year and could not have been anticipated when developing the Advance Capital Budget ("ACB"). Once a GRC decision is adopted, any project opened that was not specifically approved by the Commission (as a "specific" ACB project) automatically defaults to the "non-specific budget" category. (In the 2015 GRC, for example, each district had projects approved with specific PIDs for 2016, 2017, and 2018, and a non-specific budget approved for each year.)

Due to Cal Water exceeding the authorized non-specific capital budget in the past GRCs, the Public Advocates Office recommended that the Commission reduce Cal Water's request for an annual non-specific budget by 65% until Cal Water develops a better budgeting methodology and clearer boundaries for the types of projects for which the budget is used. One area in particular with which the Public Advocates Office has concerns pertained to the use of non-specific budgets in land purchases. In rebuttal, Cal Water noted that the Commission has the opportunity to review the merits of all completed capital projects during each GRC, including those funded with non-specific budgets.

RESOLUTION: After weighing all the issues related to the non-specific budgets, the Parties agree on an amount between the Parties' original positions. The Parties agree to an annual non-specific budgets of 80% of Cal Water's original request, without any reporting requirements or cap. In its next GRC, Cal Water must provide justifications demonstrating the reasonableness of capital projects that exceed the non-specific capital budget.

Additionally, the Parties agree to the following pertaining to land purchases:

- Land purchased using the "non-specific" budget will not be included in rates unless Cal Water provides a justification, and the Commission approves the inclusion. If Cal Water demonstrates that a non-specific land purchase will be used for a capital project or other regulated service within 5 years from being

Attachment 3-3: Marysville Capital Budget Summary

Table 2-A	Capital Budget Summary – Marysville District			
Marysville	**2022**	**2023**	**2024**	**Annual Average**
Cal Advocates	$ 1,273,742	$ 1,336,361	$ 728,354	$ 1,112,819
CWS	$ 2,113,217	$ 2,028,707	$ 1,389,963	$ 1,843,962
CWS > Cal Advocates	$ 839,475	$ 692,346	$ 661,609	$ 731,143
Cal Advocates as % CWS	60.28%	65.87%	52.40%	60.35%

Table 2-B Capital Budget Detail – Marysville District

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Carry Over Total	[illegible]	[illegible]	[illegible]	[illegible]
		TOTAL 2022	[illegible]	[illegible]	[illegible]	[illegible]

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Carry Over Total	[illegible]	[illegible]	[illegible]	[illegible]
		TOTAL 2023	[illegible]	[illegible]	[illegible]	[illegible]

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Unscheduled [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Carry-Over Total	[illegible]	[illegible]	[illegible]	[illegible]
		TOTAL 2024	[illegible]	[illegible]	[illegible]	[illegible]

Table 2-C	Capital Budget vs. Recorded Expenditure – Marysville District				
Marysville	**2022**	**2023**	**2024**	**Annual Average**	**% of Recorded**
2015-2020	--	--	--	$ 1,227,243	100%
Cal Advocates	$ 1,273,742	$ 1,336,361	$ 728,354	$ 1,112,819	91%
CWS	$ 2,113,217	$ 2,028,707	$ 1,389,963	$ 1,843,962	150%

Attachment 4-1: Willows Capital Budget Summary

Table 2-A	Capital Budget Summary – Willows District			
Willows	**2022**	**2023**	**2024**	**Annual Average**
Cal Advocates	$ 949,653	$ 733,838	$ 563,395	$ 748,962
CWS	$ 1,187,610	$ 934,629	$ 606,570	$ 909,603
CWS > Cal Advocates	$ 237,957	$ 200,791	$ 43,175	$ 160,641
Cal Advocates as % CWS	79.96%	78.52%	92.88%	82.34%

Table 2-B Capital Budget Detail – Willows District

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
		Comp-Over Total	[illegible]	[illegible]	[illegible]	[illegible]
		TOTAL 2022	[illegible]	[illegible]	[illegible]	[illegible]

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Comp-Over Total	[illegible]	[illegible]	[illegible]	[illegible]
		TOTAL 2023	[illegible]	[illegible]	[illegible]	[illegible]

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Comp-Over Total	[illegible]	[illegible]	[illegible]	[illegible]
		TOTAL 2024	[illegible]	[illegible]	[illegible]	[illegible]

Table 2-C	Capital Budget vs. Recorded Expenditure – Willows District				
Willows	**2022**	**2023**	**2024**	**Annual Average**	**% of Recorded**
2015-2020	--	--	--	$ 2,182,737	100%
Cal Advocates	$ 949,653	$ 733,838	$ 563,395	$ 748,962	34%
CWS	$ 1,187,610	$ 934,629	$ 606,570	$ 909,603	42%

Attachment 5-1: Dixon Capital Budget Summary

Table 2-A	Capital Budget Summary – Dixon District			
Dixon	**2022**	**2023**	**2024**	**Annual Average**
Cal Advocates	$ 637,776	$ 902,657	$ 558,389	$ 699,607
CWS	$ 833,284	$ 1,560,421	$ 1,074,471	$ 1,156,059
CWS > Cal Advocates	$ 195,508	$ 657,765	$ 516,082	$ 456,452
Cal Advocates as % CWS	76.54%	57.85%	51.97%	60.52%

Table 2-B Capital Budget Details – Dixon District						
2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2022	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2022	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2022	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2022	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2022	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2022	[illegible]	Unscheduled Replacements	[illegible]	[illegible]	[illegible]	[illegible]
2022		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
2022	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
2022		Carry-Over Total	-	[illegible]	[illegible]	[illegible]
		TOTAL 2022	[illegible]	[illegible]	[illegible]	[illegible]

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2023	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2023	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2023	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2023	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2023	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2023	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
2023		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
2023	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
2023		Carry-Over Total				[illegible]
		TOTAL 2023	[illegible]	[illegible]	[illegible]	[illegible]

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
2024	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
2024		Specific Total	[illegible]	[illegible]	[illegible]	[illegible]
2024	[illegible]	Non-specific Total	[illegible]	[illegible]	[illegible]	[illegible]
2024		Carry-Over Total				[illegible]
		TOTAL 2024	[illegible]	[illegible]	[illegible]	[illegible]

Table 2-C	Capital Budget vs. Recorded Expenditure – Dixon District				
Dixon	**2022**	**2023**	**2024**	**Annual Average**	**% of Recorded**
2015-2020	--	--	--	$ 2,992,687	100%
Cal Advocates	$ 637,776	$ 902,657	$ 558,389	$ 699,607	23%
CWS	$ 833,284	$ 1,560,421	$ 1,074,471	$ 1,156,059	39%

Docket		A.21-007-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	Zaved Sarkar
Witness(es)	:	Brian Lui

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

PUBLIC

Report on Plant for Los Angeles County and South Bay Regions, East Los Angles, Westlake, and Travis AFB Districts, and Special Request #9

California Water Service Company

Test Year 2023 General Rate Case

A.21-07-002

San Francisco, California
February 4, 2022

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MEMORANDUM

The Public Advocates Office at the California Public Utilities Commission ("Cal Advocates") examined application materials, data request responses, and other information presented by California Water Service Company ("Cal Water or CWS") in Application ("A.") 21-07-002 to provide the California Public Utilities Commission ("Commission" or "CPUC") with recommendations in the interests of ratepayers for safe and reliable service at the lowest cost. Brain Yu is Cal Advocates' project lead for this proceeding. Syreeta Gibbs is the oversight supervisor, and Marybelle Ang and Caryn Mandelbaum are the legal counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any particular issue connotes neither agreement nor disagreement of the underlying request, methodology, or policy position related to that issue.

Chapter	Subject Area	Cal Advocates Witness
1	East Los Angeles District Plant	Zaved Sarkar
2	Antelope Valley District Plant	Zaved Sarkar
3	Palos Verdes District Plant	Zaved Sarkar
4	Dominguez District Plant	Zaved Sarkar
5	Hermosa Redondo District Plant	Zaved Sarkar
6	Westlake District Plant	Zaved Sarkar
7	Travis AFB District Plant	Zaved Sarkar
8	Special Request #9	Zaved Sarkar & Brian Lui

CHAPTER 1 East Los Angeles District Plant

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for CWS' East Los Angeles District.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a capital budget of $4,963,086 for 2022, $5,398,132 for 2023 and $5,628,644 for 2024 for CWS' East Los Angeles District. These recommendations form the basis for the recommended capital budget summary presented in Table 1-A.[1] The estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding sample sites, control valve overhauls and replacements, SB 1398 service line replacements, water quality analyzers, meter vault lid replacements, pressure vessel replacements, main replacements, pump and motor replacements, physical security upgrades, vehicle replacements, unscheduled and non-specific projects. Table 1-B presents project-specific adjustments.[2]

III. ANALYSIS

The East Los Angeles District recorded $14,195,715 per year in average gross plant additions for the most recent four-year period 2015-2020.[3] Table 1-C compares the proposed and recommended estimates against recorded annual average gross plant additions.[4]

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[1] Attachment 1-2: Capital Budget Summary and Details – East Los Angeles District, Table 1-A.

[2] Attachment 1-2: Capital Budget Summary and Details – East Los Angeles District, Table 1-B.

[3] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

[4] Attachment 1-2: Capital Budget Summary and Details – East Los Angeles District, Table 1-C.

The following discussion presents analyses and recommended adjustments to CWS' requested capital budget for specific projects, non-specific projects, and carry-over projects below.

Contingency and construction management/special inspection has been set to 0% for all projects. See Common Issue direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion on contingency, construction management/special inspection and carry-over projects.

A. Specific Projects

1. Main Replacements Crossing Interstate Highways (PID#124079)

The Commission should deny Cal Water's request for $348,865 to perform surveys, designs, and secure permits to replace three segments of cast iron (CI) pipelines because this budget does not reflect the full rate impact for this project and conflicts with the Commission's authorized rate case plan.

The Commission-authorized rate case plan mandates that capital project proposals include a budget for the entire project.[5] Cal Water's proposal to split the budget for a single project across two GRCs does not provide the entire budget for the project and obscures the true rate impact. It is impossible to determine if this budget is reasonable for a project of this scope because Cal Water has not provided the entire project's scope. Rather, Cal Water requests a budget solely for the survey, design and permitting stage of replacing three segments of pipeline, which crosses interstate highways, in the 2021 GRC. Thereafter, Cal Water states it will request a construction budget for this project in its 2024 GRC.[6] Cal Water claims that its proposal to split the budget allows the final

[5] "[P]roposals for major capital projects presented in the application must include need analysis, cost comparison and evaluation, conceptual designs, and overall budget." D.04-06-018, p.15.

[6] A.21-07-002, East Los Angeles Capital Project Justification, p. ELA PJ-37.

budget to be more accurate, yet even the planning budget for the 2021 GRC includes a high contingency cost of 20%.[7]

Cal Water claims that the CI mains need replacement because they are old, in poor condition, and present a significant business and safety risk.[8] Despite this claim, Cal Water could not provide sufficient evidence to show the pipelines current conditions. In fact, Cal Water has not conducted any evaluation of these water mains as of August 2021.[9] It is irresponsible to approve the budget of part of a project without reviewing the entire proposal, as it puts the ratepayer at risk of financing uncertain investments through rates.

See direct testimony of Mr. Justin Menda for further discussion on proposed design-only projects.

The Commission should, therefore, deny Cal Water's budget request to plan for a project that is not fully scoped until the next GRC because the full impact on rates cannot be determined without the complete project scope and the failure to include a complete budget contradicts the Commission-authorized rate case plan.

2. Land for New Well (PID#124112)

The Commission should deny Cal Water's request for $491,121 to purchase new property to install a new well because the East Los Angeles district is able to meet its Title 22 source capacity requirements without a new well.

Cal Water requests to purchase new land to construct new groundwater wells due to a number of wells taken out of service for concerns about Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA) water quality issues. Cal Water removed two wells (ELA 38-02 and ELA 63-01) from service upon detection of PFOS/PFOA

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[7] A.21-07-002, East Los Angeles Capital Project Justification, p. ELA PJ-38.

[8] A.21-07-002, East Los Angeles Capital Project Justification, p. ELA PJ-36.

[9] Attachment 1-3: Cal Water Response to DR ZS1-001, Q.1.b.

which were exceeding State of California's response level [PFOA > 10 PPT and PFOS > 40 PPT][10,11].

The Public Advocates Office evaluated the current water system conditions in East Los Angeles to verify if there is enough capacity to meet the current demand of the system, including the system's Maximum Day Demand (MDD) and Peak Hour Demand (PHD). Title 22 of the California Code of Regulations on drinking water standards ("California Waterworks Standards") defines the system's MDD as the highest day of water use demand during the past ten years.[12] The PHD can be estimated by multiplying the MDD by a factor of at least 1.5.[13]

The 2014 DDW East Los Angeles Inspection Report cited that East Los Angeles current source capacities, storage capacities and emergency connections can meet both MDD and PHD.[14] This is even more evident with Cal Water's own admission in its Water Supply-Demand Analysis Report (January 15, 2021) where it states: "The East Los Angeles system is not deficient in meeting MDD or PHD as a whole."[15] Additionally, Cal Water has already installed GAC Treatment to address the PFOS and PFOA in Well 63-01. The construction of the GAC treatment facility was commenced in July 2021 and completed in December 2021.[16] Cal Water also requested a routine GAC changeout project in this GRC for Well 63-01, which is addressed in Section 7 of this chapter.

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[10] PPT = Parts per trillion.

[11] Attachment 1-4: Cal Water Response to DR ZS1-006, Q.1.a.

[12] California Code of Regulations, Title 22, Division 4, Chapter 16, Article 2, Section 64554 (b) (1).

[13] California Code of Regulations, Title 22, Division 4, Chapter 16, Article 2, Section 64554 (b) (1).

[14] Attachment 1-5: 2014 Sanitary Survey California Water Service Company - East Los Angeles System No. 1910036, August 2015 inspection report issued by the State Water Resources Control Board's Division of Drinking Water, pg. 10.

[15] A.21-07-002, East Los Angeles Capital Project Justification, p. ELA PJ-143.

[16] Attachment 1-6: Engineering Report, For Consideration of the Permit Amendment Application from the California Water Service – East Los Angeles, December 31, 2021, pg. 3.

Through further correspondence with DDW engineers assigned to East Los Angeles, Public Advocates Office was made aware that "Well 38-01 is an active source but has been removed from service since June 2019 because of PFAS. Cal Water is yet to decide whether equipping the well with treatment is cost effective."[17] Even with Well 38-01 inactive and no treatment available, East Los Angeles can meet its Title 22 requirements. Therefore, the Commission should deny Cal Water's request for $491,121 to purchase a new property to install a new well, as it is not needed.

3. Water Supply and Facilities Master Plan (PID#124256)

The Commission should approve $259,203 for the East Los Angeles District's Water Supply and Facilities Master Plan (WSFMP). Cal Water requests $311,434 to complete East Los Angeles' WSFMP. This budget includes a 10% contingency cost.[18] The added 10% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees. The Commission should, therefore, approve $259,203 for Cal Water's East Los Angeles' WSFMP.

4. SCADA Automation Enhancement and Reliability Project (PID#124404)

The Commission should deny Cal Water's request for $1,158,534 in 2022 to replace the Supervisory Control and Data Acquisition (SCADA) system in the East Los Angeles district because the manufacturer's support for the existing East Los Angeles SCADA system is current and does not require replacement.

Cal Water claims that operation of the current SCADA system in the East Los Angeles District is costly because Cal Water relies heavily on consultants to help

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[17] Email dated January 19, 2022, from Ofelia Oracion to Zaved Sarkar of the Public Advocates Office.

[18] A.21-07-002, East Los Angeles Capital Project Justification, p. ELA PJ-71.

maintain and operate the system.[19] In response to Cal Advocates' data request ZS1-002, Q.1.b., Cal Water stated that the manufacturer's support for the current SCADA system in the East Los Angeles District ended in June of 2005 and provided a vendor warranty statement.

Data Flow Systems (DFS) is the manufacturer of the current East Los Angeles SCADA system. According to DFS' warranty statement provided by Cal Water, the SCADA software is warranted for as long as it is in use by the Owner. Also, all SCADA software upgrades are provided to the owner and are performed free of charge.[20] Therefore, DFS' support of the SCADA software is still current, and Cal Water need not replace nor rely on costly consultants to operate and maintain the software.

Cal Water also claims that the existing SCADA system in the East Los Angeles District is proprietary technology and requires specially trained resources to maintain and operate the system. However, according to DFS' website,[21] training is provided by DFS at an additional cost, either on site at Cal Water's facilities or at DFS' training facility. DFS also offers several free courses throughout the year. Further, DFS provides factory phone support during normal business hours. Therefore, DFS is able to provide any specialized training and Cal Water need not rely on consultants to operate and maintain the system.

In addition, Cal Water claims that the current SCADA system in the East Los Angeles District is more costly to operate compared to its other districts because it is different from the systems in the other districts. However, considering the manufacturer's support for the existing SCADA system in the East Los Angeles District, the SCADA system should function and operate properly for the foreseeable future. If, by contrast, Cal Water wants to integrate the existing East Los Angeles SCADA with the

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[19] A.21-07-002, East Los Angeles Capital Project Justification, p. ELA PJ-84.

[20] Cal Water Response to DR ZS1-002, Q.1.b, Attachment #1 - DFS-Warranty-Statement.pdf.

[21] DFS Customer Training, (https://www.dataflowsys.com/wp-content/uploads/2020/10/Customer-Training.pdf , Date accessed 11/10/2021).

rest of Cal Water enterprise systems for the sake of convenience, Cal Water could replace the East Los Angeles district's SCADA system with a new SCADA system, but the cost of replacing the East Los Angeles district's SCADA system should not be included in rates.

5. Panelboard Replacement Station 55 (PID#124407)

The Commission should deny Cal Water's request for $359,823 to install a new panelboard in Station 55.

In response to discovery, Cal Water provided the log of panelboard maintenance performed on the electrical components at Station 55 by Cal Water's Electrical Maintenance Technicians and SCADA Technicians for four different years.[22] The panelboard maintenance reports neither indicated any corrective action was required nor recommended replacement of the panelboard. Cal Water also provided a list of work history on the panelboard in Station 55.[23] The log of panelboard maintenance performed showed that repairs and any work done were routine and 12 out of 24 repairs lasted no more than one day. The electrical components appear to be fit for continued service based on this condition assessment.

The Commission should, therefore, deny this project because Cal Water cannot provide verifiable support to justify the panelboard replacement.

6. District Main Office Improvements (PID#125358)

The Commission should approve $761,050 for the District Main Office Improvements project.

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[22] Cal Water Response to DR ZS1-003, Q.1.a – 1a_Panelboard Maintenance_2011.xls, 1b_Panelboard Maintenance_2013.pdf, 1c_Panelboard Maintenance_2016.pdf and 1d_Panelboard Maintenance_2020.pdf

[23] Cal Water Response to DR ZS1-003, Q.1.b - Attachment 2_10 Year Work Order History.xlsx

Cal Water requests $913,260 to complete the district office improvements. This budget includes a 20% contingency cost.[24] The added 20% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should, therefore, approve $761,050 for the District Main Office Improvements project.

7. Routine Granular Activated Carbon Changeout (PID # 126483, 126484, 126485)

The Commission should approve $364,216 for 2022, $373,321 for 2023 and $382,654 for 2024 change Granular Activate Carbon (GAC) media.

Cal Water requests $400,637 in 2022, $410,653 in 2023 and $420,920 in 2024 to complete the district office improvements. This budget includes a 10% contingency cost for each year.[25] The added 10% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should, therefore, approve $364,216 for 2022, $373,321 for 2023 and $382,654 for 2024 change Granular Activate Carbon (GAC) media.

8. New Main from Station 61 to Zone G (PID # 124920)

The Commission should approve $1,092,641 to install a new 12-inch pipeline from Station 61 to Zone G.

Cal Water requests $1,425,740 to install a new 12-inch pipeline from Station 61 to Zone G. This budget includes a 20% contingency cost and a 10% construction

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[24] A.21-07-002, East Los Angeles Capital Project Justification, p. ELA PJ-110.

[25] A.21-07-002, East Los Angeles Capital Project Justification, p. ELA PJ-121-123.

management cost.[26] The added 20% contingency cost and 10% construction management cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve $1,092,641 to install a new 12-inch pipeline from Station 61 to Zone G.

B. Non-Specific Budgets

The Commission should authorize a non-specific budget of $1,966,106 for the East Los Angeles District for the year 2022-2024. See Common Issues direct testimony of Mr. Zaved Sarkar for further discussion on Non-Specific budget requests.

C. Carry-Over Budget

1. Previously Funded Incomplete Projects

The Commission should deny Cal Water's proposal to include East Los Angeles District projects adopted in the previous rate case cycle in 2023 revenue requirement that are not yet completed. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion.

IV. CONCLUSION

The recommendations presented above have been incorporated in the calculations for the recommended Plant in Service as shown in Cal Advocate's RO Report.

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[26] A.21-07-002, East Los Angeles Capital Project Justification, p. ELA PJ-103.

CHAPTER 2 Antelope Valley District Plant

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for CWS' Antelope Valley District.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a capital budget of $370,857 for 2022, $2,075,798 for 2023 and $679,679 for 2024 for CWS' Antelope Valley District.

These recommendations form the basis for the recommended capital budget summary presented in Table 2-A.[27] The estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding sample sites, control valve overhauls and replacements, SB 1398 service line replacements, water quality analyzers, meter vault lid replacements, pressure vessel replacements, main replacements, pump and motor replacements, physical security upgrades, vehicle replacements, unscheduled and non-specific projects. Table 2-B presents project-specific adjustments.[28]

III. ANALYSIS

The Antelope Valley District recorded $563,915 per year in average gross plant additions for the most recent four-year period 2015-2020.[29] Table 2-C compares the proposed and recommended estimates against recorded annual average gross plant additions.[30]

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[27] Attachment 2-1: Capital Budget Summary and Details – Antelope Valley District, Table 2-A.

[28] Attachment 2-1: Capital Budget Summary and Details – Antelope Valley District, Table 2-B

[29] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

[30] Attachment 2-1: Capital Budget Summary and Details – Antelope Valley District, Table 2-C.

The following discussion presents analyses and recommended adjustments to CWS' requested capital budget for specific projects, non-specific projects, and carry-overs below.

Contingency and construction Management/special inspection has been set to 0% for all projects. See Common Issue direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion on contingency, construction management/special inspection and carry-over projects.

A. Specific Projects

1. Leona Valley Storage Tank Replacement Station 4 (PID#123629)

The Commission should approve $1,058,446 for Leona Valley Storage Tank Replacement Station 4 project as additional storage is needed to meet the Title 22 standards.

Cal Water requests $1,383,374 to demolish an existing 60,000-gallon welded steel tank, install a new 220,000-gallon bolted steel tank and perform necessary construction and station piping. This budget includes a 20% contingency cost and 10% special inspection.[31] The added 20% contingency cost and 10% special inspection cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve $1,058,446 for Leona Valley Storage Tank Replacement Station 4 project.

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[31] A.21-07-002, Antelope Valley Capital Project Justification, p. AVD PJ-35.

2. Leona Valley Well Property Purchase (PID#123634)

The Commission should deny Cal Water's request for $572,857 to purchase new property to install a new well because Cal Water is able to meet its Title 22 source capacity requirements without a new well.

Leona Valley water system has two active wells that can produce approximately 63 gpm.[32] The system also has a connection with Antelope Valley East Kern (AVEK) water agency, which supplies treated surface water of approximately 1100 gpm.[33] Department of Drinking Water (DDW) stated in its 2014 Sanitary Survey Inspection that the Leona Valley System has enough source capacity to meet the Maximum Day Demand (MDD).

Additionally, the property Cal Water intends to purchase (Wrigley Property) would potentially require further investment in complex water treatment to make the existing Wrigley Well No 2 or a new well to be operational.[34] It would be imprudent to approve a project that increases burden on ratepayers when the system already meets the Title 22 source capacity standards.

The Commission should deny Cal Water's request for $572,857 to purchase a new property to install a new well because Cal Water is able to meet its Title 22 source capacity requirements without a new well.

3. Water Supply and Facilities Master Plan (PID#124250)

The Commission should approve $109,352 for Antelope Valley district's Water Supply and Facilities Master Plan (WSFMP).

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[32] Cal Water Response to DR ZS1-007, Q.1.a.i, Attachment 1 - Well Data and Water Demand Data.xlsx

[33] Attachment 2-2: California Water Service Co. – Leona Valley System No. 1910242, 2014 DDW Sanitary Survey Inspection Report, dated June 5, 2015, p. 3

[34] Attachment 2-3: Cal Water Response to DR ZS1-007, Q.2.b and 2.c.

Cal Water requests $120,288 to complete Antelope Valley's WSFMP. This budget includes a 10% contingency cost.[35] The added 10% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve $109,352 for Cal Water's Antelope Valley's WSFMP.

4. Routine Panelboard Replacement Station 1 (PID # 124272)

The Commission should approve $230,017 for the routine panelboard replacement at Fremont Station 1.

Cal Water requests $280,173 to complete the routine panelboard replacement. This budget includes a 10% contingency cost and 10% special inspection.[36] The added 10% contingency cost and 10% special inspection cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve $230,017 for the routine panelboard replacement at Fremont Station 1.

5. Water Supply Reliability Study (PID#124343)

The Commission should approve $130,325 for Antelope Valley's Water Supply Reliability Study.

Cal Water requests $142,192 to complete Water Supply Reliability Study. This budget includes a 10% contingency cost.[37] The added 10% contingency cost should be

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[35] A.21-07-002, Antelope Valley Capital Project Justification, p. AVD PJ-89.

[36] A.21-07-002, Antelope Valley Capital Project Justification, p. AVD PJ-105.

[37] A.21-07-002, Antelope Valley Capital Project Justification, p. AVD PJ-110.

removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve $130,325 for Antelope Valley's Water Supply Reliability Study.

6. LAN Station 1 New Production Meter (PID#125047)

The Commission should approve $397,951 to install a new flowmeter in Lancaster Station 1.

Cal Water requests $500,162 to complete the district office improvements. This budget includes a 20% contingency cost and 5% special inspection cost.[38] The added 20% contingency cost and 5% special inspection cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve a $397,951 for the District Main Office Improvements project.

7. Replace Generator at Station 1 (PID # 125547)

The Commission should approve $228,865 to replace the generator at Lancaster Station 1.

Cal Water requests $264,466 to decommission the existing generator and install a new generator in Lancaster Station 1. This budget includes a 10% contingency cost.[39] The added 10% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common

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[38] A.21-07-002, Antelope Valley Capital Project Justification, p. AVD PJ-127.

[39] A.21-07-002, Antelope Valley Capital Project Justification, p. AVD PJ-131.

Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should, therefore, approve $228,865 to replace the generator at Lancaster Station 1.

B. Non-Specific Budgets

The Commission should authorize a non-specific budget of $86,782 for the Antelope Valley District for the year 2022-2024. See Common Issues direct testimony of Mr. Zaved Sarkar for further discussion on Non-Specific budget requests.

C. Carry-Over Budget

1. Previously Funded Incomplete Projects

The Commission should deny Cal Water's proposal to include Antelope Valley's projects adopted in the previous rate case cycle in 2023 revenue requirement that are not yet completed. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion.

IV. CONCLUSION

The recommendations presented above have been incorporated in the calculations for the recommended Plant in Service as shown in Cal Advocate's RO Report.

CHAPTER 3 Palos Verdes District Plant

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for CWS' Palos Verdes District.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a capital budget of $4,766,028 for 2022, $4,968,571 for 2023 and $7,127,362 for 2024 for CWS' Palos Verdes District.

These recommendations form the basis for the recommended capital budget summary presented in Table 3-A.[40] The estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding sample sites, control valve overhauls and replacements, SB 1396 service line replacements, water quality analyzers, meter vault lid replacements, pressure vessel replacements, main replacements, pump and motor replacements, physical security upgrades, vehicle replacements, unscheduled and non-specific projects. Table 3-B presents project-specific adjustments.[41]

III. ANALYSIS

The Palos Verdes District recorded $7,169,758 per year in average gross plant additions for the most recent four-year period 2015-2020.[42] Table 3-C compares the proposed and recommended estimates against recorded annual average gross plant additions.[43]

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[40] Attachment 3-1: Capital Budget Summary and Details – Palos Verdes District, Table 3-A.

[41] Attachment 3-1: Capital Budget Summary and Details – Palos Verdes District, Table 3-B.

[42] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

[43] Attachment 3-1: Capital Budget Summary and Details – Palos Verdes District, Table 3-C.

The following discussion presents analyses and recommended adjustments to CWS' requested capital budget for specific projects, non-specific projects, and carry-overs below.

Contingency and construction management/special inspection has been set to 0% for all projects. See Common Issue direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion on contingency, construction management/special inspection and carry-over projects.

A. Specific Projects

1. Station 37 New Water Storage Tank (PID#123934)

The Commission should deny Cal Water's request for $1,338,054 to perform survey, designs, and secure permits to add a 2.5 million-gallon (MG) reservoir in the Palos Verdes District as the budget does not reflect the full rate impact for this project and conflicts with the Commission's authorized rate case plan. Moreover, the extra water storage capacity is not necessary at this time.

The Commission-authorized rate case plan mandates that capital project proposals must include a budget for the entire project.[44] Cal Water's proposal to split the budget for a single project across two GRCs does not provide the entire budget for the project and obscures the true rate impact. It is impossible to determine if this budget is reasonable for a project of this scope because Cal Water has not provided the entire project's scope. Cal Water requests a budget solely for the survey, design and permitting stage to build a new storage tank. The construction budget for this project would be requested in Cal Water's 2024 GRC.[45] Cal Water claims that this proposal to split the

[44] "[P]roposals for major capital projects presented in the application must include need analysis, cost comparison and evaluation, conceptual designs, and overall budget." D.04-06-018, p.15.

[45] A.21-07-002, Palos Verdes Capital Project Justification, p. PV PJ-45.

budget allows the final budget to be more accurate, yet the budget for planning alone includes a high contingency factor of 20% suggesting a lack of accuracy.[46]

The existing Palos Verdes system has sufficient capacity to meet the current system demand under a Maximum Day Demand (MDD) and Peak Hour Demand (PHD) scenario. Title 22 of the California Code of Regulations on drinking water standards ("California Waterworks Standards") defines a system's MDD as the highest day of water use demand during the past 10 years.[47] The PHD is calculated by multiplying the MDD by a factor of at least 1.5.[48] The Palos Verdes system has sufficient capacity to meet a MDD plus fire flow scenario[49], even though neither California Waterworks Standards nor the Commission's General Order 103-A ("GO 103-A") requires this for existing portions of a system.[50]

See direct testimony of Mr. Justin Menda for further discussion on proposed design-only projects.

The Commission should, therefore, deny Cal Water's budget request to plan for a project that is not fully justified and needed at this time.

2. D-500 Main Replacement Preliminary Design Report (PDR) (PID #124230)

The Commission should approve $1,296,719 to complete D-500 main replacement preliminary design report.

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[46] A.21-07-002, Palos Verdes Capital Project Justification, p. PV PJ-47.

[47] California Code of Regulations, Title 22, Division 4, Chapter 16, Article 2, Section 64554 (b) (1).

[48] California Code of Regulations, Title 22, Division 4, Chapter 16, Article 2, Section 64554 (b) (1).

[49] Attachment 3-2: 2015 Sanitary Survey California Water Service Company - Palos Verdes, p. 7.

[50] G.O. 103-A, page 11 Section II.2.B.(3) (b) states: "if a system provides potable water for fire protection service, **new** portions of the system shall have supply and storage facilities that are designed to meet MDD plus the required fire flow **at the time of design**." (Emphasis added).

Cal Water requests $1,556,379 to complete D-500 main replacement preliminary design report. This budget includes a 20% contingency cost.[51] The added 20% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve $1,296,719 to complete D-500 main replacement preliminary design report.

3. Station Rebuild Design Projects (PID # 124232, 124233 and 124243)

The Commission should deny Cal Water's request for $411,026 for Station 14, $890,490 for Station 15 and $493,968 for Station 23 to perform survey, designs, and secure permits to rebuild the Stations 14, 15 and 23 in the Palos Verdes District as the budget does not reflect the full rate impact for this project and conflicts with the Commission's authorized rate case plan.

The Commission-authorized rate case plan mandates that capital project proposals must include a budget for the entire project.[52] Cal Water's proposal to split the budget for a single project across two GRCs does not provide the entire budget for the project and obscures the true rate impact. It is impossible to determine if this budget is reasonable for a project of this scope because Cal Water has not provided the entire project's scope. Cal Water requests a budget solely for the survey, design and permitting stage to rebuild Stations 14, 15 and 23. The construction budget for these projects would be requested in Cal Water's 2024 GRC.[53] Cal Water claims that this proposal to split the budget allows the final budget to be more accurate, yet the budget for planning alone

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[51] A.21-07-002, Palos Verdes Capital Project Justification, p. PV PJ-51.

[52] "[P]roposals for major capital projects presented in the application must include need analysis, cost comparison and evaluation, conceptual designs, and overall budget." D.04-06-018, p.15.

[53] A.21-07-002, Palos Verdes Capital Project Justification, p. PV PJ-68, 73 and 88.

includes a high contingency factor of 20% for each of three projects suggesting a lack of accuracy.[54]

See direct testimony of Mr. Justin Menda for further discussion on proposed design-only projects.

The Commission should deny Cal Water's budget request to plan for these projects not requested until next GRC.

4. Tank Nitrification Projects (PID# 124813, 124814 and 124936)

The Commission should approve $414,415 for PV Station 37, $425,557 for PV 49 Station and $256,193 for PV 46 Station to install tank mixing and chemical addition equipment.

Cal Water requests $520,854, $534,859 and $321,994 for PV Stations 37, 46 and 49, respectively, to install tank mixing and chemical addition equipment. This budget includes a 20% contingency cost and 5% special inspection cost.[55] The added 20% contingency cost and 5% special inspection should be removed from the estimates. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should, therefore, approve $414,415 for PV Station 37, $425,557 for PV Station 49, and $256,193 for PV Station 46 to install tank mixing and chemical addition equipment.

5. PV Wildfire Hardening Project (PID #125640, 125641, 125642 and 125644)

The Commission should approve $971,255, $1,644,830, $719,116 and $323,322 to install new mains that will improve grid resiliency in Palos Verdes.

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[54] A.21-07-002, Palos Verdes Capital Project Justification, p. PV PJ-70, 77 and 90.

[55] A.21-07-002, Palos Verdes Capital Project Justification, p. PV PJ-103-105.

Cal Water requests $1,209,187, $1,894,225, $854,650 and $422,905 for PID# 125640, 125641, 125642 and 125644, respectively, to install new mains that will improve grid resiliency in Palos Verdes. This budget includes a 20% contingency cost and 10% special inspection cost.[56] The added 20% contingency cost and 5% special inspection should be removed from the estimates. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion.

The Commission should, therefore, approve $971,255, $1,644,830, $719,116 and $323,322 to install new mains that will improve grid resiliency in Palos Verdes.

B. Non-Specific Budgets

The Commission should authorize a non-specific budget of $969,916 for the Palos Verdes District for the year 2022-2024. See Common Issues direct testimony of Mr. Zaved Sarkar for further discussion on Non-Specific budget requests.

C. Carry-Over Budget

1. Previously Funded Incomplete Projects

The Commission should deny Cal Water's proposal to include Palos Verdes' projects adopted in the previous rate case cycle in 2023 revenue requirement that are not yet completed. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion.

IV. CONCLUSION

The recommendations presented above have been incorporated in the calculations for the recommended Plant in Service as shown in Cal Advocate's RO Report.

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[56] A.21-07-002, Palos Verdes Capital Project Justification, p. PV PJ-113, 121, 130 & 138.

CHAPTER 4 Dominguez District Plant

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for CWS' Dominguez District.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a capital budget of $4,210,247 for 2022, $3,818,662 for 2023 and $5,483,348 for 2024 for CWS' Dominguez District. These recommendations form the basis for the recommended capital budget summary presented in Table 4-A.[57] The estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding sample sites, control valve overhauls and replacements, SB 1398 service line replacements, water quality analyzers, meter vault lid replacements, pressure vessel replacements, main replacements, pump and motor replacements, physical security upgrades, vehicle replacements, unscheduled and non-specific projects. Table 4-B presents project-specific adjustments.[58]

III. ANALYSIS

The Dominguez District recorded $9,134,096 per year in average gross plant additions for the most recent four-year period 2015-2020.[59] Table 4-C compares the proposed and recommended estimates against recorded annual average gross plant additions.[60]

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[57] Attachment 4-1: Capital Budget Summary and Details – Dominguez District, Table 4-A.

[58] Attachment 4-1: Capital Budget Summary and Details – Dominguez District, Table 4-B.

[59] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

[60] Attachment 4-1: Capital Budget Summary and Details – Dominguez District, Table 4-C.

The following discussion presents analyses and recommended adjustments to CWS' requested capital budget for specific projects, non-specific projects, and carry-overs below.

Contingency and construction management/special inspection has been set to 0% for all projects. See Common Issue direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion on contingency, construction management/special inspection and carry-over projects.

A. Specific Projects

1. Station Rebuild Design Projects (PID# 123411 and 123415)

The Commission should deny Cal Water's request for $280,128 for Station 279 and $280,128 for Station 298 to perform survey, designs, and secure permits to rebuild both stations in the Dominguez district as the budget does not reflect the full rate impact for this project and conflicts with the Commission's authorized rate case plan.

The Commission-authorized rate case plan mandates that capital project proposals must include a budget for the entire project.[61] Cal Water's proposal to split the budget for a single project across two GRCs does not provide the entire budget for the project and obscures the true rate impact. It is impossible to determine if this budget is reasonable for a project of this scope because Cal Water has not provided the entire project's scope. Cal Water requests a budget solely for the survey, design and permitting stage to rebuild Stations 279 and 298. The construction budget for these projects would be requested in Cal Water's 2024 GRC.[62] It is uncertain what the true impact of the change in scope will be in this GRC and the estimated total cost range provided by CWS for $1,200,000 - $1,800,000.

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[61] "[P]roposals for major capital projects presented in the application must include need analysis, cost comparison and evaluation, conceptual designs, and overall budget." D.04-06-018, p.15.

[62] A.21-07-002, Dominguez Capital Project Justification, p. DOM PJ-71 and 77.

See direct testimony of Mr. Justin Menda for further discussion on proposed design-only projects.

The Commission should, therefore, deny Cal Water's budget request to plan for these projects that will not be requested until next GRC.

2. Water Supply and Facilities Master Plan (PID#124255)

The Commission should approve $279,134 for Antelope Valley District's Water Supply and Facilities Master Plan (WSFMP).

Cal Water requests $311,434 to complete Dominguez WSFMP. This budget includes a 10% contingency cost.[63] The added 10% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should, therefore, approve $279,134 for Cal Water's Antelope Valley's WSFMP.

3. Tank Mixing (PID # 124830)

The Commission should approve $785,573 for DOM Station 203 to install tank mixing and chemical addition equipment.

Cal Water requests $1,031,995 for DOM Station 203 to install tank mixing and chemical addition equipment. This budget includes a 20% contingency cost and 10% special inspection.[64] The added 10% contingency cost and 10% special inspection should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

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[63] A.21-07-002, Dominguez Capital Project Justification, p. DOM PJ-89.

[64] A.21-07-002, Dominguez Capital Project Justification, p. DOM PJ-104.

The Commission should, therefore, approve $785,573 for DOM Station 203 to install tank mixing and chemical addition equipment.

4. Multi-Stage Treatment Station 219 (PID #123403)

The Commission should deny Cal Water's request of $5,849,917 to install multi-stage treatment at Station 219 because Cal Water has not performed adequate water sampling and the water quality test results that CWS has received do not warrant this treatment plant. A similar lack of justification led Cal Advocates to oppose this project in Cal Water's previous general rate case, and the handful of additional test results completed since then further validates Cal Advocates' past and present recommendations.

Cal Water states that color, iron, manganese, total dissolved solids, and tetrachloroethylene (TCE) are constituents of concern for Well 219-02.[65] However, based on the most recent water quality results for Well 219-02, treatment for color, methane, and total organic carbon (TOC) constituents will not be needed. Additional water quality testing and reporting is required by both DDW and the US EPA before reactivation of Well 219-02. In response to discovery, Cal Water stated it plans to do additional water quality sampling in 2022, hence it will be premature to approve a budget for this project without knowing the full extent of test results.

Color:

Color is a secondary standard that may cause aesthetic effects in drinking water but has no known health risks. The secondary MCL is 15 color units. The following are the most recent water quality monitoring results for color at Well 219-02 that were submitted in response to data request ZS1-013.[66]

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[65] A.21-07-002, Dominguez Capital Project Justification, p. DOM PJ-45.

[66] Attachment 4-2: A.21-07-002 Public Advocates Office DR ZS1-013, Q. 1. a.

Table 4-1: Water Quality Results for Color from DOM Well 219-02

Sample Id	Sampled Date	Analysis Date	Result	Units	DLR	MCL
080311-071	09/24/2007	09/25/2007	22	UNITS	1.	15.
160509-0040	05/16/2016	05/17/2016	10	UNITS	1.	15.
160509-0041	05/17/2016	05/19/2016	10	UNITS	1.	15.
160509-0042	05/18/2016	05/19/2016	5	UNITS	1.	15.
160509-0043	05/19/2016	05/20/2016	5	UNITS	1.	15.
160509-0044	05/20/2016	05/20/2016	10	UNITS	1.	15.
160509-0045	05/23/2016	05/24/2016	10	UNITS	1.	15.
160509-0046	05/24/2016	05/25/2016	10	UNITS	1.	15.
160509-0047	05/25/2016	05/26/2016	5	UNITS	1.	15.
160509-0048	05/26/2016	05/27/2016	5	UNITS	1.	15.
160509-0049	05/27/2016	05/27/2016	5	UNITS	1.	15.
200911-0126	10/05/2020	10/06/2020	ND	UNITS	N/A	N/A
200911-0127	10/05/2020	10/06/2020	ND	UNITS	N/A	N/A
200911-0128	10/06/2020	10/07/2020	ND	UNITS	N/A	N/A
200911-0129	10/07/2020	10/08/2020	ND	UNITS	N/A	N/A
200911-0130	10/08/2020	10/09/2020	ND	UNITS	N/A	N/A
200930-0026	10/13/2020	10/14/2020	ND	UNITS	N/A	N/A
200930-0027	10/13/2020	10/14/2020	ND	UNITS	N/A	N/A
200930-0028	10/14/2020	10/15/2020	ND	UNITS	N/A	N/A
200930-0029	10/15/2020	10/16/2020	ND	UNITS	N/A	N/A
200930-0030	10/16/2020	10/16/2020	ND	UNITS	N/A	N/A

Taken while 219-02 was offline after Aug 2007 rehab but before September 2020 rehab.
Taken after September 2020 rehab.

The 2016 water quality results show that color ranges from 5–10 color units with an average of 7.5 color units. The most recent results show non-detect. All the results, as well as the average, are below the secondary MCL of 15 units for color. These results show that Well 219-02 is in compliance with the secondary MCL for color, and treatment for color is not needed.

Methane:

Methane (CH_4) is a colorless, odorless, tasteless, and combustible gas. There are no known acute or chronic health effects from the ingestion of water containing methane.[67] Methane is an unregulated chemical; therefore, there are no regulatory standards such as primary or secondary MCLs for methane. Even though review of

[67] Minnesota Department of Health, 2011. Methane in Minnesota Well Water, Fact Sheet

available information found no recommended action levels or established guidelines for methane in water,[68] the U.S. Department of Interior recommends the following actions for levels of methane in water:[69]

- < 10 mg/L. Levels of methane less than 10 mg/L require no immediate action. Periodic monitoring should be performed to verify that the gas concentration has not changed.
- > 10 mg/L but < 28 mg/L. When a dissolved methane concentration exceeds 10 mg/L, it should be viewed as a warning that gas is not only present but that the concentration may be increasing.
- >28 mg/L. A dissolved methane concentration greater than 28 mg/L indicates that potentially explosive or flammable quantities of gas are being liberated into the well and/or may be liberated into the home. This concentration of methane should result in immediate ventilation of the well head to the atmosphere. Additionally, methane concentration in excess of 28 mg/L may require further mitigation and modification to the water supply system.

In summary, according to the U.S. Department of the Interior, methane in water at concentrations less than 10 mg/L requires no immediate action, and treatment is needed at concentrations greater than 28 mg/L.

Also, the United States Geological Survey (USGS) recommended similar action levels for methane in water. According the USGS, because the solubility of methane in water is between 28 and 30 mg/L, well water with concentrations of dissolved methane greater than 28 mg/L could liberate potentially explosive or flammable quantities of gas

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[68] U.S. Department of the Interior, Office of Surface Mining. Technical Guidance for the Investigation and Mitigation of Fugitive Methane Hazards in Areas of Coal Mining, p. 40

[69] U.S. Department of the Interior, Office of Surface Mining. Technical Guidance for the Investigation and Mitigation of Fugitive Methane Hazards in Areas of Coal Mining, p. 40

inside the well or in confined spaces in well houses or structures containing wells.[70] In other words, wells with methane concentrations greater than 28 mg/L is need treatment.

<<BEGIN CONFIDENTIAL>> [redacted] **<<END CONFIDENTIAL>>** In addition, page DOM PJ-44 of the Dominguez Capital Project Justification Book states that recent sample shows that the methane level at Well 219-02 is 0.026 mg/L at 1,000 gpm and 0.039 mg/L at 2,000 gpm.[71] Furthermore, the table below shows the most recent water quality monitoring results for methane at Well 219-02 that were submitted in response to data request ZS1-013.

Table 4-2: Water Quality Results for Methane from DOM Well 219-02

Sample Id	Sampled Date	Analysis Date	Result	Units	DLR	MCL
200914-0065	10/05/2020	10/07/2020	ND	mg/L	0.05	N/A
200914-0066	10/05/2020	10/07/2020	ND	mg/L	0.05	N/A
200914-0067	10/06/2020	10/07/2020	0.079	mg/L	0.05	N/A
200914-0068	10/07/2020	10/08/2020	ND	mg/L	0.05	N/A
200914-0069	10/08/2020	10/09/2020	0.097	mg/L	0.05	N/A
200930-0031	10/13/2020	10/15/2020	ND	mg/L	0.05	N/A
200930-0032	10/13/2020	10/15/2020	ND	mg/L	0.05	N/A
200930-0033	10/14/2020	10/15/2020	ND	mg/L	0.05	N/A
200930-0034	10/15/2020	10/17/2020	0.096	mg/L	0.05	N/A
200930-0035	10/16/2020	10/19/2020	0.078	mg/L	0.05	N/A
Taken after September 2020 rehab.						

According to the recommended actions of USGS and U.S. Department of Interior, no well in the Dominguez District needs treatment for methane because all levels are below 28 mg/L. Rather than pursue treatment at this time, Cal Water should take additional water quality samples for methane at Well 219-02 to accurately determine the methane level at Well 219-02.

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[70] USGS Fact Sheet 2006-3011(https://pubs.usgs.gov/fs/2006/3011/, Date Accessed 1/12/2021)

[71] A.21-07-002, Dominguez Capital Project Justification, p. DOM PJ-46.

Total Organic Carbon (TOC):

TOC is a composite measure of the organic content in drinking water. The origins of TOC in drinking water include various naturally occurring and manmade sources.[72] Total organic carbon has no health effects.[73] High TOC levels in groundwater wells, typically above 1 ppm, however, can contribute to elevated levels of disinfection by-products (DBP) resulting in water quality standard exceedances.

The table below shows the most recent water quality monitoring results for TOC at Well 219-02 that were submitted in response to data request ZS1-013.

Table 4-3: Water Quality Results for TOC from DOM Well 219-02

Sample Id	Sampled Date	Analysis Date	Result	Units	DLR	MCL
200911-0126	10/05/2020	10/09/2020	0.72	mg/L	N/A	N/A
200911-0127	10/05/2020	10/09/2020	0.52	mg/L	N/A	N/A
200911-0128	10/06/2020	10/13/2020	0.62	mg/L	N/A	N/A
200911-0129	10/07/2020	10/14/2020	0.54	mg/L	N/A	N/A
200911-0130	10/08/2020	10/19/2020	0.58	mg/L	N/A	N/A
200930-0026	10/13/2020	10/21/2020	0.92	mg/L	N/A	N/A
200930-0027	10/13/2020	10/21/2020	0.54	mg/L	N/A	N/A
200930-0028	10/14/2020	10/27/2020	0.66	mg/L	N/A	N/A
200930-0029	10/15/2020	10/28/2020	0.64	mg/L	N/A	N/A
200930-0030	10/16/2020	10/28/2020	0.68	mg/L	N/A	N/A
Taken after September 2020 rehab.						

Cal Water provided the recent test sample results, which show that the TOC level at Well 219-02 is 0.52 mg/L at 1,000 gpm and 0.53 mg/L at 2,000 gpm.[74] Since these concentrations fall below the 1ppm thresholds that contributes to DBP standard exceedances, no treatment for TOC is needed at Well 219-02 at this time.

As discussed above, recent water quality results show that treatment proposed by Cal Water for Well 219-02 is not currently needed for any of the three constituents of concern (color, methane, and TOC). Similarly, treatment for the additional stated

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[72] California Code of Regulations, Title 22, Appendix 64481-A

[73] California Code of Regulations, Title 22, Appendix 64465-G

[74] A.21-07-002, Dominguez Capital Project Justification, p. DOM PJ-46.

concerns related to color and elevated DBPs–iron, manganese, Total Dissolved Solids (TDS) and Trichloroethylene (TCE)-- is also unneeded at this time as the recent water quality test samples are all below the respective MCLs.[75, 76] The Dominguez District Drinking Water Supply Study, which was completed in 2016, states **<<BEGIN CONFIDENTIAL>>** [redacted] **<<END CONFIDENTIAL>>** Cal Water has not collected enough water quality samples to prove the need for a multi-stage treatment at Well 219-02. These results combined with limited overall water quality sample tests suggest treatment is not needed at Well 219-02 at this time. If Cal Water can justify a request for treatment with more evidence that treatment is required by the next GRC, it should propose treatment expenses at the next GRC. For now, the Commission should deny Cal Waters request of $5,849,917 for this project.

5. Purchase Property (PID#123393)

The Commission should deny Cal Water's requests for $1,270,946 to purchase property for a new well. The project is not consistent with the Dominguez District Drinking Water Supply Study. Moreover, the lifecycle cost analysis for the proposed well and treatment is not valid.

Cal Water requests to purchase property for a proposed new West Basin well and a treatment facility. Construction of the well and treatment will be proposed in the next rate case filing when more information about well water quality and performance is available.

The Dominguez District Drinking Water Supply Study was completed in 2016 and was used in the justification for this project. **<<BEGIN CONFIDENTIAL>>** [redacted]

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[75] Attachment 4-2: A.21-07-002 Public Advocates Office DR ZS1-013, Q. 1. a.

[76] A.21-07-002, Dominguez Capital Project Justification, p. DOM PJ-46

[redacted] **<<END CONFIDENTIAL>>**[77]

The Dominguez District Drinking Water Supply Study **<<BEGIN CONFIDENTIAL>>** [redacted] **<<END CONFIDENTIAL>>**

<<BEGIN CONFIDENTIAL>> [redacted][78] **<<END CONFIDENTIAL>>** By contrast, Cal Water is proposing it acquire a large piece of property of at least 15,000 square feet[79] for a new well and its own treatment facility. **<<BEGIN CONFIDENTIAL>>** [redacted][80] [redacted] **<<END CONFIDENTIAL>>** Therefore, the Commission should deny this project.

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[77] Dominguez District Drinking Water Supply Study, p. 10-1.

[78] Dominguez District Drinking Water Supply Study, p. 8-23.

[79] A.21-07-002, Dominguez Capital Project Justification, p. DOM PJ-40.

[80] Dominguez District Drinking Water Supply Study, p. 8-12

Cal Water included a life cycle cost analysis in the justification for these projects.[81] This analysis is not valid because the construction cost of the new well is based on the unrealistic assumption that the cost would be less than half the cost of similar projects in the Dominguez District. Looking at the construction of a new well from a previously authorized project, New Well Central Basin (At the Seminary) (PID # 00020775), the total direct cost is $5,382,114.[82] By contrast, the capital cost of the well included in the life cycle cost analysis for this project is only $1,900,000. In addition to the faulty cost assumption, the life cycle analysis fails to include the cost of annual treatment related expenses making it further unreliable. Because Cal Water well construction cost assumptions were unreasonable and it failed to consider treatment related costs, the life cycle analysis for these projects is not valid.

The reverse osmosis treatment at Well 232-03 and the aeration at Well 298-01 are rarely used.[83] Cal Water does not need to drill a new well when it is not fully utilizing the wells that Dominguez district already has, and customers are already paying for expensive treatment at these wells.

<<BEGIN CONFIDENTIAL>>[redacted][84][redacted]

[81] A.21-07-002, Dominguez Capital Project Justification, p. DOM PJ-44.

[82] Dominguez District, Report on the Result of Operations, p 224 of the pdf.

[83] Attachment 4-4: 2021 Quality Data from Dominguez District.

[84] Dominguez District Drinking Water Supply Study, p. 10-3

[redacted] **<<END CONFIDENTIAL>>** and the Commission should deny these projects.

6. Station 232 Discharge Main Relocation (PID # 123405)

The Commission should deny Cal Water's request of $2,323,832 to relocate and replace Station 232 20-inch discharge main.

Cal Water states that the transmission discharge main in Station 232 in 350 pressure zone has been in operation for over 60 years and is buried under highly developed infrastructure.[85] Cal Water also states a pipe failure has the potential to take several days to months to repair and emergency connections are not operationally intended to provide water for more day.

Cal Advocates inquired about the leak/break history, repair history, inspections and condition assessments on the existing 20-inch discharge main segment that Cal Water proposed to replace and relocate.[86] In response, Cal Water could not provide any leak/break history, repair history, s inspection reports, or condition assessments .[87] Additionally, Cal Water failed to provide any recorded information about incidents in which the 20-inch main are considered the root cause of any loss of service in the surrounding pressure zone.

The Dominguez District ratepayers should not be burdened with funding a replacement project when Cal Water has failed to provide evidence of problems with the existing infrastructure or justify the cost of a new pone. The Commission should, therefore, deny the budget request for this project.

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[85] A.21-07-002, Dominguez Capital Project Justification, p. DOM PJ-54.

[86] A.21-07-002 Public Advocates Office DR ZS1-013, Q. 2. a & b.

[87] Attachment 4-2: CWS Response to DR ZS1-013, Q.2.a & b.

7. Zone 1 Supply Reliability (PID # 123419)

The Commission should deny Cal Water's request of $2,468,873 to perform a route study and prepare detailed designs to propose an alternative supply main in Dominguez Zone 1 as the budget does not reflect the full rate impact for this project and conflicts with the Commission's authorized rate case plan.

The Commission-authorized rate case plan mandates that capital project proposals must include a budget for the entire project.[88] Cal Water's proposal to split the budget for a single project across two GRCs does not provide the entire budget for the project and obscures the true rate impact. It is impossible to determine if this budget is reasonable for a project of this scope because Cal Water has not provided the entire project's scope.

See direct testimony of Mr. Justin Menda for further discussion on proposed design-only projects.

The Commission should deny Cal Water's budget request to plan for these projects that will not be requested until the next GRC.

8. Multi-Stage Treatment Station 300 (PID# 125762)

The Commission should deny Cal Water's request of $3,096,242 to install multi-stage treatment facility at Station 300 because Cal Water has not collected enough water quality test samples and the water quality testing results do not warrant this treatment plant

Cal Water states that the groundwater from the Well 300-01 has been found to contain elevated levels of manganese. In addition, Well 300-01 dissolved oxygen (DO_2) concentrations are lower than 8 - 10 mg/l, which can lead to corrosion problems within the distribution system.[89]

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[88] "[P]roposals for major capital projects presented in the application must include need analysis, cost comparison and evaluation, conceptual designs, and overall budget." D.04-06-018, p.15.

[89] A.21-07-002, Dominguez Capital Project Justification, p. DOM PJ-106.

Cal Water provided only two water quality monitoring results in response to Cal Advocates' inquiry.[90]

	April 2020	May 2020
Mn	35 µg/L	36 µg/L
DO_2	1.8 mg/L	2.3 mg/L

Contrary to Cal Water's proposed multi-stage treatment facility to treat manganese, in the Drilling, Construction, Development, and Testing Dominguez (DOM) Well 300-01 report, Cal Water cited to the same test samples collected on April 14, 2020, and found, "(just the sentence re. manganese)"

> [Total Dissolved Solids] TDS of the completed well was 320 mg/L, below the DDW recommended lower limit of the secondary MCL of 500 mg/L. Despite detections in all three (3) isolated aquifer zone tests, iron within the completed well was reported below the laboratory reporting limit and below the DDW secondary MCL of 300 µg/L. The manganese concentration of the completed well was reported to be 35 µg/L, below the DDW secondary MCL of 50 µg/L. (emphasis added) Methane was reported at a concentration of 350 µg/L within the completed well, [which is below the action level]. Odor from the completed well was reported at 2 TON units, below the secondary MCL of 3 TON units.
>
> PFOS and PFOA were not detected in any of the three (3) isolated aquifer zones tested, nor in the completed well water quality. No other volatile or semi-volatile organic compounds were reported above laboratory reporting limits.[91]

The utility's conflicting positions and finding of non-actional levels of manganese suggest treatment would be premature at this stage.

Cal Water also stated that historic DO_2 concentrations at the wellhead range from 0 - 1 mg/L but failed to provide additional water quality test sample data. The only

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[90] Attachment 4-2: A.21-07-002 Public Advocates Office DR ZS1-013, Q. 3. a.

[91] Drilling, Construction, Development, and Testing Dominguez (DOM) Well 300-01, p 13.

samples provided, as shown above, show DO_2 at a higher level than previously stated. Cal Water should perform additional water quality monitoring to determine and confirm if treatment for DO_2 is needed.

The Commission should, therefore, deny the request for this project.

B. Non-Specific Budgets

The Commission should authorize a non-specific budget of $1,669,120 for the Dominguez District for the year 2022-2024. See Common Issues direct testimony of Mr. Zaved Sarkar for further discussion on Non-Specific budget requests.

C. Carry-Over Budget

1. Previously Funded Incomplete Projects

The Commission should deny Cal Water's proposal to include Dominguez's projects adopted in the previous rate case cycle in 2023 revenue requirement that are not yet completed. See direct testimony of Mr. Suliman, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion.

2. Sta 219 Treatment Plant Design (PID# 114508)

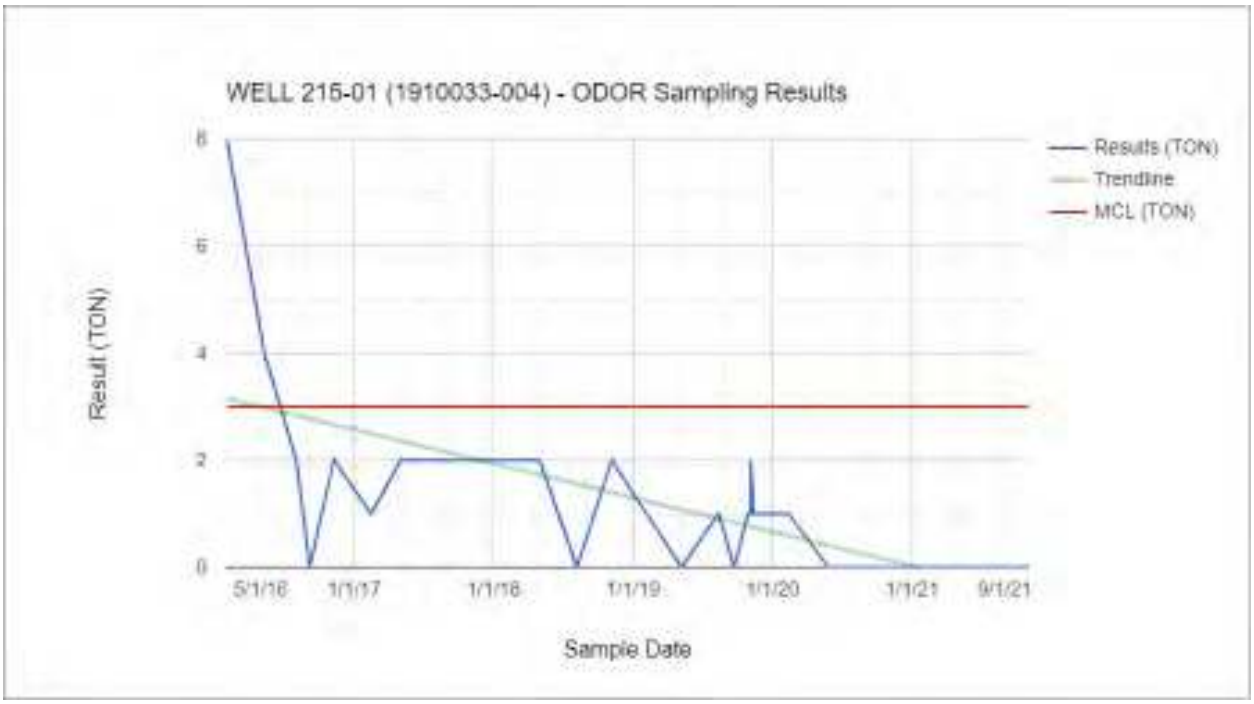
The Commission should remove Project 114508 ($823,076) from the Carry Over Budget because, according to the discussion in Section A.4. of this chapter, Cal Water has not collected enough water quality test samples and the water quality test samples test results that Cal Water has received do not warrant a treatment for this plant.

3. Sta 215 Treatment Plant Design and Construct (PID# 114507 & 114503)

The Commission should remove Projects 114503 ($734,014) and 114507 ($5,534,644) from the Carry Over Budget. Ratepayers have funded a variation of this project since Cal Water's last general rate case without receiving any benefit. Despite evidence presented by Cal Advocates in the previous proceeding that treatment was not necessary to recommence operations of Well 215-01, the Commission authorized rate increases based upon a highly speculative, alleged need for treatment. Not only did Cal

Water not complete its previously proposed treatment of Well 215-01, but Cal Water has been consistently utilizing Well 215-01 without any treatment.[92] Cal Water's current request to change the scope of the previously funded but abandoned project and embark upon an expanded centralized treatment project should not receive another round of needless customer funding.

Cal Water asserted that a high odor sample in 2016 necessitated treatment at Well 215-01. Well 215-01 has been non-detect for odor since the first quarter of 2020, which is two years ago. Treatment should not be approved unless the water quality results show that treatment is needed. This project was approved and funded by customers purely on speculation that the level of odor would increase in the future, but that did not happen. Odor has decreased to non-detect as shown in the graph below.[93]



[92] Attachment 4-3: West Coast Basin Watermaster Reports, https://www.wrd.org/content/west-coast-basin-watermaster-reports Date accessed 01/31/2022)

[93] Attachment 4-4: Water Quality Data from Dominguez District.

IV. CONCLUSION

The recommendations presented above have been incorporated in the calculations for the recommended Plant in Service as shown in Cal Advocate's RO Report.

CHAPTER 5 Hermosa Redondo District Plant

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for CWS' Hermosa Redondo District.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a capital budget of $4,543,825 for 2022, $5,970,931 for 2023 and $5,178,445 for 2024for CWS' Hermosa Redondo District.

These recommendations form the basis for the recommended capital budget summary presented in Table 5-A.[94] The estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding sample sites, control valve overhauls and replacements, SB 1398 service line replacements, water quality analyzers, meter vault lid replacements, pressure vessel replacements, main replacements, pump and motor replacements, physical security upgrades, vehicle replacements, unscheduled and non-specific projects. Table 5-B presents project-specific adjustments.[95]

III. ANALYSIS

The Hermosa Redondo District recorded $5,590,691 per year in average gross plant additions for the most recent four-year period 2015-2020.[96] Table 5-C compares the proposed and recommended estimates against recorded annual average gross plant additions.[97]

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[94] Attachment 5-1: Capital Budget Summary and Details – Hermosa Redondo District, Table 5-A.

[95] Attachment 5-1: Capital Budget Summary and Details – Hermosa Redondo District, Table 5-B.

[96] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

[97] Attachment 5-1: Capital Budget Summary and Details – Hermosa Redondo District, Table 5-C.

The following discussion presents analyses and recommended adjustments to CWS' requested capital budget for specific projects, non-specific projects, and carry-overs below.

Contingency and Construction Management/Special Inspection has been set to 0% for all projects. See Common Issue direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion on Contingency, Construction Management/Special Inspection and Carry-over projects.

A. Specific Projects

1. Station 4 Panelboard Replacement (PID # 123890)

The Commission should approve $280,016 to replace the panelboard in Hermosa Redondo's Station 4.

Cal Water requests $322,069 to demolish the existing panelboard and install a new panelboard in Station 4. This budget includes a 10% contingency cost and 5% special inspection.[98] The added 10% contingency cost and 5% special inspection cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve $280,016 to replace the panelboard in Hermosa Redondo's Station 4.

2. Station Rebuild Design Projects (PID# 124092, PID# 124339 and PID# 124429)

The Commission should deny Cal Water's request for $244,276 for Station 5, $189,038 for Station 26, and $218,219 for Station 27 to perform survey, designs, and secure permits to rebuild in the Hermosa Redondo District as the budget does not reflect the full rate impact for this project and conflicts with the Commission's authorized rate case plan.

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[98] A.21-07-002, Hermosa Redondo Capital Project Justification, p. HR PJ-36.

The Commission-authorized rate case plan mandates that capital project proposals must include a budget for the entire project.[99] Cal Water's proposal to split the budget for a single project across two GRCs does not provide the entire budget for the project and obscures the true rate impact. It is impossible to determine if this budget is reasonable for a project of this scope because Cal Water has not provided the entire project's scope. Cal Water requests a budget solely for the survey, design and permitting stage to rebuild Station 5, Station 26 and Station 27. The construction budget for these projects would be requested in Cal Water's 2024 GRC.[100] It is uncertain what the true impact of the change in scope will be in this GRC and the estimated total cost range provided by CWS, $700,000 - $1,500,000, is too broad to provide reasonable accuracy.

See direct testimony of Mr. Justin Menda for further discussion on proposed design-only projects.

The Commission should, therefore, deny Cal Water's budget request to plan for these projects not requested until next GRC.

3. Water Supply and Facilities Master Plan (PID#124257)

The Commission should approve $279,134 for Hermosa Redondo District's Water Supply and Facilities Master Plan (WSFMP).

Cal Water requests $311,434 to complete Hermosa Redondo's WSFMP. This budget includes a 10% contingency cost.[101] The added 10% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

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[99] "[P]roposals for major capital projects presented in the application must include need analysis, cost comparison and evaluation, conceptual designs, and overall budget." D.04-06-018, p.15.

[100] A.21-07-002, Hermosa Redondo Capital Project Justification, p. HR PJ-40, 66 and 78.

[101] A.21-07-002, Hermosa Redondo Capital Project Justification, p. HR PJ-51.

The Commission should approve $279,134 for Cal Water's Antelope Valley's WSFMP.

4. Install SCADA and Meters to PV-HR Interconnections (PID# 124379)

The Commission should approve $351,477 to install new SCADA equipment at the Hermosa Redondo-Palos Verdes interconnection.

Cal Water requests $387,904 to install SCADA controls and communication equipment at the two HR-PV interconnections. This budget includes a 10% contingency cost.[102] The added 10% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should, therefore, approve $351,477 for the routine panelboard replacement at Fremont Station 1.

5. Station 29 Chemical Building (PID # 124449)

The Commission should approve $379,919 to build a new chemical storage building at Station 29.

Cal Water requests $526,186 to build a new chemical storage building at Station 29. This budget includes a 20% contingency cost and 10% construction management cost.[103] The added 20% contingency cost and 10% construction management cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

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[102] A.21-07-002, Hermosa Redondo Capital Project Justification, p. HR PJ-75.

[103] A.21-07-002, Hermosa Redondo Capital Project Justification, p. HR PJ-88.

The Commission should, therefore, approve $379,919 to build a new chemical storage building at Station 29.

6. Tank Mixing & Chemical Addition (PID #124776, PID #124843, PID #124844 and PID #124960)

The Commission should approve $435,203 for HR Station 29, $499,903 for HR Station 05, $721,603 for HR Station 26, and $487,710 for HR Station 23 to install tank mixing and chemical addition equipment.

Cal Water requests $571,721 for HR Station 29, $610,575 for HR Station 05, $947,958 for HR Station 26, and $595,683 for HR Station 23 to install tank mixing and chemical addition equipment. This budget includes a 20% contingency cost and 5-10% construction management and special Inspection costs.[104] The added 20% contingency cost and 5-10% construction management and special inspection costs should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should, therefore, approve $435,203 for HR Station 29, $499,903 for HR Station 05, $721,603 for HR Station 26 and $487,710 for HR Station 23 to install tank mixing and chemical addition equipment.

7. Vault Safety and Operational Improvement Projects (PID #125393, PID #125394 and PID #125395)

The Commission should approve $299,953 for 2022, $293,453 for 2023 and $352,668 for 2024 to replace the existing vault structure, associated control or check valve, and associated isolation valves in the Hermosa Redondo District.

Cal Water requests $329,949 for 2022, $322,798 for 2023 and $387,935 for replace the existing vault structure, associated control or check valve, and associated

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[104] A.21-07-002, Hermosa Redondo Capital Project Justification, p. HR PJ-103-106.

isolation valves in the Hermosa Redondo District. This budget includes a 10% contingency cost.[105] The added 10% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should, therefore, approve $299,953 for 2022, $293,453 for 2023 and $352,668 for 2024 to replace the existing vault structure, associated control or check valve, and associated isolation valves in Hermosa Redondo

B. Non-Specific Budgets

The Commission should authorize a non-specific budget of $1,404,494 for the Hermosa Redondo District for the year 2022-2024. See Common Issues direct testimony of Mr. Zaved Sarkar for further discussion on Non-Specific budget requests.

C. Carry-Over Budget

1. Previously Funded Incomplete Projects

The Commission should deny Cal Water's proposal to include the Hermosa Redondo District's projects adopted in the previous rate case cycle in 2023 revenue requirement that are not yet completed. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion.

IV. CONCLUSION

The recommendations presented above have been incorporated in the calculations for the recommended Plant in Service as shown in Cal Advocate's RO Report.

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[105] A.21-07-002, Hermosa Redondo Capital Project Justification, p. HR PJ-115-117.

CHAPTER 6 Westlake District Plant

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for Cal Water's Westlake District.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a capital budget of $986,951 for 2022, $1,182,571 for 2023 and $1,456,029 for 2024 for Cal Water's Westlake District.

These recommendations form the basis for the recommended capital budget summary presented in Table 6-A.[106] The estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding sample sites, control valve overhauls and replacements, SB 1398 service line replacements, water quality analyzers, meter vault lid replacements, pressure vessel replacements, main replacements, pump and motor replacements, physical security upgrades, vehicle replacements, unscheduled and non-specific projects. Table 6-B presents project-specific adjustments.[107]

III. ANALYSIS

The Westlake District recorded $3,557,715 per year in average gross plant additions for the most recent four-year period 2015-2020.[108] Table 6-C compares the proposed and recommended estimates against recorded annual average gross plant additions.[109]

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[106] Attachment 6-1: Capital Budget Summary and Details – Westlake District, Table 6-A.

[107] Attachment 6-1: Capital Budget Summary and Details – Westlake District, Table 6-B.

[108] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

[109] Attachment 6-1: Capital Budget Summary and Details – Westlake District, Table 6-C.

The following discussion presents analyses and recommended adjustments to CWS' requested capital budget for specific projects, non-specific projects, and carry-overs below.

Contingency and construction management/special inspection has been set to 0% for all projects. See Common Issue direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion on contingency, construction management/special Inspection and carry-over projects.

A. Specific Projects

1. Wildfire - Replacement Valve for Golf Course Court (PID #124149)

The Commission should approve $88,135 to install a check valve at Golf Course Court and Canterbury Street.

Cal Water requests $105,762 to install a check valve at Golf Course Court and Canterbury Street. This budget includes a 20% contingency.[110] The added 20% contingency cost should be removed from the estimates. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion on contingency.

The Commission should approve $88,135 to install a check valve at Golf Course Court and Canterbury Street.

2. Station 6 - Tank Mixer and Chloramine Dosing (PID #124150 & 124151)

The Commission should approve $245,563 for WLK Station 6 and $233,730 for WLK Station 7 to install tank mixing and chemical addition equipment.

Cal Water requests $270,119 for WLK Station 6 and $257,104 for WLK Station 7 to install tank mixing and chemical addition equipment. This budget includes a 10%

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[110] A.21-07-002, Westlake Capital Project Justification, p. WLK PJ-25.

contingency cost.[111] The added 10% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve $245,563 for WLK Station 6 and $233,730 for WLK Station 7 to install tank mixing and chemical addition equipment.

3. Water Supply Reliability Study (PID #124357)

The Commission should approve $127,146 for Westlake District's Water Supply Reliability Study

Cal Water requests $141,609 to complete Westlake's Water Supply Reliability Study. This budget includes a 10% contingency cost.[112] The added 10% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should $127,146 for Westlake district's Water Supply Reliability Study.

4. WLK Station 7 Harper Driveway & Wall (PID #125459)

The Commission should deny Cal Water's request for $74,898 to finalize designs and secure permits to construct a new driveway and wall in WLK Station 7 as the budget does not reflect the full rate impact for this project and conflicts with the Commission's authorized rate case plan.

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[111] A.21-07-002, Westlake Capital Project Justification, p. WLK PJ-29-30.

[112] A.21-07-002, Westlake Capital Project Justification, p. WLK PJ-35.

The Commission-authorized rate case plan mandates that capital project proposals must include a budget for the entire project.[113] Cal Water's proposal to split the budget for a single project across two GRCs does not provide the entire budget for the project and obscures the true rate impact. It is impossible to determine if this budget is reasonable for a project of this scope because Cal Water has not provided the entire project's scope. Cal Water requests a budget solely for the design and permitting stage to construct a driveway and wall in WLK Station 7. The construction budget for these projects would be requested in Cal Water's 2024 GRC.[114] It is uncertain what the true impact of the change in scope will be in this GRC and the estimated total cost range provided by CWS for $400,000 - $600,000.

See direct testimony of Mr. Justin Menda for further discussion on proposed design-only projects.

The Commission should deny Cal Water's budget request to plan for these projects not requested until next GRC.

B. Non-Specific Budgets

The Commission should authorize a non-specific budget of $368,642 for the West Lake district for the year 2022-2024. See Common Issues direct testimony of Mr. Zaved Sarkar for further discussion on Non-Specific budget requests.

C. Carry-Over Budget

1. Previously Funded Incomplete Projects

The Commission should deny Cal Water's proposal to include Westlake's projects adopted in the previous rate case cycle in 2023 revenue requirement that are not yet completed. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion.

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[113] "[P]roposals for major capital projects presented in the application must include need analysis, cost comparison and evaluation, conceptual designs, and overall budget." D.04-06-018, p.15.

[114] A.21-07-002, Westlake Capital Project Justification, p. WLK PJ-50.

IV. CONCLUSION

The recommendations presented above have been incorporated in the calculations for the recommended Plant in Service as shown in Cal Advocate's RO Report.

CHAPTER 7 Travis AFB District Plant

I. INTRODUCTION

This chapter presents analyses and recommendations for Plant in Service for Cal Water's Travis Airforce Base District.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a capital budget of $1,495,878 for 2022, $1,029,400 for 2023 and $622,551 for 2024 for Cal Water's Travis Airforce Base District.

These recommendations form the basis for the recommended capital budget summary presented in Table 7-A.[115] The estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding sample sites, control valve overhauls and replacements, SB 1398 service line replacements, water quality analyzers, meter vault lid replacements, pressure vessel replacements, main replacements, pump and motor replacements, physical security upgrades, vehicle replacements, unscheduled and non-specific projects. Table 7-B presents project-specific adjustments.[116]

III. ANALYSIS

The Travis Airforce Base district recorded $0 per year in average gross plant additions for the most recent four-year period 2015-2020.[117] Table 7-C compares the

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[115] Attachment 7-1: Capital Budget Summary and Details – Travis AFB District, Table 7-A.

[116] Attachment 7-1: Capital Budget Summary and Details – Travis AFB District, Table 7-B.

[117] Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

proposed and recommended estimates against recorded annual average gross plant additions.[118]

The following discussion presents analyses and recommended adjustments to CWS' requested capital budget for specific projects, non-specific projects, and carry-overs below.

Contingency and construction management/special inspection has been set to 0% for all projects. See Common Issue direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion on contingency, construction management/special inspection and carry-over projects.

A. Specific Projects

1. TAB Station 3 Pump Station Rebuild (PID #125908)

The Commission should approve $1,285,505 to rebuild Station 3 in Travis AFB.

Cal Water requests $1,541,362 to rebuild Station 3 in Travis AFB. This budget includes a 10% contingency cost and 10% construction management/special inspection.[119] The added 10% contingency cost and 10% construction management/special inspection cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve $1,285,505 to rebuild Station 3 in Travis AFB.

2. TAB Station 1 Vault Replacement (PID #126095)

The Commission should approve $157,381 to replace and retrofit the existing vault with replacement of the equipment and associated appurtenances.

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[118] Attachment 7-1: Capital Budget Summary and Details – Travis AFB District, Table 7-C.

[119] A.21-07-002, Travis District Capital Project Justification, p. TD PJ-15-16.

Cal Water requests $173,119 replace and retrofit the existing vault with replacement of the equipment and associated appurtenances. This budget includes a 10% contingency cost.[120] The added 10% contingency cost should be removed from the estimate. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion. The total cost of this purchase has been artificially increased by adding unnecessary contingency fees.

The Commission should approve $157,381 to replace and retrofit the existing vault with replacement of the equipment and associated appurtenances.

B. Non-Specific Budgets

The Commission should authorize a non-specific budget of $746,736 for the Travis district for the year 2022-2024. See Common Issues direct testimony of Mr. Zaved Sarkar for further discussion on Non-Specific budget requests.

C. Carry-Over Budget

1. Previously Funded Incomplete Projects

The Commission should deny Cal Water's proposal to include Travis District's projects adopted in the previous rate case cycle in 2023 revenue requirement that are not yet completed. See direct testimony of Mr. Suliman Ibrahim, Chapter 16 of the Cal Advocates Report on Common Plant Issues, for further discussion.

IV. CONCLUSION

The recommendations presented above have been incorporated in the calculations for the recommended Plant in Service as shown in Cal Advocate's RO Report.

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[120] A.21-07-002, Travis District Capital Project Justification, p. TD PJ-24.

CHAPTER 8 Special Request 9

I. INTRODUCTION

This chapter addresses Cal Water's Special Request #09 to establish a Memorandum Account that would track the incremental final settlement costs associated with the Palos Verdes Peninsula Water Reliability Project (PVPWRP) that exceed the amount not already authorized in rates.[121]

II. SUMMARY OF RECOMMENDATIONS

The Public Advocates Office recommends that the Commission approve Cal Water's request to establish the Palos Verdes Memorandum Account (PV MA) with the following conditions:

1. The Commission should require Cal Water to provide a complete set of workpapers documenting the accounting adjustments that Cal Water makes for this memorandum account.
2. The Commission should require Cal Water to provide all submitted and potential design/build work order claims that remain in dispute and/or are awaiting additional information with supporting documents, invoices, and/or receipts.
3. The Commission should extend for the next three years of the current GRC cycle a current provision from the Settlement in the last GRC, which prevents costs over the cap being included in rates prior to Commission approval.

III. DISCUSSION

At the time of this filing the actual costs are $102.5 million, a $6.4 million increase above the cap approved in D.20-12-007 ($96.1 million) and implemented through AL

[121] A.21-07-002, Cal Water's Additional Testimony, p. 45-48.

2387. Cal Water is requesting to have this additional amount included in proposed rates for this GRC.[122]

Although the project was completed in June 2020 and is in-service, according to Cal Water several cost claims remain in dispute and/or are awaiting additional information for final substantiation from the design/builder Black and Veatch (B&V) of the project. Cal Water states it does not believe it has an obligation to pay any of these claims and due to its agreement with B&V for cost increases and schedule adjustments, Cal Water is not waiving its right to its commitments.[123]

Cal Water additionally states the claims in dispute are expected to be related to schedule delays due to COVID and other circumstances. Cal Water cites the pending lawsuit between B&V and its subcontractor, Hill & Knowlton Strategies LLC (H&K) as the major cause of this delay to obtain the final cost of the project.

Audit:

The objective of Cal Advocates' review was to determine whether entries recorded supporting the $102 million cost recovery were appropriate, correctly stated, and in compliance with applicable Commission decisions. Cal Advocates' review procedures included, but were not limited to, the following:

- Review of Cal Water's application testimony, exhibits, workpapers, and data request responses.
- Review of pertinent advice letters and Commission decisions.
- Review of general ledger entries supporting the $102 million cost recovery request.[124]

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[122] A.21-07-002, Cal Water's Additional Testimony, p. 46.

[123] A.21-07-002, Cal Water's Additional Testimony, p. 46-47.

[124] CWS's response to Cal Advocates Data Request ZS1-011 Attachment 3 & Attachment 4.

- Cal Advocates conducted tests on its selected sample by reviewing source documents that support the expenses supporting the $102 million cost recovery request.
    - Cal Advocates' sample was a simple random sample. The size of the sample was selected utilizing a sample size calculator[125], with the parameters of 1) a population of 4700; 2) a confidence level of 95%; and 3) a margin of error of 10. Running these parameters in the sampling size calculator resulted in a sample size of 94.
        - The recorded entries that made up the $102 million recovery request were recorded in approximately 4700 separate line items (population).
        - A 95% level of confidence means if the sampling were repeated over and over again, the results would match the results from the population 95 percent of the time.
        - The margin of error is a statistic expressing the amount of random sampling error. A higher margin of error indicates a lower confidence level in the produced results. A lower margin of error indicates a higher confidence level in the produced results.
    - After the sample size of 94 was determined, the 94 samples were selected using an excel spreadsheet. The excel sheet was filled with the entire population of the approximately 4700-line items. The excel "=rand()" function was used to assign a random number to every line item in the entire population. The values of the random number were copied and pasted in a separate column. The ~4700-line items were

[125] The Sample Size calculator used can be found here: https://www.surveysystem.com/sscalc.htm

then sorted based on their random number values from smallest to largest. The top 94 random numbers were selected to be the sample.

- Cal Advocates sampled the 94-line items within the $102 million cost recovery request to determine whether adequate support exists. In this regard, Cal Advocates examined invoices, general ledger entries, proof of payment, and related supporting documentation for amounts recorded as part of the $102 million cost recovery request and verified the mathematical accuracy of accounting worksheets.

Through the discovery process, Cal Advocates requested the supporting documentation for its 94-line-item sample and Cal Water provided the requested information promptly. Cal Advocates had virtual meetings with Cal Water staff to clarify the supporting documentation requested. After reviewing the information provided, Cal Advocates' sample of the $102 million cost recovery request appears to be adequately supported.

Cal Advocates does not object to the entries recorded as the $102 million cost recovery request in the Palos Verdes Peninsula Water Reliability Project.

AFUDC:

Cal Advocates reviewed the total Allowance for Funds Used During Construction (AFUDC) booked under the Palos Verdes pipeline project resulting from Cal Water's labor. In response to Cal Advocates' inquiry, Cal Water provided the total amount of AFUDC recorded for this project as $6,907,978.39.[126] Cal Water estimated the CWS Labor - Engineering, CWS Labor – Construction, CWS Labor – PR and Construction Overhead related to AFUDC portion to be $1,403,413.[127] This amount represents the

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[126] CWS's response to Cal Advocates Data Request ZS1-022 Attachment 3 & Attachment 4. Total AFUDC = $5,463,357.76(PID# 00098326) + $1,444,620.63(PID# 00098328) = $6,907,978.39

[127] For PID# 00098326

Estimated AFUDC related to labor = $349,832.18

Estimated Construction Overhead related to AFUDC = $864,914.69

1 financing of the labor cost and general Cal Water overhead. However, as part of the
2 GRC process, the cost of internal labor and overhead is distributed amongst all the
3 projects that are authorized as part of the capital budget and therefore fully funded by
4 ratepayers. Importantly, Cal Advocates is not challenging the total overhead and total
5 labor that has been allocated to this project, which will be included in the total rate base
6 associated with this project. Cal Advocates only challenges the financing cost of the
7 internal labor and overhead (i.e., the AFUDC) that accumulated while the project was
8 being constructed and recommends it be removed. A total of $1,403,413 in AFUDC
9 from the plant account for PV Pipeline project should be removed because this amount
10 was fully funded as part of the GRC process that allocated all internal labor and overhead
11 to authorized projects.

12 **IV. CONCLUSION**

13 The Commission should approve Cal Water's request to establish a Palos Verdes
14 Memorandum Account with the exception of $1,403,413 from the PV Pipeline project
15 plant accounts as this AFUDC amount for labor and construction overhead was
16 previously funded as part of the reoccurring GRC process. $1,403, 413 should be
17 removed from Cal Water's Palos Verdes Memorandum Account request.

For PID# 00098328

Estimated AFUDC related to labor = $40,022.18

Estimated Construction Overhead related to AFUDC = $148,644.17

Attachment 1-1: Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY OF Zaved Sarkar

Q.1 Please state your name and address.

A.1 My name is Zaved Sarkar and my business address is 505 Van Ness Avenue, San Francisco, California 94102.

Q.2 By whom are you employed and what is your job title?

A.2 I am a Utilities Engineer in the Water Branch of the Public Advocates Office.

Q.3 Please describe your educational and professional experience.

A.3 I received a Bachelor of Science Degree in Electrical and Electronic Engineering from the American International University – Bangladesh (AIUB) in 2010. I also earned a Master of Science Degree in Electrical and Electronic Engineering from California State University, Sacramento in 2019.

I have been with the Public Advocates Office – Water Branch since October 2017. Prior to joining the Public Advocates Office, I worked as an QA Software Engineer primarily in the energy and medical field for over seven years.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am responsible for East Los Angeles, Los Angeles Region, South-Bay Region, West Lake, Travis districts, Special Req #9, Non-Specific Budgets, Pressure Vessels, Tank Retrofits and Well Infrastructure Renewal Program.

Q.5 Does that complete your prepared testimony?

A.5 Yes

QUALIFICATIONS AND PREPARED TESTIMONY OF Brian Lui

Q.1 Please state your name and business address.

A.1 My name is Brian Lui. My business address is 505 Van Ness Ave, San Francisco, California, 94102.

Q.2 By whom are you employed and in what capacity?

A.2 I am employed by the California Public Utilities Commission (CPUC) as a Public Utilities Financial Examiner in the Public Advocates Office, Electricity Planning & Policy Branch.

Q.3 Please describe your educational and professional experience.

A.3 I hold a Master's Degree in Accounting from Golden Gate University in San Francisco. I also received a Bachelor of Science Degree in Biochemistry from the University of California, Riverside. I joined the Commission on January 7, 2014, in the Public Advocates Office's Electricity Planning and Policy Branch. In the Public Advocates Office, I am involved in the Energy Resource Recovery Account (ERRA) Forecast and ERRA Compliance proceedings. Immediately prior to joining the Commission, I worked for the California State Board of Equalization as a tax auditor. I have over 9 years of experience working as an auditor in the public sector.

Q.4 What your area of responsibility in this proceeding?

A.4 I am responsible for Special Request # 9 - Memo Account for PV Pipeline Disputed Issues.

Q.5 Does this complete your testimony at this time?

A.5 Yes, it does.

Attachment 1-2: Capital Budget Summary and Details – East Los Angeles District

Table 1-A: Capital Budget Summary – East Los Angeles District

East Los Angeles	2021	2022	2023	2024	Annual Average
Cal Advocates	$ -	$ 4,963,086	$ 5,398,132	$ 5,628,644	$ 3,997,465
CWS	$ -	$ 11,221,266	$ 9,657,975	$ 9,837,717	$ 7,679,239
CWS > Cal Advocates	$ -	$ 6,258,180	$ 4,259,843	$ 4,209,073	$ 3,681,774
Cal Advocates as % CWS	#DIV/0!	44.23%	55.89%	57.21%	52.06%

Table 1-B: Capital Budget Details – East Los Angeles District

2021	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2021		N/A	$ -	$ -	$ -	0.00%
2021		**Specific Total**	$ -	$ -	$ -	0.00%
2021	106-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2021		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2021	$ -	$ -	$ -	0.00%

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00123926	ELA 12 Pressure Tank	$ 203,624	$ 234,062	$ 30,438	87.00%
2022	00124368	ELA Sta. 12 Panelboard Replacement	$ 239,222	$ 286,764	$ 47,542	83.42%
2022	00125445	ELA 2022 Physical Security Upgrades	$ 71,223	$ 315,954	$ 244,731	22.54%
2022	00124276	ELA 038-02 Well Renewal	$ 232,203	$ 279,621	$ 47,418	83.04%
2022	00123280	ELA 004-T1 - Tank Retrofits	$ 4,764	$ 5,267	$ 503	90.45%
2022	00123524	ELA 2022 Control Valve Replacement	$ 61,933	$ 187,141	$ 125,208	33.09%
2022	00123552	ELA 2022 CP Upgrades	$ 18,096	$ 46,291	$ 28,195	39.09%
2022	00123812	ELA 2022 Control Valve Overhaul	$ 12,613	$ 23,875	$ 11,261	52.83%
2022	00124056	ELA Relocate Existing Control Valve	$ 108,776	$ 125,037	$ 16,261	87.00%
2022	00124062	ELA 2022 Flowmeter Replacement	$ 106,323	$ 155,941	$ 49,618	68.18%
2022	00124404	ELA Implement Standardized SCADA	$ -	$ 1,158,534	$ 1,158,534	0.00%
2022	00125333	ELA 63 Pump Replacement	$ 108,776	$ 172,790	$ 64,014	62.95%
2022	00125035	ELA 2022 Analyzer Replacement	$ 19,574	$ 21,531	$ 1,957	90.91%
2022	00126480	2022 ELA 62 Carbon Change Outs	$ 108,776	$ 278,330	$ 169,554	39.08%
2022	00126483	2022 ELA 63 Carbon Change Outs	$ 364,216	$ 400,637	$ 36,421	90.91%
2022	00124002	ELA 2022 Customer Meter Vault Lids	$ 24,952	$ 27,448	$ 2,495	90.91%
2022	00123730	ELA 2022 Vehicle Replacemnt Program	$ 121,592	$ 133,751	$ 12,159	90.91%
2022	00123875	ELA 2022 CARB Vehicle Replacements	$ 95,009	$ 104,510	$ 9,501	90.91%
2022	00124223	ELA Main & Svc Locater Equipment	$ 18,029	$ 19,742	$ 1,713	91.32%
2022	00124927	ELA-New Forklift for New Warehouse	$ 45,412	$ 49,954	$ 4,542	90.91%
2022	00124994	ELA Small Trailer Vacuum Unit	$ 22,910	$ 25,201	$ 2,291	90.91%
2022	106MRP22	ELA 2022 Main Replacement Program	$ 2,034,149	$ 3,199,635	$ 1,165,487	63.57%
2022	ELA0900	Meter Replacement Program	$ 183,282	$ 183,282	$ -	100.00%
2022	106UNSCH	Unscheduled Replacements	$ -	$ 1,409,614	$ 1,409,614	0.00%
2022	00126347	ELA Replace V208165	$ 118,411	$ 133,508	$ 15,097	88.69%
2022		**Specific Total**	$ 4,323,865	$ 8,978,419	$ 4,654,554	48.16%
2022	106-NON-SP	**Non-specific Total**	$ 639,221	$ 799,026	$ 159,805	80.00%
2022		**Carry-Over Total**	$ -	$ 1,443,821	$ 1,443,821	0.00%
		TOTAL 2022	$ 4,963,086	$ 11,221,266	$ 6,258,180	44.23%

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00124112	ELA - Land Purchase	$ -	$ 491,121	$ 491,121	0.00%
2023	00124479	ELA Sta. 12 Genset Replacement	$ 197,305	$ 236,001	$ 38,696	83.60%
2023	00125446	ELA 2023 Physical Security Upgrades	$ 83,433	$ 82,606	$ (826)	101.00%
2023	00123529	ELA 2023 Control Valve Replacement	$ 55,955	$ 180,259	$ 124,304	31.04%
2023	00123815	ELA 2023 Control Valve Overhaul	$ 17,262	$ 26,058	$ 8,796	66.24%
2023	00123282	ELA 055-A Replace Pump & Motor	$ 32,686	$ 46,096	$ 13,410	70.91%
2023	00124063	ELA 2023 Flowmeter Replacement	$ 83,408	$ 137,623	$ 54,215	60.61%
2023	00124097	ELA Sta 012 Tank-2 Tank Mixer	$ 62,799	$ 75,229	$ 12,430	83.48%
2023	00124103	ELA 040-T2 Install Tank Mixer	$ 62,799	$ 75,229	$ 12,430	83.48%
2023	00124104	ELA 055-T1 Install Tank Mixer	$ 62,799	$ 75,229	$ 12,430	83.48%
2023	00125038	ELA 2023 Analyzer Replacements	$ 19,125	$ 21,037	$ 1,912	90.91%
2023	00126481	2023 ELA 62 Carbon Change Outs	$ 259,352	$ 285,288	$ 25,936	90.91%
2023	00126484	2023 ELA 63 Carbon Change Outs	$ 373,321	$ 410,653	$ 37,332	90.91%
2023	00124920	ELA STA 61 Main to Zone G	$ 1,092,641	$ 1,425,740	$ 333,099	76.64%
2023	00124005	ELA 2023 Customer Meter Vault Lids	$ 25,576	$ 28,134	$ 2,558	90.91%
2023	00123731	ELA 2023 Vehicle Replacemnt Program	$ 41,544	$ 45,698	$ 4,154	90.91%
2023	106MRP23	Meter Replacement Program	$ 2,085,002	$ 3,279,626	$ 1,194,624	63.57%
2023	ELA0900	ELA 2023 Main Replacement Program	$ 187,864	$ 187,864	$ -	100.00%
2023	106UNSCH	Unscheduled Replacements	$ -	$ 1,444,854	$ 1,444,854	0.00%
2023		**Specific Total**	$ 4,742,872	$ 8,554,347	$ 3,811,475	55.44%
2023	106-NON-SP	**Non-specific Total**	$ 655,260	$ 819,075	$ 163,815	80.00%
2023		**Carry-Over Total**	$ -	$ 284,553	$ 284,553	0.00%
		TOTAL 2023	$ 5,398,132	$ 9,657,975	$ 4,259,843	55.89%

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00124407	ELA Sta. 55 Panelboard Replacement	$ -	$ 359,823	$ 359,823	0.00%
2024	00124441	ELA Sta. 59 Panelboard Replacement	$ 248,528	$ 296,637	$ 48,109	83.78%
2024	00125358	ELA Main Office Improvements	$ 761,050	$ 913,260	$ 152,210	83.33%
2024	00125448	ELA 2024 Physical Security Upgrades	$ 81,631	$ 118,015	$ 36,384	69.17%
2024	00123518	ELA Tank Exterior Ladder Lifelines	$ 73,532	$ 79,541	$ 6,008	92.45%
2024	00123817	ELA 2024 Control Valve Overhaul	$ 16,490	$ 26,508	$ 10,019	62.20%
2024	00124064	ELA 2024 Flowmeter Replacement	$ -	$ 141,322	$ 141,322	0.00%
2024	00124105	ELA 060-T1 Install Tank Mixer	$ 64,369	$ 77,110	$ 12,741	83.48%
2024	00125042	ELA 2024 Analyzer Replacements	$ 13,781	$ 15,160	$ 1,378	90.91%
2024	00126482	2024 ELA 62 Carbon Change Outs	$ 265,836	$ 292,420	$ 26,584	90.91%
2024	00126485	2024 ELA 63 Carbon Change Outs	$ 382,654	$ 420,920	$ 38,266	90.91%
2024	00124079	ELA Main Rplcmnt I-5 Crossing-Dsgn	$ -	$ 348,865	$ 348,865	0.00%
2024	00124006	ELA 2024 Customer Meter Vault Lids	$ 26,216	$ 28,837	$ 2,622	90.91%
2024	00123733	ELA 2024 Vehicle Replacemnt Program	$ 85,166	$ 140,524	$ 55,358	60.61%
2024	00124226	ELA Vacuum Truck Replacement	$ 229,268	$ 251,049	$ 21,780	91.32%
2024	00124256	East Los Angeles WSFMP	$ 259,203	$ 311,434	$ 52,231	83.23%
2024	00124347	East Los Angeles Reliability Study	$ 128,736	$ 141,609	$ 12,873	90.91%
2024	106MRP24	ELA 2024 Main Replacement Program	$ 2,137,127	$ 3,361,617	$ 1,224,490	63.57%
2024	ELA0900	Meter Replacement Program	$ 183,431	$ 192,560	$ 9,129	95.26%
2024	106UNSCH	Unscheduled Replacements	$ -	$ 1,480,975	$ 1,480,975	0.00%
2024		**Specific Total**	$ 4,957,019	$ 8,998,185	$ 4,041,167	55.09%
2024	106-NON-SP	**Non-specific Total**	$ 671,625	$ 839,532	$ 167,906	80.00%
2024		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 5,628,644	$ 9,837,717	$ 4,209,073	57.21%

Table 1-C: Capital Budget vs. Recorded Expenditure – East Los Angeles District

East Los Angeles	2021	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	--	$ 14,195,715	100%
Cal Advocates	$ -	$ 4,963,086	$ 5,398,132	$ 5,628,644	$ 3,997,465	28%
CWS	$ -	$ 11,221,266	$ 9,657,975	$ 9,837,717	$ 7,679,239	54%

Attachment 1-3: Cal Water Response to Public Advocates Office Data Request DR ZS1-001

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Zaved Sarkar Utilities Engineer	Phone: Email:	(415) 703-3250 zaved.sarkar@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **Aug 24, 2021**	Request Received from CPUC: **August 16, 2021**
Re: **ZS1-001**	Requested Due Date: **August 24, 2021**
Subj: **ELA – Main Replacement Crossing Interstate Highways**	

Comments:

- **Full response attached.**
- **Response provided by Engineering.**

- **Attachments 4 &6 contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – Leak report in East Los Angeles**
  - **Attachment #2 – Repair Report at Atlantic Blvd**
  - **Attachment #3 – AWWA M28 Excerpt**
  - **Attachment #4 – Esplanade Pipe Drawing Example – Confidential (category #4)**
  - **Attachment #5 – Esplanade Permit Example**
  - **Attachment #6 – Esplanade Pipe Calculation Example – Confidential (category #4)**

Data Requests and Responses

1. Refer to PID# 124079: Main Replacements Crossing Interstate Highways (Capital Project Justifications – East Los Angeles District, page ELA PJ-36 to 40).
   a. Provide the leak/break history, repair history and other related information on the following pipeline segments that are proposed to be replaced.
      i. Atlantic Boulevard over Interstate 5
      ii. Eastern Avenue over Interstate 5
      iii. Humphreys Avenue over Interstate 710

Response: These cast iron water mains were installed inside the bridge deck crossing interstate highways in 1948, 1950, and 1957. Given the age of these water mains and their significant consequence of failure, Cal Water believes it is necessary to begin proactively planning for their replacement. A pin hole leak on one of the pipelines has occurred near the bridge crossing in 2012, supporting the possibility of future leaks or breaks that could occur along the bridge crossing in the near future (Attachments 1 and 2).

Reviewing current research on cast iron pipes, a recent study by the University of Utah in 2018 on water mains in North America reported that the "break rates of cast iron and asbestos cement pipe, which make up 41% of the installed water mains in US and Canada, have increased by more than 40% over a 6-year period [2012 – 2018]".[1] This study also expects this increasing trend of breaks in cast iron pipes to continue and recommended utilities with cast iron pipes to accelerate their replacement as many of these aging cast iron pipes are reaching the end of their expected lives.[2]

Similarly, the American Water Works Association (AWWA) in their rehabilitation of water mains manual (see Attachment 3) note that "before the 1960s, many iron pipes were installed without effective, long-lasting linings to protect their interior surfaces. These pipes often experience internal corrosion and develop tubercular scales. This scaling restricts the flow and recreates areas were sediment is deposited, and chlorine depletion occurs."[3] Given the construction time period the cast iron water mains Cal Water is proposing to replace, it is very likely that they are unlined and therefore have a high likelihood of tuberculation occurring within the pipeline. Any scaling building up can greatly degrade the structural integrity of the water main and reduce capacity of the water mains.

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[1] Folkman, Steven. *Water Main Break Rates in the USA and Canada: A Comprehensive Study*. University of Utah (2018), pg. 4. Retired from: https://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=1173&context=mae_facpub
[2] ibid., pg. 4
[3] AWWA, *M28 Rehabilitation of Water Mains* (2014), pg 4.

From a seismic perspective, these cast iron pipes Cal Water is proposing to replace were also installed prior to any seismic design standards or codes being adopted, and therefore are vulnerable to future seismic events. Cast iron pipe is known to be particularly vulnerable during a seismic event because of its brittle joints and composition.[4] The location of these cast iron water mains would also have a catastrophic consequence of failure should a major leak occur along the pipeline. These pipelines cross overhead of a major transit corridors in East LA and a significant leak could shut down major traffic arteries for an extend period of time and could potentially result in large financial impacts to the Company and customers.

Therefore, given the increasing probability of failure for aging cast iron pipes and the catastrophic consequence of failure, Cal Water is proposing to proactively evaluate and design a replacement of these water mains to increase the safety and reliability of water system in East Los Angeles.

b. Provide documentation on all inspections and conditional assessments of the following pipeline segments that Cal Water has performed in the last 10 years.
   i. Atlantic Boulevard over Interstate 5
   ii. Eastern Avenue over Interstate 5
   iii. Humphreys Avenue over Interstate 710

Response: Cal Water has not conducted any evaluation of the water main to date. However, Cal Water will evaluate the existing pipeline as part of the design and field survey of the pipe of this proposed project. Based on the findings of that assessment and survey, the final replacement of the mains will be presented as part of the GRC 2024.

c. Regarding the selection of the proposed pipeline replacement method and materials – Cast-Iron mains replaced with encased CL&C steel pipe.
   i. Provide reasons and documents supporting this selection.

Response: The actual construction method and main material will be determined after completion of condition assessment and required technical studies, and final design. However, Caltrans Chapter 600 - Utility Permits (603.3C) states that:

"High priority utilities are required to be encased on both conventional and access-controlled right-of-way, when installed either longitudinal or transverse to highway. A reinforced concrete jacket is an encasement that: I. Contains or controls leaks, II. Protects carrier pipe from crushing or bending stresses and minimizes coating damage during installation, III. Provides some protection from corrosive elements and aggressive salts, and IV. Protects against highway maintenance and repair activities."

Hence, Cal Water assumed the CL&C steel pipe is the most accurate reflection of this regulatory requirement.

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[4] Ballantyne, Donald. *Overview of Piping Systems and their Seismic Vulnerability*. (2012), pg 1. Retrieved from: https://responsiblechoice.info/wp-content/uploads/Overview-of-Piping-Systems-and-their-Seismic-Vulnerability.pdf

ii. Provide instances in which Cal Water used the same pipe replacement method and materials.

Response: Please note Cal Water has not determined the final replacement method and material for these mains. The proposed CL&C steel pipe is assumed based on Cal Water's past experience and initial understanding of Caltrans specifications. Upon approval of this project, Cal Water will assess the condition of these pipes, and based on the construction feasibility, the final plan will be presented in the 2024 GRC.

Regarding examples of Cal Water's past experience using the same pipe replacement method and materials, please see attachments 4, 5, and 6 to see the drawings, approved permit, and calculations for Cal Water's most recent example of a similar CL&C pipe installed along a bridge crossing.

Attachment 1-4: Cal Water Response to Public Advocates Office Data Request DR ZS1-006

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Zaved Sarkar Utilities Engineer	Phone: Email:	(415) 703-3250 zaved.sarkar@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **Sep 24, 2021**	Request Received from CPUC: **September 16, 2021**
Re: **Partial Response #2 (Final) to ZS1-006**	Requested Due Date: **September 24, 2021**
Subj: **ELA – Land for New Well**	Extension for 1e(i, ii, and iii): **October 1, 2021**

Comments:

- **Partial Response #2 (final) for Questions 1e.i, 1e.ii, and 1e.iii provided below (blue font).**
- **Response provided by Engineering.**

- **Does not contain confidential information.**
- **The first response refers to the following attachments included separately for partial response #1 on September 24:**
  - **Attachment #1 – Wells 38-02 and 63-01 WQ**
  - **Attachment #2 – ELA-W-038-02 Data Trending Chart & Report**
  - **Attachment #3 – ELA-W-063-01 Data Trending Chart & Report**
  - **Attachment #4 – ELA-W-063-01 Mn and 1,4-Dioxane Data Trending Chart & Report**
  - **Attachment #5 – Production Costs Model Methodology**
  - **Attachment #6 – ELA Production Cost Model**
  - **Attachment #7 – Well Near 63-01 WQ**

- **This response refers to the following attachments included separately:**
  - **Attachment #8 – ELA Well O&M Summary**
  - **Attachment #9 – ELA Additional Well Inventory and Records**
  - **Attachment #10 – ELA Source of Supply Maintenance Expenses**

Data Requests and Responses

1. Refer to PID# 124112: Land for New Well (Capital Project Justifications – East Los Angeles District, page ELA PJ-41 to 67).

   a. Provide the list of wells that were taken out of service due to concerns about perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) water quality issues.

   Response: Two (2) wells, ELA 38-02 and ELA 63-01, have been removed from service for exceeding the State of California's Response Level.

   - **ELA 38-02 exceeds the Response Levels for both PFOA (> 10 ppt) and PFOS (> 40 ppt).**
   - **ELA 63-01 exceeds the Response Level for PFOA (> 10 ppt) and the Notification Level for PFOS (> 6.5 ppt).**

   b. Please provide water quality test data for the above list (Q.1.a) regarding the PFOA, PFOS, PFHxA and PFBS concentration for the years 2016-2021 in Excel format.

   Response: Please see Attachments 1. Please note, results are reported in micrograms per liter (µg/L) or parts per billion (ppb) and not nanograms per liter (ng/L) or parts per trillion (ppt).

   c. Please provide trend line for the concentration levels of each contaminant in Q.1.b above for each well.

   Response: Please see Attachments 2, 3, and 4. Please note, results are reported in micrograms per liter (µg/L) or parts per billion (ppb) and not nanograms per liter (ng/L) or parts per trillion (ppt). It is important to note the water quality trends changed when the wells were removed from service. Accordingly, it is not known if the water quality will return to historical values when the wells return to service.

   d. Cal Water states "...engaged Kayuga Solutions, Inc. (Kayuga) to develop a comprehensive plan of all Cal Water's groundwater assets to enable Cal Water to make more informed decisions on how to effectively and proactively manage its groundwater assets. Kayuga's analysis and findings became the 2021 Well Infrastructure Renewal Program (WIRP)..." (Capital Project Justifications – East Los Angeles District, page ELA PJ-41)

      i. In section 4.4 (Financial Efficiency) of the WIRP, Figure 7 shows a cost comparison between well water and purchased water.

         Please provide a breakdown of how this comparison analysis was performed. Provide all reference data, range of years used, capital investments considered (including bag filters, IX treatment vessels, GAC treatment vessels, and periodic replacements such as resin and

carbon), operating costs considered (such as O&M, purchased power, pump tax, chemical costs, replacement costs, etc.)

Response: Please see "Production Costs Model Methodology" document that describes the methodology and inputs of the model (Attachment 5). Also, Attachment 6, "ELA Cost Model", contains the data used and model outputs for the ELA district that used to derive production & purchase water costs reported in the WIRP report.

e. Cal Water states "More than 67% of the groundwater wells in this District are in poor condition and need to be replaced." (Capital Project Justifications – East Los Angeles District, page ELA PJ-41)

i. Please provide a list for each ACTIVE well in East Los Angeles that are identified under the "67 percentile" needing a replacement.

Response: The East Los Angeles (ELA) district is currently served by 11 Active wells. Of these, 6 wells have surpassed the region's median service life of 63 years (Common Plant PJ – page 403). Additionally, past inspections have identified heavy encrustation and tubercules within the well, which is an indicator of corrosion. See table below and attachments for additional detail.

Table 1. Summary of Active Wells Beyond Median Service Life in ELA

SP Code	Well	Status	Install Year	Year - O&M Activity	Description
ELA-W-013-02	13-02	Active	1950	2011	Well cleaning, brushing performed; Mn and Fe Surface Treatment on site. Well is 71 years old, beyond Median Survival Age of 63 years.
ELA-W-022-01	22-01	Active	1930	2010	Well brushed and video inspected. Well is 91 years old, beyond Median Survival Age of 63 years.
ELA-W-025-01	25-01	Active	1939	2014	Cleaning, brushing, video. Casing encrustation & tubercles. Well is 82 years old, beyond Median Survival Age of 63 years.
ELA-W-038-02	38-02	Active	1949	–	Mg and Fe Surface Treatment. Well is 72 years old, beyond Median Survival Age of 63 years.
ELA-W-043-01	43-01	Active	1949	2009	Cleaning, brushing; PCE Surface Treatment. Heavy encrustation and nodules on well casing. Well is 72 years old, beyond Median Survival Age of 63 years.
ELA-W-054-01	54-01	Active	1953	2017	Sanding records; Cleaning, brushing, well video indicates heavy scale. Well is 68 years old, beyond Median Survival Age of 63 years.

ii. Provide inspection/maintenance records for each well for the years 2010-2020. If inspection/maintenance records are not available, provide an explanation.

Response: Please see Attachment 8 as the summary of ELA Well O&M and Attachments 9 for more detailed information and historical records.

iii. Provide the annual maintenance and repair costs for the years 2010-2020. Include supporting documentation such as invoices. If the records are not available, provide an explanation. *All these data (for Q.1.e.i - iii can be assembled in an excel spreadsheet if it is easy to present that way.*

Response: Please see the historical data for well maintenance account in Attachment 10. Please note inspection work is often performed as part of a pump replacement project. These costs can be seen in the specific project attachments referenced in response to part ii of this question above.

f. What capacity does Cal Water expect the well to be built near Station 63 site will produce?

Response: Cal water expects about 3000 gpm production for this well.

g. What water quality issues does Cal Water expect the water to be extracted from the well built near Station 63 site, will have? Provide documentation to support response.

Response: Potential PFAS, 1,4-dioxane, and manganese concentrations. Please see Attachment 1 and Attachment 7.

Based on Cal Water's response in Q.1.g. above, what treatment does CWS expect the water to be extracted from the well built near Station 63 site will require?

Response: A combination of treatment methods including treatment for PFAS, 1,4-dioxane, and manganese concentrations. Exact treatment method will be dependent on specific water quality concentrations and speciation (e.g. PFAS long chain or PFAS short chain molecules) determined based on water quality identified after well is drilled.

Treatment methods could include:

- **PFAS (PFOA, PFOS, PFHxA, PFBS): Treatment options for PFAS could include one of the following treatment types:**
  - **Granular Activated Carbon (GAC) effective removal for many PFAS**
    - **Better media life for long-chain PFAS, e.g. PFOA, PFOS**
    - **Shorter media life for short-chain PFAS, e.g. PFHxA, PFBS**
    - **Not effective for removal of 1,4-dioxane**
  - **Ion Exchange (IX) effective for removal of most PFAS contaminants**

        - **Better media life for long-chain PFAS, e.g. PFOA, PFOS**
        - **Shorter media life for short-chain PFAS, e.g. PFHxA, PFBS**
        - **Not effective for removal of 1,4-dioxane**
    - **Low Pressure Reverse Osmosis (LPRO)**
        - **Effective for removal of PFAS**
        - **Potential 70-95% removal for 1,4-dioxane**
        - **Protects from future unidentified PFAS and emerging contaminants**
        - **Requires NPDES discharge permit or other disposal options of concentrate**
- **1,4-Dioxane: Treatment options for ¼ Doxane could include one of the following treatment types:**
    - **Ozone-Biofiltration**
        - **Partial removal of 1,4-dioxane**
        - **Not effective for most PFAS**
    - **Ultraviolet-Advanced Oxidation Process (UV-AOP)**
        - **Can oxidize 1,4-dioxane**
        - **Not effective for most PFAS**
- **Manganese: The most effective option for removal of manganese is:**
    - **Greensand filtration effective removal for manganese**

Attachment 1-5: 2014 Sanitary Survey California Water Service Company - East Los Angeles System No. 1910036, pg. 10

Table 10: Emergency Interconnections

Connected with	Tie-In Location	Status	Capacity (gpm)
Montebello Land and Water Company	Allston St. & 22nd St. (8" Connection)	Standby (Two way)	250
South Montebello ID	Vail Ave & Acco St. (8" Connection)	Standby (Two way)	500
City of Montebello	Elm St. & Vail Ave (10" Connection)	Standby (Two way)	1,000
Total Emergency Interconnections Capacity			**1,750**

2.4 Adequacy of Supply

Section 64554, Title 22 of the CCR, California Waterworks Standards mandates a public water system to have the capacity to meet the system's maximum day demand (MDD) at all times. CWSC-ELA has an instantaneous combined yield of approximately 31,540 gpm from the nine active groundwater wells and the three connections with MWDSC. The highest daily usage recorded during the period from 2005 to 2014 was in 2007 with 36.45 MGD (25,312.5 gpm). CWSC-ELA's current sources have enough capacities to meet the MDD.

Section 64554 (a) (1) of the *California Waterworks Standards* states that "For systems with 1,000 or more service connections, the system shall be able to meet four hours of peak hourly demand (PHD) with source capacity, storage capacity, and/or emergency source connections". Using the peaking factor of 1.5, times the average hourly consumption during the maximum demand day (1.52 MG per hour), the estimated PHD is 2.28 MG. The amount of water needed to meet four hours of PHD is 9.12 MG. CWSC-ELA's nine active wells can produce up to 1.98 MG in four hours. The MWDSC connections produce up to 5.59 MG in four hours. The three emergency interconnections with the Montebello Land and Water Company, South Montebello ID and the City of Montebello can provide up to 0.42 MG in four hours. The total storage capacity of CWSC-ELA's 16 tanks is approximately 22.0 MG. The Company's source capacities, storage capacities and emergency connections can meet the four hours of PDD.

2.5 Inactive Wells

CWSC-ELA has six inactive wells: Wells 19-03, 19-04, 20-01, 33-01, 37-01 and 56-01. Wells 19-03 and 19-04 and Well 20-01 have been inactive for more than 30 years. Well 33-01 and Well 56-01 have been inactive for more than 10 years. In 2007, Well 37-01 was placed into inactive status. Due to water quality issues, CWSC has no intention of reactivating these inactive wells in the future. However, due to financial constraints, CWSC was not able to properly destroy these wells. During the 2011 sanitary survey, the Division has advised CWSC to properly destroy the inactive wells if there is no plan to reactivate these wells in the future. During the 2014 sanitary survey, CWSC provided the Division with CWSC's Proposed Well Destruction Schedule. Table 11 summarizes the schedule.

Table 11: Proposed Well Destruction Schedule

Source	Status	Primary Station (PS) Code	Proposed Schedule of Destruction	Comments
Well 19-03	Inactive	1910036-008	2015	Included in CWSC's 2014/2015 budget.
Well 19-04	Inactive	1910036-009	2015	Included in CWSC's 2014/2015 budget.
Well 33-01	Inactive	1910036-018	2015	Included in CWSC's 2014/2015 budget.

Attachment 1-6: Engineering Report, For Consideration of the Permit Amendment Application from the California Water Service – East Los Angeles, December 31, 2021, pg. 3

removed Well 63-01 from service when the new RL for PFOA was established in February 2020. CWS has kept the status of the well as an active source and continued to sample the well for PFAS. The last sampling result in the Division's Water Quality Database was for a sample collected in September 2021. PFOA concentration of the sample was above the current NL but below the new RL. The PFOA concentration may increase once the well starts pumping again. CWS has proposed to equip the well with PFAS treatment prior to placing the well back into service.

On August 19, 2021, a permit amendment application dated August 18, 2021 was submitted by CWS to the Division, to add a GAC adsorption system at Station 63 for the removal of PFAS from the water produce by Well 63-01. The construction of the GAC treatment facility was commenced in July 2021 and completed in December 2021.

1.3. BRIEF DESCRIPTION OF THE SYSTEM

The CWS-ELA water system currently serves an estimated population of 151,576 people through 24,663 active service connections. It provides water to customers in portions of the cities of Commerce, Vernon and Montebello, and the unincorporated Los Angeles County area, known as East Los Angeles. The water system has eleven active groundwater wells, three active connections with MWDSC, and three emergency connections with the neighboring water systems, including one connection each with the Montebello Land and Water Company, South Montebello Irrigation District, and the City of Montebello. The system has seven inactive wells. Well 63-01, the subject of this permit investigations, is an active source but has been out of service since February 2020 due to elevated levels of PFAS. CWS has equipped this well with a GAC treatment facility for PFAS removal. CWS will place Well 63-01 back into service once the permit amendment for the new treatment facility is issued by the Division. Well 38-02 is another active source not in operation. The well has been removed from service since August 27, 2019, also due to elevated levels of PFAS. CWS has yet to decide whether to equip this well with treatment facility. Out of the 11 active groundwater sources in the ELA water system, Well 25-01 is the only well has no detection of PFOA or PFOS. PFAS treatment has already been provided for Wells 62-01 and 62-02.

The ELA water system also has 16 treated water storage tanks that provide about 25.83-MG of water storage for the 9 pressure zones in the distribution system. The system has additional 698 connections for fire suppression, street cleaning, line flushing, construction meters, temporary meters, among others

According to CWS's Annual Report to the Drinking Water Program, the ELA water system recorded a total water production of 4,636.85 MG in 2020. A total of 3,357.98 MG was produced by the groundwater wells, representing 72 percent of the total water supply, while 1,278.87 MG was purchased from MWDSC, representing 28 percent of the total water supply. Table 1.2 lists the sources and their capacities, and treatment provided for each source in the ELA water system.

Attachment 2-1: Capital Budget Summary and Details – Antelope Valley District

Table 2-A: Capital Budget Summary – Antelope Valley District

Antelope Valley	2021	2022	2023	2024	Annual Average
Cal Advocates	$ -	$ 370,857	$ 2,075,798	$ 679,679	$ 781,584
CWS	$ 2,037,342	$ 1,751,410	$ 2,860,559	$ 1,058,165	$ 1,926,869
CWS > Cal Advocates	$ 2,037,342	$ 1,380,553	$ 784,761	$ 378,485	$ 1,145,285
Cal Advocates as % CWS	0.00%	21.17%	72.57%	64.23%	40.56%

Table 2-B: Capital Budget Details – Antelope Valley District

2021	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2021		N/A	$ -	$ -	$ -	0.00%
2021		**Specific Total**	$ -	$ -	$ -	0.00%
2021	129-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2021		**Carry-Over Total**	$ -	$ 2,037,342	$ 2,037,342	0.00%
		TOTAL 2021	$ -	$ 2,037,342	$ 2,037,342	0.00%

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00123634	AV Wrigely Well Property Purch.	$ -	$ 572,857	$ 572,857	0.00%
2022	00125503	AV 2022 Physical Security Upgrades	$ 71,223	$ 58,121	$ (13,103)	122.54%
2022	00123509	AV Tank Exterior Ladder Lifelines	$ 42,988	$ 47,527	$ 4,539	90.45%
2022	00123727	AV 2022 Flowmeter Replacement	$ 31,936	$ 35,129	$ 3,194	90.91%
2022	00124925	AV 2022 Analyzer Replacements	$ 32,953	$ 36,248	$ 3,295	90.91%
2022	00123091	AV 2022 Vehicle Replacemnt Program	$ -	$ 92,718	$ 92,718	0.00%
2022	00123929	FMT 001-PT1 - Pressure Vessel Rplcm	$ -	$ 294,487	$ 294,487	0.00%
2022	00123199	LAN 001-T2 - Tank Retrofits	$ 5,727	$ 6,332	$ 605	90.44%
2022	00123499	LAN 001-T1 - CP Upgrade	$ 5,243	$ 13,413	$ 8,170	39.09%
2022	00123632	LAN 001-T2 - Seismic Retrofit	$ 79,849	$ 88,281	$ 8,432	90.45%
2022	00123636	LAN 001-T3 - Seismic Retrofit	$ 65,279	$ 72,173	$ 6,894	90.45%
2022	129MRP22	AV 2022 Main Replacement Program	$ -	$ 288,289	$ 288,289	0.00%
2022	AVD0900	Meter Replacement Program	$ 7,427	$ 10,334	$ 2,908	71.86%
2022	129UNSCH	Unscheduled Replacements	$ -	$ 1,230	$ 1,230	0.00%
2022		**Specific Total**	$ 342,625	$ 1,617,140	$ 1,274,514	21.19%
2022	129-NON-SP	**Non-specific Total**	$ 28,232	$ 35,290	$ 7,058	80.00%
2022		**Carry-Over Total**	$ -	$ 98,980	$ 98,980	0.00%
		TOTAL 2022	$ 370,857	$ 1,751,410	$ 1,380,553	21.17%

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00125504	AV 2023 Physical Security Upgrades	$ 83,433	$ 21,587	$ (61,845)	386.49%
2023	00123629	AV LV Sta 4 New 0.22MG Storage Tank	$ 1,058,446	$ 1,383,374	$ 324,928	76.51%
2023	00123764	AV 2023 Flowmeter Replacement	$ 33,367	$ 36,704	$ 3,337	90.91%
2023	00123829	LHUG 001-01 - Replace Pump & Motor	$ 20,321	$ 28,659	$ 8,337	70.91%
2023	00123831	LHUG 001-02 - Replace Pump & Motor	$ 20,321	$ 28,659	$ 8,337	70.91%
2023	00123834	LHUG 002-02 - Replace Pump & Motor	$ 24,408	$ 34,422	$ 10,014	70.91%
2023	00123827	FREM 001-01 - Replace Pump & Moto	$ 24,408	$ 34,422	$ 10,014	70.91%
2023	00123447	LHUG 003-T1 - CP Upgrade	$ 5,374	$ 13,748	$ 8,374	39.09%
2023	00125047	LAN 001: New Production Meter	$ 397,951	$ 500,162	$ 102,211	79.56%
2023	00125547	AV-LAN 001 Generator Replacement	$ 228,865	$ 264,466	$ 35,601	86.54%
2023	00123446	LEO 004-T1 - CP Upgrade	$ 5,374	$ 13,748	$ 8,374	39.09%
2023	00123986	AV-LEO Sta 04 Tank-1 Aeration	$ 54,892	$ 60,379	$ 5,487	90.91%
2023	00125371	AV-LEO 001 Replace Production Meter	$ 17,010	$ 22,196	$ 5,186	76.64%
2023	00125040	LEO 0004-T1: Tank Mixer	$ 62,150	$ 74,580	$ 12,430	83.33%
2023	129MRP23	AV 2023 Main Replacement Program	$ -	$ 295,496	$ 295,496	0.00%
2023	AVD0900	Meter Replacement Program	$ 10,593	$ 10,593	$ -	100.00%
2023	129UNSCH	Unscheduled Replacements	$ -	$ 1,261	$ 1,261	0.00%
2023		**Specific Total**	$ 2,046,915	$ 2,824,455	$ 777,540	72.47%
2023	129-NON-SP	**Non-specific Total**	$ 28,884	$ 36,105	$ 7,221	80.00%
2023		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2023	$ 2,075,798	$ 2,860,559	$ 784,761	72.57%

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00125505	AV 2024 Physical Security Upgrades	$ 81,631	$ 21,056	$ (60,576)	387.70%
2024	00123788	AV 2024 Flowmeter Replacement	$ -	$ 37,695	$ 37,695	0.00%
2024	00124250	Antelope Valley WSFMP	$ 109,352	$ 120,288	$ 10,936	90.91%
2024	00124343	Antelope Valley Reliability Study	$ 130,325	$ 142,192	$ 11,867	91.65%
2024	00124272	FMT Sta. 1 Panelboard Replacement	$ 230,017	$ 280,173	$ 50,156	82.10%
2024	00123480	LAN 001-T2 - CP Upgrade	$ 5,509	$ 14,092	$ 8,583	39.09%
2024	00124301	Leona Valley Portable Generator	$ 82,321	$ 90,553	$ 8,232	90.91%
2024	129MRP24	AV 2024 Main Replacement Program	$ -	$ 302,883	$ 302,883	0.00%
2024	AVD0900	Meter Replacement Program	$ 10,858	$ 10,858	$ -	100.00%
2024	129UNSCH	Unscheduled Replacements	$ -	$ 1,292	$ 1,292	0.00%
2024		**Specific Total**	$ 650,013	$ 1,021,082	$ 371,069	63.66%
2024	129-NON-SP	**Non-specific Total**	$ 29,666	$ 37,083	$ 7,417	80.00%
2024		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 679,679	$ 1,058,165	$ 378,485	64.23%

Table 2-C: Capital Budget vs. Recorded Expenditure – Antelope Valley District

Antelope Valley	2021	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	--	$ 563,915	100%
Cal Advocates	$ -	$ 370,857	$ 2,075,798	$ 679,679	$ 781,584	139%
CWS	$ 2,037,342	$ 1,751,410	$ 2,860,559	$ 1,058,165	$ 1,926,869	342%

Attachment 2-2: California Water Service Co. – Leona Valley System No. 1910242, 2014 DDW Sanitary Survey Inspection Report, dated June 5, 2015, pg. 3

3. Area Served

The Company's Leona Valley System serves the community of Leona Valley, an un-incorporated area in North Los Angeles County, ten miles west of Quartz Hill. The water system's service area consists of approximate two square miles in the Valley, generally bounded on the north by North Side Drive, on the east by East Bouquet Canyon Road, on the south by 95th to 96th Streets, and on the west by 107th Street. It is primarily residential, with a few commercial establishments. The terrain is undulating and scenic near the south end of the California Poppy Reserve.

4. Consumer Data

According to the Company's 2014 Annual Report to the Drinking Water Program, the Leona Valley System serves an estimated population of 1,256 persons through 419 active metered service connections. The average daily per capita water use is 313.4 gallons in 2014. Table 2 shows the numbers of population and service connections served by the water system during the last five years.

Table 2: Historical Population and Service Connection Data

		2010	2011	2012	2013	2014
Population		1,218	1,223	1,296	1,302	1,256
Service Connections	Residential	435	437	437	463	403
	Commercial	15	14	24	2	16
	Industrial	-	2	2	-	-
	Irrigation (Ag & Res.)	-	-	-	-	-
	Other Water Systems	-	-	-	11	-
	Total	450	453	463	476	419

Data Source: Annual Reports to the Drinking Water Program, 2010-2014, CWSC-Leona Valley

B. SOURCES

1. Purchased Water

The Company's Leona Valley System has one connection with AVEK, which supplies treated surface water from AVEK's Quartz Hill Treatment Plant. This 8-inch connection has a capacity of 1,100 gpm and feeds directly into the 90th Street Tank.

Table 3: Purchased Water

Source Name	PS Code	Size (inch)	Capacity (gpm)
Antelope Valley East Kern Water Agency (AVEK)	1910243-005	8	1,100

Attachment 2-3: Cal Water Response to Public Advocates Office Data Request DR ZS1-007

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Zaved Sarkar Utilities Engineer	Phone: Email:	(415) 703-3250 zaved.sarkar@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **September 24, 2021**	Request Received from CPUC: **September 16, 2021**
Re: **ZS1-007**	Requested Due Date: **September 24, 2021**
Subj: **AVD – Leona Valley Tank Replacement and Property Purchase**	

Comments:

- **Full response attached.**
- **Response provided by Engineering.**

- **Contains Confidential (Category 4) information.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – Well Data and Water Demand Data**
  - **Attachment #2 – CWSC_Wrigley Well 02_Work Plan**
  - **Attachment #3 – TM_Production Goal_Cal Water Leonna Valley**
  - **CONFIDENTIAL Attachment #4 – Private_Wells_WQ_Results**

Data Requests and Responses

1. Refer to PID# 123629: Leona Valley Storage Tank Replacement Station 4 (Capital Project Justifications – Antelope Valley District, page AVD PJ-30 to 42).

a. Cal Water states "The existing operational storage capacity in Leona Valley Water System is insufficient to the required volume in accordance with General Order 103-A and Title 22 § 64554". (Capital Project Justifications – Antelope Valley District, page AVD PJ-30).

i. For the Antelope Valley district and the 5 water systems operated under it, please use the attached Excel spreadsheet (tab: Well Data) to provide data on existing wells and interconnection - active, standby, and inactive. (Attachment 1)
Response: Please see Attachment 1, tab "Well Data".

ii. For the Leona Valley water system, please use the attached Excel spreadsheet (tab: Water Demand Data) to provide the demand data monthly and annually for the last 15 years.

Response: Please see Attachment 1, tab "Water Demand Data".

iii. What was the highest reported MDD in the last 10 years for Leona Valley water system, used for the analysis presented in AVD PJ-151 to 154?

Response: The highest MDD used as referenced in the table, is 429 gpm (1.5 factor of the max month during the period of available data at the time it was compiled).

2. Refer to PID# 123629: Leona Valley Well Property Purchase (Capital Project Justifications – Antelope Valley District, page AVD PJ-43 to 85).

a. Cal Water presented two studies conducted by Wood Rodgers: *Phase 1 – Leona Valley District Groundwater Supply Study (April 2020)* and a *Phase 2 – Plan to Achieve Production Goal Technical Memorandum (January 2021)*.

i. The Wood Rodgers report recommended Cal Water perform well testing at the Wrigley Wells sites (Well No 1 and Well No 2). Did Cal Water do any well testing to determine this location is the best location for an additional well? If so, please provide the report with supporting documents

Response: Before conducting a test, Cal Water needed to make contact with the owner of the site; contact was made earlier this year. The owner has provided permission to allow CWS to conduct a pump test, water quality sample and well video survey. This will allow CWS to validate sustained yield, well condition, and expected constituents on one well (Wrigley 2) since the other well is capped. As of now, Cal Water is currently in the process of obtaining proposals from well pump contractors and will

then have Wood Rodgers coordinate and oversee the test. The preliminary test date will be performed in October or early November due to scheduling and COVID work plans. As reference, please see the work plan document from Wood Rodgers as reference to conduct a test only on Wrigley Well 2 in Attachment 2.

ii. If the Wrigley Well location already has two existing wells with high-capacity yields, why does Cal Water propose to build another new well rather than repurpose these wells to be included in the system as source of groundwater?

Response: Cal Water does not own the property nor rights to the wells themselves. Well 1 is capped and Well 2 hasn't been operated by Cal Water in recent history due to lease expiration. Cal Water is planning to test Wrigley Well 2 to determine the yield and condition of the well. If the well is in good condition and high yielding, Cal Water intends to negotiate with the owner on obtaining the property and well. If the due diligence yields unfavorable results, Cal Water will pursue the next highest ranked property acquisition to develop a new groundwater supply well on.

1. Are these two existing wells in Wrigley Wells location owned and operated by someone else? If so, please provide details.

   Response: Please see response to question 2a(ii) above.

iii. Provide the supply capacity of the Wrigley Wells No1 and No 2.

Response: Well No 1 is capped. Well No 2 is anticipated to produce 80-90 gpm. However, Cal Water will be conducting a pump test to determine the exact capacity of this well.

iv. The Wood Rodgers report recommended Cal Water implement an exploratory drilling program "to further understand the groundwater quality and capacity in this area". (Page 15, *Phase 1 – Leona Valley District Groundwater Supply Study (April 2020)*).

1. Has Cal Water implemented an exploratory drilling program?

   Response: No. The approved scope did not include pilot holes. However, based on the historical yield and water quality data, the Wrigley well is a prime location to test. The well is readily accessible and will be a low cost option to determine the true flow/quality of the water compared to conducting dilling programs.

2. If yes, please provide documentation showing the results of these programs and how it helped Cal Water conclude that Wrigley Wells location itself the ideal location.

   Response: Please see the response to question 2a(iv)1.

3. If no, why didn't Cal Water implement an exploratory drilling program?

   Response: If the proposed site produces unfavorable results, Cal Water will further evaluate other potential sites prior to securing the property. Wood Rogers evaluated historical water quality from adjacent wells owned by Cal Water and other private wells in the vicinity to determine the best well sites. This is the typical approach versus drilling test wells, as this is a very high cost level of effort to appraise identified locations. Therefore, Cal Water proposes to begin with conducting a test on an existing well, as this is the more cost effective and prudent approach.

v. The Wood Rodgers report recommended Cal Water rehabilitate existing wells to possibly increase the capacity. (Page 15, *Phase 1 – Leona Valley District Groundwater Supply Study (April 2020)*).

1. Please explain with supporting documents why Cal Water has not proposed to rehabilitate the existing two wells in Leona Valley water system.

   Response: Cal Water is planning to rehabilitate these two wells. However, they have a low production capacity. Moreover, according to the Wood Rodgers report (the same mentioned in this question), Well 01-06 has a specific capacity that is significantly lower than other wells in this area. Well 01-06 also needs treatment for Nitrate, and Well 01-01 needs panelboard replacement. Even with these improvements, Cal Water still needs to increase its groundwater water supply capacity to meet its demands.

b. What water quality issues (elevated fluoride, nitrate, arsenic etc.) does Cal Water expect the water to be extracted from the new well proposed to be built at the Wrigleys Well location, will have? Provide documentation to support response.

Response: Historically, Wrigley Well No 2 did not require treatment since there were no water quality constituents of concern exceeding the MCL or SMCL levels. However, there are a few constituents that have been reported in our own wells and WQ taken from our

LV resident program. Results from our wells can be found in the "TM treatment alternative draft report" and results from the Leona residents can be found in the "Private Well Water Quality Results" (See Attachments 3 and 4). The two potential primary constituents of concern are fluoride and nitrate. Other secondary constituents that may be present are iron and manganese.

c. Based on Cal Water's response in Q.1.c. above, what treatment does CWS expect the water to be extracted from the well built at the Wrigleys Well location will require?

Response: In the "TM Treatment Alternative Draft Report", Wood Rodgers provided treatment alternatives on the constituents found in the LV Water System (See Attachment 3). It was recommended that blending well water at a central location may allow reduction of treatment plants. Costs for four treatment removal technologies are also included in the estimate. The treatment trains presented are oxididation/filtration, ion exchange, reverse osmosis and adsorption. Until the well is further analyzed, rehabilitated and CWS is able to collect representative water samples, CWS will not be able to confirm this is the property to purchase and what treatment may be required for the well.

Attachment 3-1: Capital Budget Summary and Details – Palos Verdes District

Table 3-A: Capital Budget Summary – Palos Verdes District

Palos Verdes	2021	2022	2023	2024	Annual Average
Cal Advocates	$ -	$ 4,766,028	$ 4,968,571	$ 7,127,362	$ 4,215,490
CWS	$ 17,125,829	$ 11,357,724	$ 14,633,752	$ 15,219,601	$ 14,584,227
CWS > Cal Advocates	$ 17,125,829	$ 6,591,696	$ 9,665,181	$ 8,092,240	$ 10,368,737
Cal Advocates as % CWS	0.00%	41.96%	33.95%	46.83%	28.90%

Table 3-B: Capital Budget Details – Palos Verdes District

2021	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2021		N/A	$ -	$ -	$ -	0.00%
2021		**Specific Total**	$ -	$ -	$ -	0.00%
2021	122-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2021		**Carry-Over Total**	$ -	$ 17,125,829	$ 17,125,829	0.00%
		TOTAL 2021	$ -	$ 17,125,829	$ 17,125,829	0.00%

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00124904	PV 27in Pipe CP System Upgrade	$ 36,463	$ 93,277	$ 56,814	39.09%
2022	00125481	PV 2022 Physical Security Upgrades	$ 71,223	$ 172,544	$ 101,321	41.28%
2022	00123389	PV 023-T1 - CP Upgrade	$ 5,243	$ 13,413	$ 8,170	39.09%
2022	00123530	PV Tank Exterior Ladder Lifelines	$ 49,918	$ 55,189	$ 5,270	90.45%
2022	00123934	PV Sta 37-New Water Strg Tnk-Design	$ -	$ 1,338,054	$ 1,338,054	0.00%
2022	00124174	PV 2022 Control Valve Overhaul	$ 295,379	$ 464,168	$ 168,788	63.64%
2022	00125272	PV 44 Vault Replacement	$ 80,183	$ 92,169	$ 11,986	87.00%
2022	00125270	PV 40 Vault Replacement	$ 78,325	$ 90,034	$ 11,709	87.00%
2022	00124225	PV 2022 Control Valve Replacement	$ 36,400	$ 116,077	$ 79,677	31.36%
2022	00125154	PV 2022 Sample Site	$ 5,183	$ 7,493	$ 2,310	69.17%
2022	00125640	PV Wildfire Zone C-635 New Main We	$ 971,255	$ 1,270,402	$ 299,147	76.45%
2022	00125644	PV Wildfire Zone H-1300 NewMain-PRV	$ 323,322	$ 422,905	$ 99,583	76.45%
2022	00123948	PV 2022 Customer Meter Vault Lids	$ 12,476	$ 13,724	$ 1,248	90.91%
2022	122MRP22	PV 2022 Main Replacement Program	$ 2,181,698	$ 2,310,862	$ 129,164	94.41%
2022	PVD0900	Meter Replacement Program	$ 303,587	$ 388,698	$ 85,111	78.10%
2022	122UNSCH	Unscheduled Replacements	$ -	$ 1,138,455	$ 1,138,455	0.00%
2022		**Specific Total**	$ 4,450,656	$ 7,987,463	$ 3,536,808	55.72%
2022	122-NON-SP	**Non-specific Total**	$ 315,372	$ 394,216	$ 78,843	80.00%
2022		**Carry-Over Total**	$ -	$ 2,976,046	$ 2,976,046	0.00%
		TOTAL 2022	$ 4,766,028	$ 11,357,724	$ 6,591,696	41.96%

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00125482	PV 2023 Physical Security Upgrades	$ 83,433	$ 651,648	$ 568,215	12.80%
2023	00124177	PV 2023 Control Valve Overhaul	$ 302,764	$ 475,772	$ 173,008	63.64%
2023	00124813	PV Station 37 Mixing and Dosing	$ 414,415	$ 520,854	$ 106,439	79.56%
2023	00124814	PV Station 49 Mixing and Dosing T-2	$ 425,557	$ 534,859	$ 109,302	79.56%
2023	00123752	PV 014-A Replace Pump & Motor	$ 24,269	$ 34,226	$ 9,957	70.91%
2023	00123758	PV 015-D Replace Pump & Motor	$ 34,119	$ 48,117	$ 13,998	70.91%
2023	00124274	PV 2023 Control Valve Replacement	$ 81,431	$ 255,926	$ 174,495	31.82%
2023	00125642	PV Wildfire Zone B-280 New Main	$ 719,116	$ 854,650	$ 135,534	84.14%
2023	00123949	PV 2023 Customer Meter Vault Lids	$ 12,788	$ 14,067	$ 1,279	90.91%
2023	122MRP23	PV 2023 Main Replacement Program	$ 2,236,241	$ 5,920,793	$ 3,684,552	37.77%
2023	PVD0900	Meter Replacement Program	$ 311,176	$ 398,415	$ 87,239	78.10%
2023	122UNSCH	Unscheduled Replacements	$ -	$ 1,166,916	$ 1,166,916	0.00%
2023		**Specific Total**	$ 4,645,309	$ 10,876,242	$ 6,230,933	42.71%
2023	122-NON-SP	**Non-specific Total**	$ 323,262	$ 404,077	$ 80,815	80.00%
2023		**Carry-Over Total**	$ -	$ 3,353,433	$ 3,353,433	0.00%
		TOTAL 2023	$ 4,968,571	$ 14,633,752	$ 9,665,181	33.95%

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00124232	PV Sta 014 Rebuild - Design	$ -	$ 411,026	$ 411,026	0.00%
2024	00125243	PV Install Pump Shelter	$ 36,568	$ 36,568	$ -	100.00%
2024	00125483	PV 2024 Physical Security Upgrades	$ 81,631	$ 140,024	$ 58,393	58.30%
2024	00124181	PV 2024 Control Valve Overhaul	$ 310,333	$ 487,666	$ 177,333	63.64%
2024	00124936	PV Station 46 Mixing and Dosing	$ 256,193	$ 321,994	$ 65,801	79.56%
2024	00124233	PV Sta 015 Rebuild Design	$ -	$ 890,490	$ 890,490	0.00%
2024	00124243	PV Sta 023 Rebuild Design	$ -	$ 493,968	$ 493,968	0.00%
2024	00124959	PV 015-PT1 - Saddle Retrofit	$ -	$ 12,101	$ 12,101	0.00%
2024	00124230	PV D-500 Main Replacement PDR	$ 1,296,719	$ 1,556,379	$ 259,660	83.32%
2024	00124281	PVD 2024 Control Valve Replacem.	$ 133,738	$ 420,319	$ 286,581	31.82%
2024	00125641	PV Wildfire Zone F-1325 New Main	$ 1,644,830	$ 1,894,225	$ 249,395	86.83%
2024	00123950	PV 2024 Customer Meter Vault Lids	$ 13,108	$ 14,418	$ 1,311	90.91%
2024	00124265	Palos Verdes WSFMP	$ 283,122	$ 311,434	$ 28,312	90.91%
2024	00124354	Palos Verdes Reliability Study	$ 128,736	$ 141,609	$ 12,873	90.91%
2024	122MRP24	PV 2024 Main Replacement Program	$ 2,292,147	$ 6,068,812	$ 3,776,666	37.77%
2024	PVD0900	Meter Replacement Program	$ 318,956	$ 408,376	$ 89,420	78.10%
2024	122UNSCH	Unscheduled Replacements	$ -	$ 1,196,089	$ 1,196,089	0.00%
2024		**Specific Total**	$ 6,796,081	$ 14,805,500	$ 8,009,419	45.90%
2024	122-NON-SP	**Non-specific Total**	$ 331,281	$ 414,102	$ 82,820	80.00%
2024		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 7,127,362	$ 15,219,601	$ 8,092,240	46.83%

Table 3-C: Capital Budget vs. Recorded Expenditure – Palos Verdes District

Palos Verdes	2021	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	--	$ 7,169,758	100%
Cal Advocates	$ -	$ 4,766,028	$ 4,968,571	$ 7,127,362	$ 4,215,490	59%
CWS	$ 17,125,829	$ 11,357,724	$ 14,633,752	$ 15,219,601	$ 14,584,227	203%

Attachment 3-2: 2015 Sanitary Survey California Water Service Company - Palos Verdes, pg. 7

Table 3: Emergency Connections

Water Systems	Size (Inch)	Capacity (gpm)	Location
Palos Verdes to Hermosa-Redondo	6	3,400	Palos Verdes Blvd
Palos Verdes to Hermosa-Redondo	6	4,200	Via Colusa
Palos Verdes to Hermosa-Redondo	6	1,500	Via Alameda

1.3 Source Capacity Evaluation

The Palos Verdes water system serves a population of 69,801 people through 24,140 active service connections (23,071 residential, 1,003 commercial, 5 landscape irrigation, 2 industrial and 59 others). The highest maximum day demand (MDD) during the past ten years is 33 MGD. The four active connections with MWDSC are capable of delivering 74.32 MGD of treated surface water. The Palos Verdes water system has enough source capacity to meet the maximum day demand, provided that MWDSC does not have water shortage problem.

Section 64554 (a) (1) of the *California Waterworks Standards* states that "For systems with 1,000 or more service connections, the system shall be able to meet four hours of peak hourly demand (PHD) with source capacity, storage capacity, and/or emergency source connections".

Using the peaking factor of 1.5, times the average hourly consumption (1.38 MG per hour) during the maximum demand day, the estimated PHD is 2.07 MG. The amount of water needed to meet four hours of PHD is 8.28 MG. The four active connections could deliver up to 12.39 MG in four hours. In addition, the system has a total of 30.7 MG storage capacity. The Company's Palos Verdes water system is capable of meeting the four hours of PHD requirement. It should be noted that the above evaluation does not address the fire and emergency demands.

2. Treatment

Water delivered by the Company's Palos Verdes system is treated by MWDSC at the Weymouth, Diemer and Jensen Filtration Plants. These treatment plants provide conventional filtration treatment and utilize chloramines as the secondary disinfectant. In addition, fluoridation treatment is provided at the treatment plants.

Attachment 4-1: Capital Budget Summary and Details – Dominguez District

Table 4-A: Capital Budget Summary – Dominguez District

Dominguez	2021	2022	2023	2024	Annual Average
Cal Advocates	$ -	$ 4,210,247	$ 3,818,662	$ 5,483,348	$3,378,064.27
CWS	$ 21,035,697	$ 17,910,269	$ 34,274,880	$ 25,274,372	$24,623,804.14
CWS > Cal Advocates	$ 21,035,697	$ 13,700,022	$ 30,456,218	$ 19,791,023	$21,245,739.87
Cal Advocates as % CWS	0.00%	23.51%	11.14%	21.70%	$0.14

Table 4-B: Capital Budget Details – Dominguez District

2021	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2021		N/A	$ -	$ -	$ -	0.00%
2021		**Specific Total**	$ -	$ -	$ -	0.00%
2021	128-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2021		**Carry-Over Total**	$ -	$ 21,035,697	$ 21,035,697	0.00%
		TOTAL 2021	$ -	$ 21,035,697	$ 21,035,697	0.00%

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00124408	DOM 290 Asphalt Replacement	$ 27,427	$ 30,025	$ 2,598	91.35%
2022	00124465	DOM WB 10 connection overhaul	$ 177,356	$ 194,156	$ 16,800	91.35%
2022	00125440	DOM 2022 Physical Security Upgrades	$ 71,223	$ 156,128	$ 84,905	45.62%
2022	00123133	DOM 203-T4 - CP Upgrade	$ 5,243	$ 13,413	$ 8,170	39.09%
2022	00123237	DOM 203-T3 - Tank Retrofits	$ 13,715	$ 15,164	$ 1,449	90.45%
2022	00123271	DOM 203-T2 - Tank Retrofits	$ 9,131	$ 10,095	$ 964	90.45%
2022	00123273	DOM 203-T4 - Tank Retrofits	$ 3,327	$ 3,678	$ 351	90.45%
2022	00123385	DOM 277-T1 - Tank Retrofits	$ 17,075	$ 18,877	$ 1,803	90.45%
2022	00123514	DOM Tank Exterior Ladder Lifelines	$ 21,289	$ 23,537	$ 2,248	90.45%
2022	00123599	DOM 2022 Control Valve Overhaul	$ 41,002	$ 65,901	$ 24,899	62.22%
2022	00123630	DOM 277-T1 - Seismic Retrofit	$ 100,981	$ 111,645	$ 10,663	90.45%
2022	00123596	DOM 2022 Control Valve Replacement	$ 68,238	$ 219,243	$ 151,005	31.12%
2022	00123968	DOM 2022 Flowmeter Replacement	$ 343,457	$ 51,492	$ (291,965)	667.02%
2022	00124395	Relocate SCADA WB-39 Connection	$ 55,811	$ 61,112	$ 5,301	91.33%
2022	00124444	DOM PRV/Vault @ 1610 E. Sepulveda	$ 287,031	$ 287,031	$ -	100.00%
2022	00125026	DOM 2022 Analyzer Replacement	$ 6,174	$ 6,791	$ 617	90.91%
2022	00123967	DOM 2022 Customer Meter Vault Lids	$ 49,905	$ 54,895	$ 4,990	90.91%
2022	128MRP22	DOM 2022 Main Replacement Program	$ 1,665,101	$ 4,958,842	$ 3,293,742	33.58%
2022	DOM0900	Meter Replacement Program	$ 704,036	$ 666,381	$ (37,656)	105.65%
2022	128UNSCH	Unscheduled Replacements	$ -	$ 1,049,490	$ 1,049,490	0.00%
2022		**Specific Total**	$ 3,667,522	$ 7,997,896	$ 4,330,374	45.86%
2022	128-NON-SP	**Non-specific Total**	$ 542,725	$ 678,406	$ 135,681	80.00%
2022		**Carry-Over Total**	$ -	$ 9,233,966	$ 9,233,966	0.00%
		TOTAL 2022	$ 4,210,247	$ 17,910,269	$ 13,700,022	23.51%

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00123393	DOM New Property Purchase	$ -	$ 1,270,946	$ 1,270,946	0.00%
2023	00123405	DOM 232 to Zone 1 Main Reliability	$ -	$ 2,323,832	$ 2,323,832	0.00%
2023	00124415	DOM 272 Asphalt Replacement	$ 41,729	$ 45,577	$ 3,848	91.56%
2023	00124482	DOM WB 21 connection overhaul	$ 182,209	$ 199,009	$ 16,800	91.56%
2023	00124500	DOM WB 14 connection overhaul	$ 266,915	$ 291,525	$ 24,610	91.56%
2023	00125441	DOM 2023 Physical Security Upgrades	$ 83,433	$ 77,032	$ (6,401)	108.31%
2023	00123600	DOM 2023 Control Valve Overhaul	$ 43,615	$ 70,043	$ 26,428	62.27%
2023	00123411	DOM Sta 279 Sta Rebuild - Design	$ -	$ 280,128	$ 280,128	0.00%
2023	00123415	DOM Sta 298 Sta Rebuild - Design	$ -	$ 280,128	$ 280,128	0.00%
2023	00123597	DOM 2023 Control Valve Replacement	$ 72,178	$ 231,853	$ 159,675	31.13%
2023	00123697	DOM 215-A Replace Pump & Motor	$ 57,342	$ 80,866	$ 23,525	70.91%
2023	00123738	DOM 275-01 Replace Pump & Motor	$ 57,342	$ 80,866	$ 23,525	70.91%
2023	00123743	DOM 298-01 Replace Pump & Motor	$ 92,354	$ 130,243	$ 37,889	70.91%
2023	00123973	DOM 2023 Flowmeter Replacement	$ -	$ 98,928	$ 98,928	0.00%
2023	00125028	DOM 2023 Analyzer Replacement	$ 25,453	$ 27,998	$ 2,545	90.91%
2023	00123419	DOM Sta 232 N Header Reliability	$ -	$ 2,468,873	$ 2,468,873	0.00%
2023	00123970	DOM 2023 Main Replacement Program	$ 51,152	$ 56,268	$ 5,115	90.91%
2023	128MRP23	DOM 2023 Customer Meter Vault Lids	$ 1,706,728	$ 5,082,813	$ 3,376,085	33.58%
2023	DOM0900	Meter Replacement Program	$ 582,055	$ 762,503	$ 180,448	76.33%
2023	128UNSCH	Unscheduled Replacements	$ -	$ 1,075,728	$ 1,075,728	0.00%
2023		**Specific Total**	$ 3,262,506	$ 14,935,162	$ 11,672,657	21.84%
2023	128-NON-SP	**Non-specific Total**	$ 556,156	$ 695,195	$ 139,039	80.00%
2023		**Carry-Over Total**	$ -	$ 18,644,522	$ 18,644,522	0.00%
		TOTAL 2023	$ 3,818,662	$ 34,274,880	$ 30,456,218	11.14%

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00123403	DOM Sta 219 Treatment Construction	$ -	$ 5,849,917	$ 5,849,917	0.00%
2024	00125444	DOM 2024 Physical Security Upgrades	$ 81,631	$ 100,293	$ 18,662	81.39%
2024	00123601	DOM 2024 Control Valve Overhaul	$ 45,968	$ 73,835	$ 27,867	62.26%
2024	00124830	DOM Sta 203 Tank Mixing & Dosing	$ 785,573	$ 1,031,995	$ 246,422	76.12%
2024	00123598	DOM 2024 Control Valve Replacement	$ 100,906	$ 323,356	$ 222,450	31.21%
2024	00123976	DOM 2024 Flowmeter Replacement	$ 365,853	$ 142,283	$ (223,570)	257.13%
2024	00124501	DOM WB 35 connection overhaul	$ 206,392	$ 226,392	$ 20,000	91.17%
2024	00124502	DOM WB 36 connection overhaul	$ 248,055	$ 270,655	$ 22,600	91.65%
2024	00124503	DOM WB 39 connection overhaul	$ 246,337	$ 268,337	$ 22,000	91.80%
2024	00125033	DOM 2024 Analyzer Replacement	$ 26,089	$ 28,698	$ 2,609	90.91%
2024	00125762	DOM Sta 300 Treatment Plant	$ -	$ 3,096,242	$ 3,096,242	0.00%
2024	00123971	DOM 2024 Customer Meter Vault Lids	$ 52,431	$ 57,674	$ 5,243	90.91%
2024	00124255	Dominguez WSFMP	$ 279,134	$ 311,434	$ 32,300	89.63%
2024	00124346	Dominguez Reliability Study	$ 128,736	$ 141,609	$ 12,873	90.91%
2024	128MRP24	DOM 2024 Main Replacement Program	$ 1,749,397	$ 5,209,884	$ 3,460,487	33.58%
2024	DOM0900	Meter Replacement Program	$ 596,607	$ 919,868	$ 323,262	64.86%
2024	128UNSCH	Unscheduled Replacements	$ -	$ 1,102,621	$ 1,102,621	0.00%
2024		**Specific Total**	$ 4,913,109	$ 19,155,094	$ 14,241,985	25.65%
2024	128-NON-SP	**Non-specific Total**	$ 570,239	$ 712,799	$ 142,560	80.00%
2024		**Carry-Over Total**	$ -	$ 5,406,479	$ 5,406,479	0.00%
		TOTAL 2024	$ 5,483,348	$ 25,274,372	$ 19,791,023	21.70%

Table 4-C: Capital Budget vs. Recorded Expenditure – Dominguez District

Dominguez	2021	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	--	$ 9,134,096	100%
Cal Advocates	$ -	$ 4,210,247	$ 3,818,662	$ 5,483,348	$ 3,378,064	37%
CWS	$ 21,035,697	$ 17,910,269	$ 34,274,880	$ 25,274,372	$ 24,623,804	270%

Attachment 4-2: Cal Water Response to Public Advocates Office Data Request DR ZS1-013

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Zaved Sarkar Utilities Engineer	Phone: Email:	(415) 703-3250 zaved.sarkar@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **November 22, 2021** Re: **ZS1-013 – Partial Response #2(Final)** Subj: **DOM – Treatments and Discharge Main**	Request Received from CPUC: **November 15, 2021** Requested Due Date: **November 22, 2021**

Comments:

- **Partial response #2 for Question 3b provided below (blue font).**
- **Response provided by Engineering.**

- **Does contain confidential (Category #2) information.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – Water Quality Results**
  - **Attachment #2 – DOM Purchased Water Cost**
  - **Attachment #3 – Water Quality Results for DOM 300-01 Zone 1**
  - **Attachment #4 – Water Quality Results for DOM 300-01 Zone 2**
  - **Attachment #5 – Water Quality Results for DOM 300-01 Zone 3**
  - Attachment #6 – **Confidential** Customer Complaints DOM last 10 years (Confid. Cat. #2)

Data Requests and Responses

1. Refer to PID# 123403: Multi-Stage Treatment Station 219 (**Capital Project Justifications – Dominguez District, page DOM PJ-45 to 53**).

   a. Provide water quality monitoring results for color, iron, manganese, Total Dissolved Solids, TCE, TOC, and methane for DOM Well 219-02, for the following timelines:

      i. For the three years prior to this well being taken offline.

      ii. Taken while the well was offline.

      iii. Most recent years after the well has been rehabilitated.

      Response: Please see Attachment #1. Please note that DOM Well 219-02 was rehabilitated twice, once in August 2007 and again in September 2020. Cal Water does not have any recorded data for color, iron, manganese, TCE, TOC, or methane for the three years prior to this well being taken offline or while it was removed from service, before the August 2007 well rehabilitation. Cal Water has included the Total Dissolved Solids for this well from a 2006 sample test. Additional water quality sampling that was to have taken place in 2021 is delayed until 2022 (see answer to question 1c below).

   b. Regarding the cost analysis included in Attachment A, page DOM PJ-53, explain why a 6% annual increase in purchased water cost was used along with any supporting documents/references.
      Response: A detailed summary of the historical purchase costs can be found in Attachment #2 and the current fiscal year schedules of Water Rates and Charges can be found on the West Basin Municipal Water District website.[1] Please note that Cal Water is a Tier 1 (non-interruptible Retail & Barrier) customer. In order to forecast future costs, Cal Water estimated the future increase to be 6% based on the average increase since 2010.

   c. Please provide the status of the DOM 219 Treatment Design Project (PID #114508), which was approved in last GRC.
      Response: To ensure appropriate treatment is designed for the plant and the well is capable of producing the anticipated yield, a rehabilitation was performed in September

[1] http://www.westbasin.org/finance/water-rates-charges/

2020. The water quality sample results varied substantially from historical data (see DOM PJ-46 & -47 for additional details). Cal Water's design consultant recommended to continuously exercise the well and collect additional water quality samples before finalizing the treatment recommendation to obtain accurate representative water quality to mitigate the risk of specifying incorrect or inadequate treatment processes. To facilitate longer term pumping, Cal Water determined it would be more cost-effective to purchase a well pump and motor to support the additional pumping and sampling. However, due to the unforeseen global material shortages, the pump equipment procurement and installation were significantly delayed by (8) months. The additional water quality sampling is projected to take place in the first quarter of 2022 and Corona, a Cal Water consultant, will complete final treatment recommendations based on the new data by the end of the second quarter of 2022.

2. Refer to PID# 123405: Station 232 Discharge Main Relocation (**Capital Project Justifications – Dominguez District, page DOM PJ-54 to 69**).
   a. Provide the leak/break history, repair history and other related information on the existing 20-inch discharge main segment proposed to be replaced and relocated.
   Response: The existing pipeline has no break history. The existing 20-inch main is a concrete cylinder pipe. Unlike steel pipe, when concrete pipe fails, it does so in a catastrophic manner.[2,3] A large section of the pipe typically cracks and fails all at once rather than a small leak propagating into a larger one. Given the size of the pipeline, the direct connection to a 5 MG tank, and the catastrophic nature of concrete cylinder pipe failures, it is likely that the entire contents of the tank would be discharged before a team could be coordinated to isolate the failure. The failure would most likely inundate and flood the adjacent community and nearby facilities, including a hospital, police department, large commercial parks, and the Madrona Marsh Preserve.
   b. Provide documentation on all inspections and conditional assessments of the existing pipe segment that Cal Water has performed in the last 10 years.
   Response: Cal Water has not performed any condition assessments on the existing pipe in the last 10 years. Performing a condition assessment on this pipe will require some level of destructive means, and any damage to this pipe could compromise the integrity of the entire existing main.
   c. Has there been instances where there was a significant issue with this discharge main which causes a loss or decrease in service for Zone 1 in Dominguez District?
      i. If yes, please provide incident reports and supporting documentations for such incidence(s).
      Response: Cal Water does not have any recorded information about incidents

[2] Xylem White Paper: *PCCP is Never Too Young (or Old) for a Check Up* (https://www.xylem.com/zh-cn/the-pipeline/assessment-services/pccp-is-never-too-young-or-old-for-a-check-up/)
[3] Rahman, et al. *Rehabilitation of Large Diameter PCCP: Relining and Sliplining with Steep Pipe* (ASCE 2012) (https://www.rwpipe.com/app/uploads/2020/08/Relining-Slipline-ASCE-2012.pdf)

specifically involving the discharge main. However, being the sole daily operating service for all of Zone 1, there is an outstanding concern over system resilience if this main were to fail. Should this singular main fail, this could result in widespread loss of pressure for all of the Zone 1 customers.

d. How frequently is the discharge main inspected?
Response: The discharge main is not on an inspection cycle given that the entire length of pipe is subterranean and for the issues described in the response to Question 2b.

3. Refer to PID# 125762: Multi-Stage Treatment Station 300 (**Capital Project Justifications – Dominguez District, page DOM PJ-106 to 122**).

a. Provide water quality monitoring result for manganese and dissolved oxygen for DOM Well 300-01 from 2015 to present.
Response: Cal Water has completed two water quality monitoring tests, once in April 2020 and May 2020, for manganese (Mn) and dissolved oxygen (DO_2) for DOM Well 300-01 from 2015 to present. Please see Table 1 below for the results.

Table 1: Water Quality Monitoring Results

	April 2020	May 2020
Mn	35 µg/L	36 µg/L
DO_2	1.8 mg/L	2.3 mg/L

b. Provide all customer complaints concerning odor, taste or smell received by Cal Water from customers served by stations in the vicinity of Well 300-01 in the last 10 years. Customer complaints should include both verbal and written complaints and Cal Water's resulting corrective actions and/or responses.
Response: Confidential Attachment No. 6 includes customer complaint data for the last 10 years for the northeast portion of the Dominguez district. The north east portion is the area that will be served by the future DOM 300-01 when it goes into service. However, the area in the vicinity of Well 300 is currently served exclusively by surface water. Therefore, the customer complaints are not related to the expected ground water quality from DOM 300-01 but from the existing purchased water.

c. Did CWS get an indication that the parcel of land that the Well 300-01 was constructed in could potentially have manganese issues?

i. If so, please provide details of all WQ testing CWS conducted before deciding to construct the Well 300-01.
Response: In 2015, HDR Inc. conducted a groundwater supply study for the Dominguez District. The Study identified potential areas for future groundwater well locations with favorable water quality. This "study area" used existing well data in the surrounding areas to estimate production and potential water quality.

Cal Water proceeded with purchase of the property since it was located within one of the identified "Study Areas".

Cal Water takes a multi-phase approach when constructing a new well. The initial step is to drill a "pilot" hole or exploratory hole which can be utilized for geophysical logging and water quality testing. The water quality sampling event is called in-zone testing. If this phase is successful and water production is available with good water quality, Cal Water proceeds to Phase 2 in which involves construction of the final well. If phase 1 is deemed unsuccessful, Cal Water would abandon the "pilot" hole.

Attachments #3-#5 show the initial in-zone water quality testing results for DOM 300-01. As shown in the sampling results, Zone 3 test results do show an elevated level of manganese at 70 µg/L.

Attachment 4-3: West Coast Basin Watermaster Reports 2017-2020

Appendix A - Groundwater Extractions (acre-feet)

Extractions 2016-17

7803- ABC Nursery, Inc.	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	3.00	6.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	4.00	0.00	5.00	22.00
003S013W29F011S/1	3.00	6.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	4.00	0.00	5.00	22.00

7826- Atlantic Richfield Co. (Oil Recovery)	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
004S013W21L002S/4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

7852- California Water Service Co./Hawthorne Lease	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	137.96	160.23	145.61	115.66	70.97	140.76	104.77	0.00	0.00	0.43	57.37	161.68	1,095.45
003S014W09N005S/12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
003S014W09M001S/13	137.96	160.23	145.61	115.66	70.97	140.76	104.77	0.00	0.00	0.43	57.37	161.68	1,095.44
003S014W09N004S/4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
003S014W09P001S/8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01

7850- California Water Service Company	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	119.45	145.10	132.87	144.44	144.10	150.57	105.92	84.06	92.99	92.45	91.55	93.01	1,386.21
003S014W32A002S/08-02	30.11	57.12	55.42	49.18	61.14	59.76	13.79	0.00	0.00	0.00	0.00	0.00	326.52
003S014W29J001S/22-01	89.34	87.23	77.45	95.26	82.96	90.59	90.11	83.45	92.99	92.45	91.55	93.01	1,066.39
003S014W29H001S/30-01	0.00	0.75	0.00	0.00	0.00	0.22	2.02	0.61	0.00	0.00	0.00	0.00	3.60

7853- California Water Service Company (Dominguez)	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	230.83	365.55	329.91	287.87	367.61	369.38	317.15	331.77	392.16	150.17	160.48	333.61	3,636.31
004S013W15A011S/215-01	83.26	87.23	80.92	84.91	87.46	86.53	86.57	77.30	86.02	84.59	79.65	88.86	1,013.30
004S013W15B005S/215-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
004S013W17D002S/219-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
004S013W17D003S/219-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Appendix A - Groundwater Extractions Continued

7052 - California Water Service Co./Hawthorne Lease	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	157.87	124.23	147.66	155.22	150.13	160.34	112.46	127.82	130.68	80.71	94.62	113.62	1,555.36
003S014W09N006S/12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
003S014W09M001S/13	157.87	124.23	147.66	155.22	150.13	160.34	112.46	127.82	130.68	80.71	94.62	113.62	1,555.36
003S014W09P001S/8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
003S014W09N004S/4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

7050 - California Water Service Company	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	83.00	90.42	89.24	100.81	82.20	100.24	96.86	87.25	98.10	93.46	97.10	67.62	1,086.30
003S014W32A002S/08-02	0.06	0.00	0.00	0.00	0.00	0.00	0.34	0.16	0.26	0.19	0.52	0.18	1.71
003S014W29J001S/22-01	82.64	90.42	89.24	100.81	82.20	100.24	96.52	87.09	97.60	93.05	96.18	67.32	1,083.31
003S014W29H001S/30-01	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.22	0.40	0.12	1.28

7053 - California Water Service Company (Dominguez)	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	328.02	380.53	236.96	225.33	385.85	373.11	418.11	282.87	327.09	370.05	413.30	318.53	4,059.75
004S013W17D002S/219-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
004S013W15F001S/277-01	59.27	88.18	87.40	97.01	96.05	100.26	113.61	71.56	98.46	91.87	88.69	0.46	990.82
004S013W15A011S/215-01	83.23	81.24	25.40	0.60	76.25	39.09	97.97	60.91	82.81	77.22	82.10	82.12	788.94
004S013W29E006S/275-01	0.00	0.21	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.67
004S013W17D003S/219-02	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
004S013W20C001S/279-01	34.29	86.18	46.47	117.54	85.74	99.65	110.44	68.05	96.89	53.70	90.03	88.87	977.85
004S013W15A006S/RCOMP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
004S013W15B006S/215-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
004S013W15A014S/298-01	148.84	121.47	71.46	0.70	127.80	134.11	96.09	82.35	50.93	147.26	152.48	146.93	1,280.42
004S013W11P002S/294-01	2.39	3.25	5.92	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.04

Appendix A - Groundwater Extractions (acre-feet)

7002 - ABC Nursery, Inc.	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	6.00	4.00	2.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	19.00
003S013W29F011S/1	6.00	4.00	2.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	19.00

7062 - California Water Service Co./Hawthorne Lease	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	60.17	98.93	98.74	81.38	58.87	92.78	81.72	42.08	83.34	72.68	69.29	32.53	872.51
003S014W09N001S/13	60.17	98.93	98.74	81.38	58.87	92.78	81.72	42.08	83.34	72.68	69.29	32.53	872.51

7050 - California Water Service Company	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	17.10	1.30	0.00	0.36	0.88	2.23	3.02	0.77	1.14	1.00	1.47	0.73	30.00
003S014W29H001S/30-01	0.23	0.00	0.00	0.17	0.00	0.00	0.23	0.00	0.00	0.45	0.52	0.00	1.60
003S014W32A002S/08-02	16.31	1.30	0.00	0.19	0.88	1.05	1.75	0.17	0.49	0.17	0.44	0.41	23.16
003S014W29J001S/22-01	0.56	0.00	0.00	0.00	0.00	1.18	1.04	0.60	0.65	0.38	0.51	0.32	5.24

7053 - California Water Service Company (Dominguez)	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	377.00	328.36	391.02	414.83	319.04	266.91	323.24	312.76	318.98	310.67	362.63	343.14	4,068.78
004S013W15A014S/298-01	152.62	44.58	130.17	147.71	61.70	33.12	150.51	146.24	154.71	150.36	132.17	154.19	1,458.08
004S013W11P002S/294-01	0.00	0.00	0.00	1.41	0.00	0.37	0.00	0.02	0.00	0.00	0.00	0.00	1.80
004S013W29E006S/275-01	0.00	0.50	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
004S013W20C001S/279-01	87.91	95.86	86.64	87.01	85.96	93.41	85.06	83.18	78.85	83.49	82.28	84.23	1,034.08
004S013W15F001S/277-01	46.78	94.33	90.19	92.27	90.95	95.36	87.67	81.05	85.42	77.02	69.10	70.81	980.95
004S013W15A011S/215-01	89.69	93.09	83.82	86.25	80.43	44.65	0.00	2.27	0.00	0.00	79.08	33.91	593.19

7093 - ConocoPhillips Company	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	483.57	263.93	206.62	237.22	382.78	421.81	466.84	420.80	429.36	400.16	471.53	471.43	4,656.05
004S013W11P003S/7	253.35	212.58	205.78	237.22	236.07	230.43	227.49	197.18	232.59	226.51	239.87	229.54	2,728.61
004S013W21J003S/5	225.62	51.34	0.84	0.00	146.71	191.38	239.35	223.62	196.77	173.65	230.10	228.93	1,909.31
004S013W31N004S/LA006	4.60	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	12.96	19.13

Appendix A - Groundwater Extractions (acre-feet)

7002 - ABC Nursery, Inc.	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	3.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	19.00
0035013W29F011S/1	3.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	19.00

7052 - California Water Service Co./Hawthorne Lease	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	73.80	70.54	47.94	63.71	56.91	44.14	54.82	51.07	50.52	26.82	48.69	47.95	636.91
0035014W09M001S/13	73.80	70.54	47.94	63.71	56.91	44.14	54.82	51.07	50.52	26.82	48.69	47.95	636.91

7050 - California Water Service Company	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	1.57	0.00	0.53	0.00	0.00	0.00	2.97	0.66	0.96	1.89	0.00	6.93	15.51
0035014W29J001S/22-01	0.73	0.00	0.22	0.00	0.00	0.00	0.47	0.37	0.53	0.65	0.00	4.78	7.75
0035014W32A002S/08-02	0.84	0.00	0.31	0.00	0.00	0.00	1.80	0.29	0.43	0.90	0.00	2.15	6.72
0035014W29H001S/30-01	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.34	0.00	0.00	1.04

7053 - California Water Service Company (Domingues)	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	385.91	339.00	293.99	393.14	351.15	282.78	216.42	252.39	376.18	259.60	163.07	182.89	3,496.52
0045013W15F001S/277-01	71.51	62.00	64.76	71.61	65.55	64.77	58.72	52.16	54.11	44.90	55.65	81.94	747.68
0045013W15A011S/215-01	76.09	91.06	93.99	99.73	89.49	84.15	74.21	90.08	80.13	32.09	36.61	64.15	911.78
0045013W15A014S/298-01	153.98	106.15	51.55	135.94	115.90	48.99	0.00	49.54	146.42	110.71	0.00	0.00	919.18
0045013W20C001S/279-01	84.33	79.79	83.69	85.86	80.21	84.87	83.49	60.61	95.52	71.90	70.81	36.80	917.88

7623 - Eco Services Operations, LLC	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	43.29	12.38	73.87	29.45	33.77	40.14	30.71	35.56	41.27	31.82	38.35	34.14	444.75
0045013W10C004S/2	43.29	12.38	73.87	29.45	33.77	40.14	30.71	35.56	41.27	31.82	38.35	34.14	444.75

7226 - Golden State Water Company	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SWN/Owner No.	6.88	67.88	306.42	804.65	277.70	2.27	88.95	263.11	452.98	479.91	435.45	341.06	3,527.26
0035014W13D006S/S0005	0.00	64.52	123.37	121.48	32.14	0.07	0.00	0.15	88.54	96.04	0.08	0.51	526.90

Attachment 4-4: 2021 Quality Data from Dominguez District

Attachment 5-1: Capital Budget Summary and Details – Hermosa Redondo District

Table 5-A: Capital Budget Summary – Hermosa Redondo District

Hermosa Redondo	2021	2022	2023	2024	Annual Average
Cal Advocates	$ -	$ 4,543,825	$ 5,970,931	$ 5,178,445	$ 3,923,300
CWS	$ 8,044,701	$ 9,263,033	$ 12,669,821	$ 9,436,496	$ 9,853,513
CWS > Cal Advocates	$ 8,044,701	$ 4,719,208	$ 6,698,889	$ 4,258,052	$ 5,930,212
Cal Advocates as % CWS	0.00%	49.05%	47.13%	54.88%	39.82%

Table 5-B: Capital Budget Details – Hermosa Redondo District

2021	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2021		N/A	$ -	$ -	$ -	0.00%
2021		**Specific Total**	$ -	$ -	$ -	0.00%
2021	108-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2021		**Carry-Over Total**	$ -	$ 8,044,701	$ 8,044,701	0.00%
		TOTAL 2021	$ -	$ 8,044,701	$ 8,044,701	0.00%

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00125451	HR 2022 Physical Security Upgrades	$ 71,223	$ 199,974	$ 128,751	35.62%
2022	00123387	HR 026-T2 - Tank Retrofits	$ 24,134	$ 26,682	$ 2,548	90.45%
2022	00123522	HR Tank Exterior Ladder Lifelines	$ 59,693	$ 65,995	$ 6,302	90.45%
2022	00123819	HR 2022 Control Valve Overhaul	$ 30,466	$ 48,996	$ 18,530	62.18%
2022	00123823	HR 2022 Control Valve Replacement	$ 75,048	$ 240,905	$ 165,857	31.15%
2022	00124179	HR 2022 Flowmeter Replacement	$ 117,069	$ 128,775	$ 11,707	90.91%
2022	00124379	HR SCADA and Meters HR-PV	$ 351,477	$ 387,904	$ 36,427	90.61%
2022	00124386	HR Meter at Prospect & Del Amo	$ 175,657	$ 192,344	$ 16,687	91.32%
2022	00124478	HR Via Colusa PBC	$ 123,484	$ 148,181	$ 24,697	83.33%
2022	00124487	HR Sta 30 Manual Transfer Switch	$ 63,941	$ 70,335	$ 6,394	90.91%
2022	00125155	HR 2022 Sample Site	$ 5,183	$ 7,493	$ 2,310	69.17%
2022	00125393	HR 2022 Vault Safety & Ops Imprvmnt	$ 299,953	$ 329,949	$ 29,996	90.91%
2022	00124008	HR 2022 Customer Meter Vault Lids	$ 24,952	$ 27,448	$ 2,495	90.91%
2022	108MRP22	HR 2022 Main Replacement Program	$ 2,379,300	$ 3,627,014	$ 1,247,714	65.60%
2022	HRD0900	Meter Replacement Program	$ 283,955	$ 454,177	$ 170,222	62.52%
2022	108UNSCH	Unscheduled Replacements	$ -	$ 1,356,784	$ 1,356,784	0.00%
2022		**Specific Total**	$ 4,085,534	$ 7,312,955	$ 3,227,421	55.87%
2022	108-NON-SP	**Non-specific Total**	$ 458,291	$ 572,864	$ 114,573	80.00%
2022		**Carry-Over Total**	$ -	$ 1,377,214	$ 1,377,214	0.00%
		TOTAL 2022	$ 4,543,825	$ 9,263,033	$ 4,719,208	49.05%

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00124449	HR 029 Chemical Building	$ 379,919	$ 526,186	$ 146,267	72.20%
2023	00125246	HR 28: Building Rebuild - Design	$ -	$ 18,025	$ 18,025	0.00%
2023	00125247	HR 008: Roof Replacement	$ 17,831	$ 17,831	$ -	100.00%
2023	00125453	HR 2023 Physical Security Upgrades	$ 83,433	$ 223,966	$ 140,533	37.25%
2023	00123178	HR 027-T1 - Tank Retrofits	$ 29,689	$ 32,911	$ 3,222	90.21%
2023	00123294	HR 2023 CP Upgrades	$ 14,157	$ 36,215	$ 22,058	39.09%
2023	00123353	HR 005-T2 - Tank Retrofits	$ 23,602	$ 26,163	$ 2,562	90.21%
2023	00123660	HR 029-T2 - Seismic Retrofit	$ 64,938	$ 71,986	$ 7,048	90.21%
2023	00123821	HR 2023 Control Valve Overhaul	$ 32,619	$ 52,377	$ 19,758	62.28%
2023	00124844	HR Sta 026 Tank Mix & Boost	$ 721,603	$ 947,958	$ 226,355	76.12%
2023	00123824	HR 2023 Control Valve Replacement	$ 76,557	$ 246,110	$ 169,554	31.11%
2023	00124184	HR 2023 Flowmeter Replacement	$ 85,040	$ 93,544	$ 8,504	90.91%
2023	00124960	HR 023 Tank Mixing & Boosting	$ 487,710	$ 595,683	$ 107,973	81.87%
2023	00124776	HR 029 AMMONIA INJECTION	$ 435,203	$ 571,721	$ 136,518	76.12%
2023	00125394	HR 2023 Vault Safety & Ops Imprvmnt	$ 293,453	$ 322,798	$ 29,345	90.91%
2023	00124010	HR 2023 Customer Meter Vault Lids	$ 25,576	$ 28,134	$ 2,558	90.91%
2023	108MRP23	Meter Replacement Program	$ 2,438,783	$ 3,717,689	$ 1,278,907	65.60%
2023	HRD0900	HR 2023 Main Replacement Program	$ 291,054	$ 465,531	$ 174,478	62.52%
2023	108UNSCH	Unscheduled Replacements	$ -	$ 1,390,704	$ 1,390,704	0.00%
2023		**Specific Total**	$ 5,501,165	$ 9,385,532	$ 3,884,366	58.61%
2023	108-NON-SP	**Non-specific Total**	$ 469,766	$ 587,208	$ 117,442	80.00%
2023		**Carry-Over Total**	$ -	$ 2,697,082	$ 2,697,082	0.00%
		TOTAL 2023	$ 5,970,931	$ 12,669,821	$ 6,698,889	47.13%

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00123890	HR Station 4 Panelboard Replacement	$ 280,016	$ 322,609	$ 42,593	86.80%
2024	00124429	HR 027 Sta Rebuild - Design	$ -	$ 218,219	$ 218,219	0.00%
2024	00125458	HR 2024 Physical Security Upgrades	$ 81,631	$ 191,039	$ 109,407	42.73%
2024	00123262	HR 005-T1 - Tank Retrofits	$ 8,847	$ 9,834	$ 987	89.97%
2024	00123822	HR 2024 Control Valve Overhaul	$ 34,328	$ 55,141	$ 20,813	62.26%
2024	00125257	HR 023-T2 Tank Retrofits	$ 47,760	$ 53,087	$ 5,327	89.96%
2024	00123825	HR 2024 Control Valve Replacement	$ 81,494	$ 261,743	$ 180,249	31.14%
2024	00124092	HR 005 Sta Rebuild - Design	$ -	$ 244,276	$ 244,276	0.00%
2024	00124186	HR 2024 Flowmeter Replacement	$ 87,322	$ 96,055	$ 8,732	90.91%
2024	00124339	HR 026 Sta Rebuild - Design	$ -	$ 189,038	$ 189,038	0.00%
2024	00124843	HR 005 Tank Mix & Boost	$ 499,903	$ 610,575	$ 110,672	81.87%
2024	00125395	HR 2024 Vault Safety & Ops Imprvmnt	$ 352,668	$ 387,935	$ 35,267	90.91%
2024	00124012	HR 2024 Customer Meter Vault Lids	$ 26,216	$ 28,837	$ 2,622	90.91%
2024	00124257	Hermosa Redondo WSFMP	$ 279,134	$ 311,434	$ 32,300	89.63%
2024	00124348	Hermosa Redondo Reliability Study	$ 128,736	$ 141,609	$ 12,873	90.91%
2024	108MRP24	HR 2024 Main Replacement Program	$ 2,499,752	$ 3,810,632	$ 1,310,879	65.60%
2024	HRD0900	Meter Replacement Program	$ 289,200	$ 477,169	$ 187,968	60.61%
2024	108UNSCH	Unscheduled Replacements	$ -	$ 1,425,471	$ 1,425,471	0.00%
2024		**Specific Total**	$ 4,697,008	$ 8,834,700	$ 4,137,692	53.17%
2024	108-NON-SP	**Non-specific Total**	$ 481,437	$ 601,796	$ 120,359	80.00%
2024		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 5,178,445	$ 9,436,496	$ 4,258,052	54.88%

Table 5-C: Capital Budget vs. Recorded Expenditure – Hermosa Redondo District

Hermosa Redondo	2021	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	--	$ 5,590,691	100%
Cal Advocates	$ -	$ 4,543,825	$ 5,970,931	$ 5,178,445	$ 3,923,300	70%
CWS	$ 8,044,701	$ 9,263,033	$ 12,669,821	$ 9,436,496	$ 9,853,513	176%

Attachment 6-1: Capital Budget Summary and Details – Westlake District

Table 6-A: Capital Budget Summary – Westlake District

Westlake	2021	2022	2023	2024	Annual Average
Cal Advocates	$ -	$ 986,951	$ 1,182,571	$ 1,456,029	$ 906,388
CWS	$ 1,018,087	$ 6,491,370	$ 2,799,714	$ 3,117,652	$ 3,356,706
CWS > Cal Advocates	$ 1,018,087	$ 5,504,419	$ 1,617,143	$ 1,661,623	$ 2,450,318
Cal Advocates as % CWS	0.00%	15.20%	42.24%	46.70%	27.00%

Table 6-B: Capital Budget Details – Westlake District

2021	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2021		N/A	$ -	$ -	$ -	0.00%
2021		**Specific Total**	$ -	$ -	$ -	0.00%
2021	123-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2021		**Carry-Over Total**	$ -	$ 1,018,087	$ 1,018,087	0.00%
		TOTAL 2021	$ -	$ 1,018,087	$ 1,018,087	0.00%

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00125459	WLK 7 Driveway & Wall - Design	$ -	$ 89,877	$ 89,877	0.00%
2022	00125478	WLK 2022 Physical Security Upgrades	$ 71,223	$ 113,258	$ 42,035	62.89%
2022	00123531	WLK Tank Exterior Ladder Lifelines	$ 8,315	$ 9,193	$ 878	90.45%
2022	00124183	WLK 2022 Control Valve Overhaul	$ 23,102	$ 36,303	$ 13,201	63.64%
2022	00124126	WLK 2022 Flowmeter Replacement	$ 15,574	$ 17,132	$ 1,557	90.91%
2022	00124149	WLK Wildfire New CV Golf Course Ct	$ 88,135	$ 105,762	$ 17,627	83.33%
2022	00123953	WLK 2022 Customer Meter Vault Lids	$ 24,952	$ 27,448	$ 2,495	90.91%
2022	123MRP22	WLK 2022 Main Replacement Program	$ 561,979	$ 1,331,242	$ 769,263	42.21%
2022	WLK0900	Meter Replacement Program	$ 73,833	$ 82,522	$ 8,689	89.47%
2022	123UNSCH	Unscheduled Replacements	$ -	$ 698,360	$ 698,360	0.00%
2022		**Specific Total**	$ 867,113	$ 2,511,096	$ 1,643,983	34.53%
2022	123-NON-SP	**Non-specific Total**	$ 119,838	$ 149,797	$ 29,959	80.00%
2022		**Carry-Over Total**	$ -	$ 3,830,477	$ 3,830,477	0.00%
		TOTAL 2022	$ 986,951	$ 6,491,370	$ 5,504,419	15.20%

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00125479	WLK 2023 Physical Security Upgrades	$ 83,433	$ 106,586	$ 23,153	78.28%
2023	00124185	WLK 2023 Control Valve Overhaul	$ 23,679	$ 37,210	$ 13,531	63.64%
2023	00124151	WLK Sta. 7 Tank Mixing	$ 233,730	$ 263,531	$ 29,801	88.69%
2023	00123959	WLK 2023 Customer Meter Vault Lids	$ 25,576	$ 28,134	$ 2,558	90.91%
2023	00123789	WLK 2023 Vehicle Replacemnt Program	$ 41,544	$ 45,698	$ 4,154	90.91%
2023	123MRP23	WLK 2023 Main Replacement Program	$ 576,029	$ 1,364,523	$ 788,494	42.21%
2023	WLK0900	Meter Replacement Program	$ 75,679	$ 84,586	$ 8,907	89.47%
2023	123UNSCH	Unscheduled Replacements	$ -	$ 715,819	$ 715,819	0.00%
2023		**Specific Total**	$ 1,059,669	$ 2,646,087	$ 1,586,417	40.05%
2023	123-NON-SP	**Non-specific Total**	$ 122,902	$ 153,628	$ 30,726	80.00%
2023		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2023	$ 1,182,571	$ 2,799,714	$ 1,617,143	42.24%

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00125480	WLK 2024 Physical Security Upgrades	$ 81,631	$ 91,498	$ 9,867	89.22%
2024	00123498	WLK 007-T1 - CP Upgrade	$ 5,509	$ 14,092	$ 8,583	39.09%
2024	00124187	WLK 2024 Control Valve Overhaul	$ 24,271	$ 38,140	$ 13,869	63.64%
2024	00124413	WLK 2024 Flowmeter Replacement	$ 142,662	$ 156,928	$ 14,266	90.91%
2024	00124150	WLK Sta. 6 Tank Mixing	$ 245,563	$ 270,119	$ 24,556	90.91%
2024	00123965	WLK 2024 Customer Meter Vault Lids	$ 26,216	$ 28,837	$ 2,622	90.91%
2024	00124357	Westlake Reliability Study	$ 127,146	$ 141,609	$ 14,463	89.79%
2024	123MRP24	WLK 2024 Main Replacement Program	$ 590,429	$ 1,398,636	$ 808,206	42.21%
2024	WLK0900	Meter Replacement Program	$ 86,701	$ 86,701	$ -	100.00%
2024	123UNSCH	Unscheduled Replacements	$ -	$ 733,715	$ 733,715	0.00%
2024		**Specific Total**	$ 1,330,128	$ 2,960,275	$ 1,630,148	44.93%
2024	123-NON-SP	**Non-specific Total**	$ 125,901	$ 157,377	$ 31,475	80.00%
2024		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 1,456,029	$ 3,117,652	$ 1,661,623	46.70%

Table 6-C: Capital Budget vs. Recorded Expenditure – Westlake District

Westlake	2021	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	--	$ 3,557,715	100%
Cal Advocates	$ -	$ 986,951	$ 1,182,571	$ 1,456,029	$ 906,388	25%
CWS	$ 1,018,087	$ 6,491,370	$ 2,799,714	$ 3,117,652	$ 3,356,706	94%

Attachment 7-1: Capital Budget Summary and Details – Travis AFB District

Table 7-A: Capital Budget Summary – Travis AFB District

Travis AFB	2021	2022	2023	2024	Annual Average
Cal Advocates	$ -	$ 1,495,878	$ 1,029,400	$ 622,551	$ 786,958
CWS	$ 2,106,357	$ 2,274,364	$ 10,000,745	$ 4,116,501	$ 4,624,492
CWS > Cal Advocates	$ 2,106,357	$ 778,486	$ 8,971,344	$ 3,493,950	$ 3,837,534
Cal Advocates as % CWS	0.00%	65.77%	10.29%	15.12%	17.02%

Table 7-B: Capital Budget Details – Travis AFB District

2021	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2021		N/A	$ -	$ -	$ -	0.00%
2021		**Specific Total**	$ -	$ -	$ -	0.00%
2021	157-NON-SP	**Non-specific Total**	$ -	$ -	$ -	0.00%
2021		**Carry-Over Total**	$ -	$ 2,106,357	$ 2,106,357	0.00%
		TOTAL 2021	$ -	$ 2,106,357	$ 2,106,357	0.00%

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00126095	TAB Station 1 Vault Replacement	$ 157,381	$ 173,119	$ 15,738	90.91%
2022	00126039	TAB 1525 (T2) - Tank Retrofits	$ 91,331	$ 100,976	$ 9,644	90.45%
2022	00126041	TAB Tanks-Remove Ext Ladder Cage	$ 50,609	$ 55,670	$ 5,061	90.91%
2022	00126096	TAB Sta 1 Flowmeter Replacement	$ 26,195	$ 28,815	$ 2,620	90.91%
2022	00126030	TAB Replace 10 Gate Valves	$ 251,125	$ 276,237	$ 25,112	90.91%
2022	00126085	TAB Backflow Device Replacement	$ 526,671	$ 579,338	$ 52,667	90.91%
2022	00126120	TAB 2022 Hydrant Replacement	$ 149,761	$ 164,737	$ 14,976	90.91%
2022	157UNSCH	Unscheduled Replacements	$ -	$ 61,183	$ 61,183	0.00%
2022		**Specific Total**	$ 1,253,074	$ 1,440,075	$ 187,002	87.01%
2022	157-NON-SP	**Non-specific Total**	$ 242,805	$ 303,506	$ 60,701	80.00%
2022		**Carry-Over Total**	$ -	$ 530,783	$ 530,783	0.00%
		TOTAL 2022	$ 1,495,878	$ 2,274,364	$ 778,486	65.77%

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00125908	TAB Station 3 Overhaul	$ 157,381	$ 1,541,362	$ 1,383,981	10.21%
2023	00126031	TAB Replace 10 Gate Valves	$ 257,403	$ 283,143	$ 25,740	90.91%
2023	00126086	TAB Backflow Device Replacement	$ 365,748	$ 402,902	$ 37,154	90.78%
2023	157UNSCH	Unscheduled Replacements	$ -	$ 62,713	$ 62,713	0.00%
2023		**Specific Total**	$ 780,532	$ 2,290,120	$ 1,509,588	34.08%
2023	157-NON-SP	**Non-specific Total**	$ 248,868	$ 311,086	$ 62,217	80.00%
2023		**Carry-Over Total**	$ -	$ 7,399,539	$ 7,399,539	0.00%
		TOTAL 2023	$ 1,029,400	$ 10,000,745	$ 8,971,344	10.29%

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00126088	TAB Backflow Device Replacement	$ 367,489	$ 404,238	$ 36,749	90.91%
2024	157UNSCH	Unscheduled Replacements	$ -	$ 64,281	$ 64,281	0.00%
2024		**Specific Total**	$ 367,489	$ 468,518	$ 101,029	78.44%
2024	157-NON-SP	**Non-specific Total**	$ 255,062	$ 318,828	$ 63,766	80.00%
2024		**Carry-Over Total**	$ -	$ 3,329,155	$ 3,329,155	0.00%
		TOTAL 2024	$ 622,551	$ 4,116,501	$ 3,493,950	15.12%

Table 7-C: Capital Budget vs. Recorded Expenditure – Travis AFB District

Travis AFB	2021	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	--	$ -	0%
Cal Advocates	$ -	$ 1,495,878	$ 1,029,400	$ 622,551	$ 786,958	0%
CWS	$ 2,106,357	$ 2,274,364	$ 10,000,745	$ 4,116,501	$ 4,624,492	588%

Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	Zaved Sarkar
Witness(es)	:	Brian Lui

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

Report Attachment

Attachment 4-4 for

Report on Plant for Los Angeles County and South Bay Regions, East Los Angles, Westlake, and Travis AFB Districts, and Special Request #9

California Water Service Company

Test Year 2023 General Rate Case

A.21-07-002

San Francisco, California
February 4, 2022

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2020 GENERAL PHYSICAL SUMMARY

Dominguez District

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 **Report Month: January** **Year: 2020**

General Physical is Collected: Monthly

January

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	01/08 13:27	ND	1	8.5	22.6	ND
DOM-D-002R	01/08 13:16	ND	1	8.5	23.6	0.10
DOM-D-003	01/08 11:57	ND	1	8.6	20.1	0.21
DOM-D-004	01/08 11:27	ND	1	8.3	16.6	0.16
DOM-D-005	01/08 11:38	5	1	8.4	23.3	0.16
DOM-D-006	01/15 10:40	ND	1	8.1	16.9	0.30
DOM-D-007	01/15 10:18	ND	1	8.2	16.9	0.14
DOM-D-008	01/15 10:06	5	1	8.2	16.6	0.15
DOM-D-009	01/15 09:55	ND	1	8.2	17.3	0.18
DOM-D-010	01/15 08:50	ND	ND	7.8	15.4	0.11
DOM-D-011	01/08 13:52	ND	1	7.0	19.4	0.11
DOM-D-012	01/08 13:34	ND	1	7.0	19.4	ND
DOM-D-013	01/08 13:04	ND	1	7.0	17.2	0.12
DOM-D-014	01/08 13:19	ND	1	6.9	18.3	0.17
DOM-D-015	01/08 12:18	ND	ND	6.9	20.1	0.13
DOM-D-016	01/15 11:51	ND	1	8.2	18.8	0.16
DOM-D-017	01/15 13:13	ND	1	8.2	17.9	0.12
DOM-D-018	01/15 13:34	ND	ND	8.2	17.4	0.15
DOM-D-019	01/22 09:39	ND	ND	7.7	16.1	0.20
DOM-D-020	01/22 09:50	ND	ND	7.9	15.3	0.23
DOM-D-021	01/15 09:07	ND	1	7.4	14.7	0.14
DOM-D-022	01/15 09:24	ND	1	8.1	15.6	0.12
DOM-D-023	01/22 10:05	ND	1	8.0	15.0	0.19
DOM-D-024	01/22 10:16	ND	ND	8.1	16.4	0.20
DOM-D-025	01/22 10:52	ND	1	8.4	20.1	ND
DOM-D-026	01/22 11:05	ND	1	8.4	21.1	0.18
DOM-D-027	01/22 09:51	ND	2	8.1	21.3	0.27
DOM-D-028	01/22 10:09	ND	1	8.2	18.6	0.21
DOM-D-029	01/22 14:22	ND	1	8.2	20.3	0.18
DOM-D-030	01/22 10:24	ND	1	8.3	19.7	0.11

Number of Samples Collected for this Month: 30

*** Temp and pH were not collected for this Distribution Point by the Sampler**

Talli Jap
Manager of Water Quality

2/6/20
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 **Report Month: February** **Year: 2020**

General Physical is Collected: Monthly

February

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	02/05 13:47	ND	2	8.2	19.6	0.15
DOM-D-002R	02/05 13:27	ND	2	8.2	19.3	0.11
DOM-D-003	02/05 13:11	ND	2	8.2	19.6	0.22
DOM-D-004	02/05 11:42	ND	2	8.3	19.3	0.18
DOM-D-005	02/05 11:57	ND	2	8.3	19.1	0.29
DOM-D-006	02/12 11:22	3	2	8.1	18.4	0.30
DOM-D-007	02/12 11:06	ND	2	8.3	17.5	0.20
DOM-D-008	02/12 10:49	ND	1	8.3	17.8	0.12
DOM-D-009	02/12 10:32	ND	1	8.2	17.7	ND
DOM-D-010	02/12 09:08	ND	2	7.3	16.9	0.21
DOM-D-011	02/05 10:28	ND	1	8.3	15.4	0.15
DOM-D-012	02/05 10:15	ND	2	8.2	15.1	0.12
DOM-D-013	02/05 09:42	ND	ND	8.2	13.3	0.13
DOM-D-014	02/05 09:54	ND	2	8.3	13.2	0.16
DOM-D-015	02/05 09:01	ND	ND	8.1	15.6	0.19
DOM-D-016	02/12 09:12	3	2	7.7	14.3	0.13
DOM-D-017	02/12 09:22	3	1	8.0	15.2	0.16
DOM-D-018	02/12 09:34	ND	2	8.1	14.7	0.20
DOM-D-019	02/19 09:34	ND	2	8.0	16.3	0.19
DOM-D-020	02/19 09:53	ND	2	8.1	17.2	0.23
DOM-D-021	02/12 10:53	ND	1	8.4	18.4	0.30
DOM-D-022	02/12 11:12	ND	2	8.3	17.3	0.25
DOM-D-023	02/19 10:08	ND	2	8.2	16.6	0.25
DOM-D-024	02/19 10:23	ND	2	8.2	17.0	0.24
DOM-D-025	02/19 13:42	ND	2	8.2	17.2	0.20
DOM-D-026	02/19 13:59	ND	1	8.1	18.0	0.21
DOM-D-027	02/19 14:21	ND	2	8.2	17.3	0.18
DOM-D-028	02/19 14:40	ND	2	8.3	17.4	0.25
DOM-D-029	02/19 13:09	ND	2	8.3	22.2	0.29
DOM-D-030	02/19 13:24	ND	1	8.3	18.0	0.19

Number of Samples Collected for this Month: 30

*** Temp and pH were not collected for this Distribution Point by the Sampler**

Talli Fay
Manager of Water Quality

3/4/20
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 **Report Month: March** **Year: 2020**

General Physical is Collected: Monthly

March

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	03/04 13:42	5	1	8.4	23.4	0.11
DOM-D-002R	03/04 13:57	5	1	8.4	25.4	0.16
DOM-D-003	03/04 11:32	ND	2	8.4	23.4	0.17
DOM-D-004	03/04 11:09	ND	1	8.3	23.2	0.23
DOM-D-005	03/04 11:21	5	1	8.4	23.0	0.13
DOM-D-006	03/11 10:38	ND	ND	8.1	19.1	0.24
DOM-D-007	03/11 10:04	ND	2	8.2	19.2	0.21
DOM-D-008	03/11 09:53	ND	1	8.1	19.5	0.22
DOM-D-009	03/11 09:43	ND	1	8.0	18.8	0.16
DOM-D-010	03/11 08:47	ND	1	7.7	18.1	0.18
DOM-D-011	03/04 14:23	ND	1	8.3	19.8	0.18
DOM-D-012	03/04 14:05	ND	1	8.3	18.7	0.15
DOM-D-013	03/04 13:27	ND	1	8.2	19.9	0.20
DOM-D-014	03/04 13:47	ND	2	8.2	20.9	0.11
DOM-D-015	03/11 12:01	ND	1	8.1	20.0	0.20
DOM-D-016	03/11 11:43	ND	1	8.2	21.0	ND
DOM-D-017	03/11 13:12	ND	1	8.2	19.8	0.14
DOM-D-018	03/11 13:35	ND	1	8.2	18.8	0.12
DOM-D-019	03/18 10:25	ND	1	7.8	14.8	0.20
DOM-D-020	03/18 10:35	ND	1	8.0	15.8	0.19
DOM-D-021	03/11 09:02	ND	2	6.7	17.2	0.15
DOM-D-022	03/11 09:20	ND	2	7.8	17.9	0.32
DOM-D-023	03/18 10:46	ND	2	8.1	16.6	0.13
DOM-D-024	03/18 11:02	ND	1	8.2	16.7	0.19
DOM-D-025	03/18 10:55	ND	2	8.1	17.7	0.28
DOM-D-026	03/18 11:12	ND	1	8.1	19.2	0.20
DOM-D-027	03/18 09:55	ND	1	8.1	17.8	0.10
DOM-D-028	03/18 10:16	ND	1	8.1	17.1	0.10
DOM-D-029	03/18 14:54	ND	2	8.2	22.1	0.12
DOM-D-030	03/18 10:35	ND	1	8.1	17.0	0.19

Number of Samples Collected for this Month: 30

*** Temp and pH were not collected for this Distribution Point by the Sampler**

Manager of Water Quality **Date**

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 **Report Month: April** **Year: 2020**

General Physical is Collected: Monthly

April

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	04/15 13:00	ND	1	8.40	23.9	0.15
DOM-D-002R	04/15 12:38	ND	2	8.30	22.2	0.21
DOM-D-003	04/15 12:20	ND	1	8.20	24.3	ND
DOM-D-004	04/15 10:47	ND	ND	8.00	20.9	0.18
DOM-D-005	04/15 11:20	10	2	8.20	25	0.2
DOM-D-006	04/22 10:58	3	1	8.10	22	0.26
DOM-D-007	04/22 10:36	ND	1	8.20	20.2	0.21
DOM-D-008	04/22 10:15	ND	1	8.20	21.1	0.21
DOM-D-009	04/22 09:53	ND	ND	8.10	20.7	0.11
DOM-D-010	04/22 08:21	ND	ND	6.90	19.6	0.21
DOM-D-011	04/15 12:21	ND	1	8.20	24.7	0.11
DOM-D-012	04/15 12:11	ND	1	8.10	26	0.12
DOM-D-013	04/15 11:48	ND	1	8.10	24.1	0.18
DOM-D-014	04/15 11:58	ND	1	8.10	26.8	0.17
DOM-D-015	04/15 11:07	ND	1	8.10	28.2	0.26
DOM-D-016	04/22 10:56	ND	1	8.10	25.1	0.11
DOM-D-017	04/22 11:14	ND	2	8.10	19.5	0.13
DOM-D-018	04/22 13:21	ND	1	7.90	21	0.13
DOM-D-019	04/29 08:38	ND	ND	7.60	18.9	ND
DOM-D-020	04/29 09:02	ND	ND	8.00	23.8	ND
DOM-D-021	04/22 08:21	ND	ND	6.60	17.4	ND
DOM-D-022	04/22 08:36	ND	ND	6.70	20.3	0.11
DOM-D-023	04/29 09:25	ND	ND	8.10	21.9	ND
DOM-D-024	04/29 09:50	ND	ND	8.10	22.2	ND
DOM-D-025	04/29 13:43	ND	2	8.20	32.4	ND
DOM-D-026	04/29 14:09	ND	2	8.00	26.9	0.17
DOM-D-027	04/29 10:46	ND	2	8.10	26.6	0.19
DOM-D-028	04/29 11:22	ND	2	8.20	25.8	ND
DOM-D-029	04/29 14:20	ND	2	8.20	24	ND
DOM-D-030	04/29 11:41	ND	2	8.20	23.4	ND

Number of Samples Collected for this Month: 30

*** Temp and pH were not collected for this Distribution Point by the Sampler**

Manager of Water Quality **Date**

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 **Report Month: May** **Year: 2020**

General Physical is Collected: Monthly

May

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	05/06 13:58	ND	1	8.20	27.1	0.1
DOM-D-002R	05/06 13:43	ND	ND	7.80	29.2	ND
DOM-D-003	05/06 11:56	ND	1	8.30	28.3	0.2
DOM-D-004	05/06 11:12	ND	1	7.80	24.9	0.19
DOM-D-005	05/06 11:39	3	2	8.20	32.4	0.16
DOM-D-006	05/13 10:48	5	1	8.10	25.3	0.3
DOM-D-007	05/13 10:28	ND	1	8.20	25.8	0.12
DOM-D-008	05/13 10:14	ND	1	8.20	22.2	0.14
DOM-D-009	05/13 10:05	ND	1	8.20	23.4	0.18
DOM-D-010	05/13 07:57	ND	ND	7.90	18.7	0.12
DOM-D-011	05/06 14:30	ND	ND	8.20	21.9	ND
DOM-D-012	05/06 14:10	ND	1	8.20	21.3	0.11
DOM-D-013	05/06 13:31	ND	1	8.20	20.6	0.11
DOM-D-014	05/06 13:52	ND	1	8.20	21.5	0.12
DOM-D-015	05/06 12:33	ND	1	8.20	22.9	0.18
DOM-D-016	05/13 10:55	ND	1	7.00	22.1	0.12
DOM-D-017	05/13 12:20	ND	1	7.50	20.6	0.14
DOM-D-018	05/13 12:36	ND	ND	7.50	19.7	0.21
DOM-D-019	05/20 08:16	ND	ND	7.70	20.4	0.11
DOM-D-020	05/20 08:26	ND	ND	7.80	23.7	0.13
DOM-D-021	05/13 08:02	ND	ND	6.80	19.7	0.1
DOM-D-022	05/13 08:19	ND	ND	7.30	21.1	0.17
DOM-D-023	05/20 08:42	ND	ND	8.00	25.3	0.14
DOM-D-024	05/20 08:58	ND	ND	8.10	22.3	0.2
DOM-D-025	05/20 09:44	ND	ND	7.90	23.9	0.12
DOM-D-026	05/20 10:06	ND	2	7.90	23.7	0.24
DOM-D-027	05/20 08:26	ND	ND	8.00	21.5	ND
DOM-D-028	05/20 08:47	ND	ND	7.90	21.9	0.1
DOM-D-029	05/20 13:38	ND	1	8.40	27.6	0.15
DOM-D-030	05/20 09:07	ND	ND	7.50	22.8	ND

Number of Samples Collected for this Month: 30

*** Temp and pH were not collected for this Distribution Point by the Sampler**

Talli Jay
Manager of Water Quality

6/8/20
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 | Report Month: June | Year: 2020

General Physical is Collected: Monthly

June

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	06/03 13:38	ND	ND	8.00	38.1	0.11
DOM-D-002R	06/03 13:21	ND	1	7.19	30.2	0.11
DOM-D-003	06/03 13:01	ND	1	7.10	31.7	0.14
DOM-D-004	06/03 12:23	ND	1	7.08	29.3	0.12
DOM-D-005	06/03 12:42	10	1	7.85	40.2	0.12
DOM-D-006	06/11 13:13	ND	1	7.58	26.7	0.36
DOM-D-007	06/11 13:35	ND	1	7.77	26.6	0.1
DOM-D-008	06/11 13:45	ND	1	7.84	26.1	0.1
DOM-D-009	06/11 14:00	ND	1	7.84	26.7	0.18
DOM-D-010	06/11 14:20	ND	1	7.91	24.1	0.18
DOM-D-011	06/03 10:35	ND	1	8.20	25.3	0.2
DOM-D-012	06/03 10:20	ND	ND	8.20	25.9	0.14
DOM-D-013	06/03 09:36	ND	ND	8.10	25.8	0.14
DOM-D-014	06/03 09:53	ND	ND	8.10	27.1	0.1
DOM-D-015	06/03 08:32	ND	ND	7.50	23.8	ND
DOM-D-016	06/11 11:18	ND	2	7.61	24.6	ND
DOM-D-017	06/11 11:06	ND	1	7.67	25.4	0.13
DOM-D-018	06/11 11:30	ND	2	7.58	23.8	0.12
DOM-D-019	06/17 08:51	ND	ND	7.80	22.5	ND
DOM-D-020	06/17 09:01	ND	ND	8.00	23.8	ND
DOM-D-021	06/11 12:20	ND	1	7.68	25.4	ND
DOM-D-022	06/11 12:42	ND	1	7.73	26.1	0.17
DOM-D-023	06/17 09:16	ND	ND	8.00	25.1	ND
DOM-D-024	06/17 09:26	ND	ND	8.10	24.6	0.1
DOM-D-025	06/17 10:28	ND	ND	7.09	25.1	0.14
DOM-D-026	06/17 10:50	ND	ND	7.28	24.7	0.15
DOM-D-027	06/17 09:26	ND	ND	6.58	24.9	ND
DOM-D-028	06/17 09:42	ND	ND	6.78	27.4	ND
DOM-D-029	06/17 12:26	ND	ND	8.20	29.8	0.11
DOM-D-030	06/17 10:05	ND	ND	6.96	23.6	ND

Number of Samples Collected for this Month: 30

* Temp and pH were not collected for this Distribution Point by the Sampler

Manager of Water Quality

7/8/20
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 | Report Month: July | Year: 2020

General Physical is Collected: Monthly

July

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	07/08 10:29	ND	ND	8.40	28	ND
DOM-D-002R	07/08 10:20	ND	ND	8.30	28.5	0.1
DOM-D-003	07/08 10:08	ND	ND	8.10	27.2	ND
DOM-D-004	07/08 09:46	ND	ND	8.00	27	ND
DOM-D-005	07/08 09:56	10	ND	8.30	27.5	0.1
DOM-D-006	07/15 14:49	ND	2	8.10	31.7	0.28
DOM-D-007	07/15 15:13	ND	1	8.30	29.4	0.14
DOM-D-008	07/15 15:22	ND	2	8.30	28.7	0.16
DOM-D-009	07/15 15:38	ND	1	8.20	28.9	0.37
DOM-D-010	07/15 16:09	ND	1	8.30	27.9	0.22
DOM-D-011	07/08 13:16	ND	1	8.20	26.1	0.1
DOM-D-012	07/08 13:00	ND	1	8.20	25	0.13
DOM-D-013	07/08 12:35	ND	1	8.10	26.3	0.28
DOM-D-014	07/08 12:46	ND	1	8.20	26.3	0.13
DOM-D-015	07/08 10:18	ND	ND	8.10	25.7	0.16
DOM-D-016	07/15 09:24	ND	1	8.10	24.1	0.14
DOM-D-017	07/15 09:38	ND	ND	8.10	23.9	0.14
DOM-D-018	07/15 09:45	ND	ND	8.10	25.9	0.16
DOM-D-019	07/22 08:54	ND	ND	6.20	20.9	0.22
DOM-D-020	07/22 09:14	ND	ND	6.37	24.1	0.15
DOM-D-021	07/15 10:48	ND	1	8.10	26.2	0.2
DOM-D-022	07/15 11:00	ND	1	8.20	27.9	0.11
DOM-D-023	07/22 09:34	ND	ND	6.60	20.2	0.12
DOM-D-024	07/22 09:53	ND	ND	6.97	22.2	0.12
DOM-D-025	07/22 12:45	ND	1	8.10	31.1	0.2
DOM-D-026	07/22 12:56	ND	ND	8.10	30.9	0.18
DOM-D-027	07/22 11:30	ND	2	8.20	24.3	0.2
DOM-D-028	07/22 11:45	ND	1	8.10	25.3	0.16
DOM-D-029	07/22 12:42	ND	ND	7.72	27.7	0.14
DOM-D-030	07/22 12:17	ND	2	8.00	32.8	0.15

Number of Samples Collected for this Month: 30

* Temp and pH were not collected for this Distribution Point by the Sampler

Manager of Water Quality

8/7/20
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 | Report Month: August | Year: 2020

General Physical is Collected: Monthly

August

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	08/05 12:50	ND	2	8.20	32.2	0.2
DOM-D-002R	08/05 12:38	ND	2	8.20	33.6	ND
DOM-D-003	08/05 11:55	ND	2	8.30	31.2	0.13
DOM-D-004	08/05 10:45	ND	2	8.00	24.7	ND
DOM-D-005	08/05 11:00	ND	1	8.30	26.7	0.15
DOM-D-006	08/12 13:03	ND	1	8.00	28.6	0.23
DOM-D-007	08/12 12:47	ND	ND	8.10	33.7	ND
DOM-D-008	08/12 09:55	ND	ND	8.20	28.3	0.16
DOM-D-009	08/12 09:37	ND	ND	8.20	26.3	0.18
DOM-D-010	08/12 08:37	ND	ND	6.80	24.2	ND
DOM-D-011	08/05 13:48	ND	1	8.00	25.1	0.17
DOM-D-012	08/05 13:33	ND	ND	7.90	25.2	0.13
DOM-D-013	08/05 11:51	ND	2	7.20	23.9	ND
DOM-D-014	08/05 13:07	ND	ND	7.80	24.5	0.15
DOM-D-015	08/05 10:46	ND	1	8.10	25	0.24
DOM-D-016	08/12 11:07	ND	1	6.90	26.5	0.11
DOM-D-017	08/12 11:54	ND	1	8.00	25	ND
DOM-D-018	08/12 12:48	ND	ND	7.30	24.4	0.11
DOM-D-019	08/19 08:27	ND	ND	8.2	26.1	0.14
DOM-D-020	08/19 08:41	ND	ND	8.2	27.2	0.13
DOM-D-021	08/12 08:01	ND	ND	6.70	23.8	ND
DOM-D-022	08/12 08:20	ND	ND	6.80	25	ND
DOM-D-023	08/19 08:52	ND	ND	8.2	27.5	ND
DOM-D-024	08/19 09:00	ND	ND	8.2	28.2	0.2
DOM-D-025	08/19 09:24	ND	ND	6.8	27.7	0.24
DOM-D-026	08/19 09:42	ND	ND	6.9	29.1	0.13
DOM-D-027	08/19 08:25	ND	ND	7.9	25.2	0.11
DOM-D-028	08/19 08:45	ND	ND	8.1	26.7	0.12
DOM-D-029	08/19 12:09	ND	ND	8.1	30.5	ND
DOM-D-030	08/19 09:05	ND	ND	7.2	27.4	0.16

Number of Samples Collected for this Month: 30

* Temp and pH were not collected for this Distribution Point by the Sampler

Manager of Water Quality

9/8/20
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 | Report Month: September | Year: 2020

General Physical is Collected: Monthly

September

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	09/09 12:19	ND	1	7.7	29.5	0.11
DOM-D-002R	09/09 12:05	ND	ND	7.3	29.4	0.1
DOM-D-003	09/09 11:50	ND	ND	7.2	29.4	ND
DOM-D-004	09/09 10:59	ND	ND	7.1	27.9	0.12
DOM-D-005	09/09 11:23	ND	ND	7.5	28.5	ND
DOM-D-006	09/16 11:52	ND	ND	7.8	29.7	0.16
DOM-D-007	09/16 11:30	ND	ND	8.1	30	ND
DOM-D-008	09/16 11:08	ND	2	7.9	29	0.14
DOM-D-009	09/16 10:27	ND	ND	8.0	27.5	0.16
DOM-D-010	09/16 08:42	ND	ND	7.6	23.6	0.14
DOM-D-011	09/09 09:06	ND	ND	7.7	23.1	0.14
DOM-D-012	09/09 09:32	ND	ND	7.4	24.2	0.12
DOM-D-013	09/09 10:17	ND	ND	7.0	22.8	ND
DOM-D-014	09/09 09:53	ND	ND	7.6	22.5	0.14
DOM-D-015	09/09 11:04	ND	ND	7.6	23.3	0.11
DOM-D-016	09/16 10:40	ND	ND	8.2	26.2	0.15
DOM-D-017	09/16 12:09	ND	1	8.1	25.6	0.1
DOM-D-018	09/16 12:31	ND	1	8.2	24.1	ND
DOM-D-019	09/23 08:37	ND	ND	7.9	23.1	ND
DOM-D-020	09/23 08:52	ND	ND	7.7	23.6	0.16
DOM-D-021	09/16 08:02	ND	ND	7.1	22.6	ND
DOM-D-022	09/16 08:20	ND	ND	8.2	24.3	0.11
DOM-D-023	09/23 09:17	ND	ND	7.6	23.8	0.15
DOM-D-024	09/23 09:42	ND	ND	7.7	24.2	0.11
DOM-D-025	09/23 09:54	ND	ND	8.1	26.3	0.18
DOM-D-026	09/23 10:20	ND	ND	8.1	27.3	0.19
DOM-D-027	09/23 08:44	ND	ND	8.2	24.3	0.39
DOM-D-028	09/23 09:07	ND	ND	8.2	26.2	0.18
DOM-D-029	09/23 13:15	ND	ND	7.9	30	ND
DOM-D-030	09/23 09:30	ND	3*	8.1	26.1	0.2

Number of Samples Collected for this Month: 30

* Resample collected 9/29/2020 = ND TON

Manager of Water Quality

10/8/20
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 | Report Month: October | Year: 2020

General Physical is Collected: Monthly

October

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	10/07 13:55	ND	1	8.3	26.3	0.13
DOM-D-002R	10/07 13:25	ND	1	8.0	26.8	0.14
DOM-D-003	10/07 13:00	ND	ND	8.0	26.6	0.13
DOM-D-004	10/07 11:30	ND	1	8.0	25.9	ND
DOM-D-005	10/07 11:56	10	2	8.3	27.7	0.2
DOM-D-006	10/14 10:56	ND	ND	8.1	26.2	0.2
DOM-D-007	10/14 10:33	ND	ND	8.1	26.1	0.14
DOM-D-008	10/14 10:16	ND	2	8.2	25.8	0.16
DOM-D-009	10/14 10:00	ND	ND	8.1	25.7	0.18
DOM-D-010	10/14 08:17	ND	ND	6.7	22.2	ND
DOM-D-011	10/07 14:32	ND	1	7.9	25.3	ND
DOM-D-012	10/07 14:13	ND	1	8.2	24.7	0.11
DOM-D-013	10/07 13:16	ND	1	7.9	24.5	0.18
DOM-D-014	10/07 13:53	ND	ND	7.6	25.5	0.13
DOM-D-015	10/07 11:30	ND	1	8.0	25.3	0.13
DOM-D-016	10/14 12:28	ND	ND	7.8	26.7	0.14
DOM-D-017	10/14 13:05	ND	ND	7.8	24.9	0.14
DOM-D-018	10/14 13:20	ND	2	7.9	25.6	0.11
DOM-D-019	10/21 08:40	ND	ND	6.8	21.3	0.12
DOM-D-020	10/21 09:08	ND	ND	7.8	23.1	0.54
DOM-D-021	10/14 08:50	ND	ND	7.0	22.8	0.14
DOM-D-022	10/14 09:10	ND	ND	7.7	23.5	0.16
DOM-D-023	10/21 09:32	ND	ND	7.9	23.7	0.15
DOM-D-024	10/21 09:54	ND	ND	7.9	24.2	0.16
DOM-D-025	10/21 10:22	ND	ND	7.9	24.5	0.22
DOM-D-026	10/21 10:47	ND	1	7.8	24.6	0.17
DOM-D-027	10/21 09:12	ND	ND	7.8	23.1	0.15
DOM-D-028	10/21 09:33	ND	ND	7.9	23.7	0.1
DOM-D-029	10/21 14:10	ND	1	8.0	26	0.13
DOM-D-030	10/21 09:52	ND	ND	7.8	23.2	0.1

Number of Samples Collected for this Month: 30

Manager of Water Quality

11/6/20
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 **Report Month: November** **Year: 2020**

General Physical is Collected: Monthly

November

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	11/04 13:33	ND	ND	8.2	25.8	0.13
DOM-D-002R	11/04 13:13	ND	ND	8.1	25.6	0.11
DOM-D-003	11/04 12:48	ND	ND	8.0	25.3	0.14
DOM-D-004	11/04 12:03	ND	ND	8.0	24.7	ND
DOM-D-005	11/04 12:32	ND	ND	8.3	28.4	0.14
DOM-D-006	11/10 13:15	ND	1	7.7	22.4	0.3
DOM-D-007	11/10 12:50	ND	ND	8.0	22.6	0.17
DOM-D-008	11/10 12:33	ND	ND	7.9	23	0.2
DOM-D-009	11/10 12:20	ND	1	8.0	22.5	0.11
DOM-D-010	11/10 12:00	ND	1	7.9	21.6	0.12
DOM-D-011	11/04 14:14	ND	ND	8.0	26.3	0.15
DOM-D-012	11/04 13:54	ND	ND	8.1	25.3	0.1
DOM-D-013	11/04 13:12	ND	ND	8.1	25.8	0.11
DOM-D-014	11/04 13:33	ND	ND	8.1	25.1	0.13
DOM-D-015	11/04 11:32	ND	ND	8.0	24.9	0.11
DOM-D-016	11/10 10:21	ND		7.6	22.2	0.15
DOM-D-016	11/17 09:10		ND			
DOM-D-017	11/10 11:00	ND	ND	8.1	21.9	0.16
DOM-D-018	11/10 11:21	ND	ND	8.0	21.4	ND
DOM-D-019	11/18 09:05	ND	ND	7.7	20.3	0.26
DOM-D-020	11/18 09:46	ND	ND	7.9	19.7	0.16
DOM-D-021	11/10 09:15	ND	ND	6.9	19.4	ND
DOM-D-022	11/10 09:37	ND	ND	6.5	21.4	0.15
DOM-D-023	11/18 10:07	ND	1	8.0	20.8	0.18
DOM-D-024	11/18 10:30	ND	1	7.9	21.3	0.12
DOM-D-025	11/18 10:42	ND	1	7.9	22.3	ND
DOM-D-026	11/18 11:08	ND	1	8.1	24.8	0.14
DOM-D-027	11/18 09:18	ND	ND	8.3	21.8	0.18
DOM-D-028	11/18 10:02	ND	1	8.4	23.4	0.11
DOM-D-029	11/18 14:38	ND	1	7.5	18.8	0.16
DOM-D-030	11/18 10:22	ND	1	8.4	25.1	ND

Number of Samples Collected for this Month: 31

Manager of Water Quality

12/7/20
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 **Report Month: December** **Year: 2020**

General Physical is Collected: Monthly

December

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	12/09 13:11	ND	ND	8.3	24.4	ND
DOM-D-002R	12/09 12:53	ND	ND	8.1	21.9	ND
DOM-D-003	12/09 12:32	ND	ND	8.1	18.9	ND
DOM-D-004	12/09 10:47	ND	ND	7.9	19.5	ND
DOM-D-005	12/09 11:15	ND	2	8.2	24.7	ND
DOM-D-006	12/16 11:09	ND	ND	8.1	22.8	0.27
DOM-D-007	12/16 10:44	ND	ND	8.2	22	ND
DOM-D-008	12/16 10:20	ND	2	8.0	20.7	0.2
DOM-D-009	12/16 09:57	ND	ND	8.0	20.9	0.17
DOM-D-010	12/16 08:03	ND	ND	7.5	15.6	0.13
DOM-D-011	12/09 14:03	ND	ND	8.0	19.4	ND
DOM-D-012	12/09 13:43	ND	ND	8.0	19.8	ND
DOM-D-013	12/09 12:55	ND	2	8.1	19.2	ND
DOM-D-014	12/09 13:28	ND	ND	8.0	19.7	ND
DOM-D-015	12/09 11:35	ND	ND	7.8	20.2	ND
DOM-D-016	12/16 12:05	ND	ND	8.0	19.1	0.18
DOM-D-017	12/16 12:45	ND	ND	7.9	16.5	0.19
DOM-D-018	12/16 13:03	ND	ND	8.1	17	0.14
DOM-D-019	12/23 08:40	ND	ND	7.1	16.3	0.12
DOM-D-020	12/23 09:00	ND	ND	7.5	16.4	0.11
DOM-D-021	12/16 08:33	ND	ND	8.0	16.3	0.11
DOM-D-022	12/16 08:52	ND	ND	7.7	16.4	0.23
DOM-D-023	12/23 09:21	ND	ND	7.7	17.6	ND
DOM-D-024	12/23 09:42	ND	ND	7.8	17.7	0.18
DOM-D-025	12/23 12:12	ND	ND	7.9	19.8	0.27
DOM-D-026	12/23 12:26	ND	ND	7.9	19.8	0.32
DOM-D-027	12/23 10:53	ND	ND	7.8	20.2	0.17
DOM-D-028	12/23 11:10	ND	ND	7.9	19.3	0.14
DOM-D-029	12/23 13:25	ND	ND	6.8	20.2	0.27
DOM-D-030	12/23 11:53	ND	ND	8.0	20	0.13

Number of Samples Collected for this Month: 30

Manager of Water Quality

1/6/21
Date

2021 GENERAL PHYSICAL SUMMARY

Dominguez District

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 | Report Month: January | Year: 2021

General Physical is Collected: Monthly

January

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	01/06 11:58	ND	ND	8.3	23	0.17
DOM-D-002R	01/06 11:44	ND	ND	8.3	20.3	0.11
DOM-D-003	01/06 11:30	ND	ND	8.2	19.4	0.29
DOM-D-004	01/06 10:53	ND	ND	8.0	16.9	0.14
DOM-D-005	01/06 11:17	ND	ND	8.1	20.9	0.12
DOM-D-006	01/15 13:00	ND	ND	7.7	22	0.33
DOM-D-007	01/15 10:50	ND	ND	7.8	18.3	0.23
DOM-D-008	01/15 11:45	ND	ND	7.9	19.1	0.17
DOM-D-009	01/15 10:30	ND	ND	7.8	18.5	0.14
DOM-D-010	01/15 09:15	ND	1	7.8	18.6	0.18
DOM-D-011	01/06 14:27	ND	ND	8.5	18.7	0.17
DOM-D-012	01/06 14:02	ND	ND	8.5	18.4	0.15
DOM-D-013	01/06 13:07	ND	ND	8.6	16.9	0.29
DOM-D-014	01/06 13:32	ND	ND	8.6	19.5	0.19
DOM-D-015	01/06 11:27	ND	ND	8.6	20.3	0.14
DOM-D-016	01/15 08:10	ND	ND	8.0	16.7	0.2
DOM-D-017	01/15 08:35	ND	ND	7.6	16.4	0.13
DOM-D-018	01/15 08:50	ND	ND	7.5	16.1	0.17
DOM-D-019	01/20 08:02	ND	ND	7.7	14.7	0.13
DOM-D-020	01/20 08:23	ND	ND	8.0	15.6	0.3
DOM-D-021	01/15 09:45	ND	ND	7.8	16.3	0.16
DOM-D-022	01/15 10:05	ND	2	7.9	18.2	0.22
DOM-D-023	01/20 08:42	ND	ND	8.0	18.7	0.13
DOM-D-024	01/20 09:04	ND	ND	8.0	18.6	ND
DOM-D-025	01/20 10:21	ND	ND	7.6	19.9	0.22
DOM-D-026	01/20 10:42	ND	ND	7.5	19.6	0.24
DOM-D-027	01/20 09:17	ND	ND	7.8	16.5	0.14
DOM-D-028	01/20 09:41	ND	ND	7.8	18.3	0.23
DOM-D-029	01/20 11:37	ND	1	8.2	21	0.22
DOM-D-030	01/20 10:01	ND	ND	7.7	16.6	0.35

Number of Samples Collected for this Month: 30

Manager of Water Quality

2/8/21
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 **Report Month: February** **Year: 2021**

General Physical is Collected: Monthly

February

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	02/03 14:05	ND	ND	8.2	24.6	ND
DOM-D-002R	02/03 13:50	ND	ND	7.9	22.1	0.27
DOM-D-003	02/03 13:37	ND	ND	8.1	21.2	0.16
DOM-D-004	02/03 13:17	ND	ND	8.2	21.7	0.23
DOM-D-005	02/03 12:50	ND	ND	8.1	25.6	0.1
DOM-D-006	02/10 12:15	ND	ND	7.7	19.9	0.29
DOM-D-007	02/10 11:55	ND	ND	8.1	17.8	0.23
DOM-D-008	02/10 11:25	ND	ND	8.2	19.1	0.1
DOM-D-009	02/10 10:30	ND	ND	8.0	17.5	0.27
DOM-D-010	02/10 08:38	ND	ND	7.0	16.1	0.19
DOM-D-011	02/03 14:16	ND	ND	8.2	18.3	0.18
DOM-D-012	02/03 13:58	ND	ND	8.1	18.2	0.15
DOM-D-013	02/03 13:23	ND	ND	8.1	18.3	0.15
DOM-D-014	02/03 13:40	ND	ND	8.2	18.4	ND
DOM-D-015	02/03 11:47	ND	ND	8.2	18.9	0.11
DOM-D-016	02/10 11:02	ND	ND	7.2	18.9	0.24
DOM-D-017	02/10 11:53	ND	ND	7.2	18.6	0.15
DOM-D-018	02/10 12:47	ND	ND	7.3	17.9	0.15
DOM-D-019	02/17 08:40	ND	ND	7.9	15.4	0.23
DOM-D-020	02/17 09:05	ND	ND	7.9	16.4	0.28
DOM-D-021	02/10 08:23	ND	ND	7.5	14.9	0.15
DOM-D-022	02/10 08:42	ND	ND	7.4	16.9	0.22
DOM-D-023	02/17 09:35	ND	ND	7.8	16.2	0.12
DOM-D-024	02/17 09:55	ND	ND	7.9	16.3	0.16
DOM-D-025	02/17 12:15	ND	ND	7.6	19.5	0.3
DOM-D-026	02/17 11:10	ND	ND	7.6	19.8	0.38
DOM-D-027	02/17 13:35	ND	ND	7.9	18.6	0.27
DOM-D-028	02/17 13:07	ND	ND	8.2	18.9	0.34
DOM-D-029	02/17 14:10	ND	ND	7.7	23	0.25
DOM-D-030	02/17 12:40	ND	ND	7.7	15	0.21

Number of Samples Collected for this Month: 30

Yaeli J. 3/8/21

Manager of Water Quality **Date**

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 | Report Month: March | Year: 2021

General Physical is Collected: Monthly

March

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	03/03 13:09	ND	ND	8.0	21.8	0.11
DOM-D-002R	03/03 12:42	ND	ND	7.9	19.7	0.16
DOM-D-003	03/03 11:32	ND	ND	7.6	15.9	0.24
DOM-D-004	03/03 10:44	ND	ND	8.0	14.7	0.21
DOM-D-005	03/03 11:10	ND	1	8.2	21.9	0.13
DOM-D-006	03/10 10:32	ND	ND	7.2	19.1	0.17
DOM-D-007	03/10 10:15	ND	ND	7.7	17.5	0.16
DOM-D-008	03/10 09:58	ND	ND	7.8	17.7	0.15
DOM-D-009	03/10 09:40	ND	ND	7.9	17.9	0.36
DOM-D-010	03/10 08:17	ND	ND	7.9	15.9	0.17
DOM-D-011	03/03 14:05	ND	ND	8.2	17.5	0.26
DOM-D-012	03/03 13:35	ND	ND	8.2	17.7	0.46
DOM-D-013	03/03 12:37	ND	ND	8.0	16.4	0.17
DOM-D-014	03/03 13:05	ND	ND	8.3	16.7	0.51
DOM-D-015	03/03 11:10	ND	ND	8.0	19.5	0.47
DOM-D-016	03/10 11:00	ND	ND	7.9	17.1	0.15
DOM-D-017	03/10 11:50	ND	ND	8.2	16.4	0.17
DOM-D-018	03/10 12:15	ND	2	8.3	16.9	0.22
DOM-D-019	03/17 09:23	ND	ND	7.2	16.9	0.24
DOM-D-020	03/17 09:55	ND	1	7.2	17.1	0.15
DOM-D-021	03/10 08:05	ND	ND	7.1	16.8	0.32
DOM-D-022	03/10 08:40	ND	ND	7.9	16.4	0.33
DOM-D-023	03/17 10:17	ND	ND	7.2	17.7	0.37
DOM-D-024	03/17 10:32	ND	ND	7.2	19.9	0.47
DOM-D-025	03/17 10:05	ND	1	8.1	16.2	0.31
DOM-D-026	03/17 10:30	ND	ND	7.9	17.9	0.31
DOM-D-027	03/17 09:00	ND	ND	8.3	13.1	0.28
DOM-D-028	03/17 09:25	ND	ND	8.3	13.9	0.25
DOM-D-029	03/17 13:52	ND	ND	7.2	20.3	0.39
DOM-D-030	03/17 09:50	ND	ND	8.2	13.4	0.2

Number of Samples Collected for this Month: 30

Manager of Water Quality

4/7/21
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 Report Month: April Year: 2021

General Physical is Collected: Monthly

April

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	04/07 12:45	ND	ND	8.1	25.1	0.22
DOM-D-002R	04/07 12:30	ND	ND	7.9	26.2	0.18
DOM-D-003	04/07 11:53	ND	1	7.9	21.1	ND
DOM-D-004	04/07 11:45	ND	1	7.8	20.7	0.24
DOM-D-005	04/07 11:20	ND	2	7.8	25.9	0.18
DOM-D-006	04/14 11:40	ND	ND	7.9	19.8	0.48
DOM-D-007	04/14 11:25	ND	ND	7.8	18.3	0.21
DOM-D-008	04/14 11:15	ND	ND	7.9	18.7	0.18
DOM-D-009	04/14 10:10	ND	ND	7.9	18.6	0.18
DOM-D-010	04/14 08:10	ND	ND	6.6	17.6	0.35
DOM-D-011	04/07 08:38	ND	ND	7.0	18.7	0.16
DOM-D-012	04/07 08:56	ND	ND	6.7	19.1	0.22
DOM-D-013	04/07 09:35	ND	ND	7.2	19.5	0.26
DOM-D-014	04/07 09:15	ND	ND	7.6	19.3	0.25
DOM-D-015	04/07 10:31	ND	2	7.9	20.1	0.27
DOM-D-016	04/14 11:34	ND	ND	7.4	20.6	0.29
DOM-D-017	04/14 12:00	ND	ND	7.3	19.8	0.41
DOM-D-018	04/14 12:44	ND	ND	7.3	20.3	0.27
DOM-D-019	04/21 08:50	ND	ND	8.0	18.2	0.14
DOM-D-020	04/21 09:15	ND	ND	7.9	18.5	0.24
DOM-D-021	04/14 08:15	ND	ND	6.7	17.1	0.18
DOM-D-022	04/14 08:30	ND	ND	6.7	19.7	0.42
DOM-D-023	04/21 09:30	ND	ND	8.0	19.7	0.32
DOM-D-024	04/21 10:05	ND	ND	8.0	19.8	0.33
DOM-D-025	04/21 09:50	ND	ND	8.3	21.4	0.53
DOM-D-026	04/21 10:12	ND	ND	8.3	21.6	0.31
DOM-D-027	04/21 08:40	ND	ND	8.4	20.4	0.4
DOM-D-028	04/21 09:03	ND	ND	8.4	20.1	0.32
DOM-D-029	04/21 14:00	ND	ND	8.0	19.4	0.34
DOM-D-030	04/21 09:24	ND	ND	8.3	18.9	0.2

Number of Samples Collected for this Month: 30

Manager of Water Quality

5/6/21
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 | Report Month: May | Year: 2021

General Physical is Collected: Monthly

May

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	05/05 13:01	ND	ND	8.1	23.5	0.33
DOM-D-002R	05/05 12:41	ND	2	8.0	22.9	0.12
DOM-D-003	05/05 12:24	ND	2	8.1	20.9	0.25
DOM-D-004	05/05 11:21	ND	1	8.0	19.9	0.24
DOM-D-005	05/05 11:38	ND	1	8.1	26.1	0.26
DOM-D-006	05/12 11:17	ND	ND	7.1	23.5	0.36
DOM-D-007	05/12 10:54	ND	ND	7.4	22	0.22
DOM-D-008	05/12 10:36	ND	ND	7.5	21.7	0.25
DOM-D-009	05/12 10:19	ND	ND	7.5	22	0.24
DOM-D-010	05/12 08:52	ND	ND	7.2	19.6	0.23
DOM-D-011	05/05 14:59	ND	1	7.5	22.7	0.14
DOM-D-012	05/05 14:46	ND	1	7.4	23.2	0.2
DOM-D-013	05/05 14:20	ND	ND	7.4	22.5	0.15
DOM-D-014	05/05 14:34	ND	2	7.4	22.9	0.21
DOM-D-015	05/05 13:35	ND	2	7.9	22.5	0.18
DOM-D-016	05/12 08:30	ND	ND	6.6	19.5	0.19
DOM-D-017	05/12 09:36	ND	1	7.6	19.3	0.23
DOM-D-018	05/12 09:45	ND	1	7.8	19.6	0.14
DOM-D-019	05/19 08:35	ND	ND	6.7	20.3	0.36
DOM-D-020	05/19 08:58	ND	ND	6.7	20.1	0.17
DOM-D-021	05/12 11:20	ND	ND	7.9	20.7	0.23
DOM-D-022	05/12 11:40	ND	ND	7.8	21.9	0.29
DOM-D-023	05/19 09:18	ND	ND	6.7	21.4	0.16
DOM-D-024	05/19 09:41	ND	ND	7.0	21.8	0.32
DOM-D-025	05/19 10:25	ND	1.0	7.6	26.5	0.19
DOM-D-026	05/19 11:00	ND	1	7.9	23.8	0.44
DOM-D-027	05/19 09:16	ND	ND	7.8	21.7	0.17
DOM-D-028	05/19 09:32	ND	1	8.0	21.9	0.12
DOM-D-029	05/19 13:50	ND	ND	8.0	22.6	0.16
DOM-D-030	05/19 09:55	ND	1	7.9	21	0.22

Number of Samples Collected for this Month: 30

Manager of Water Quality

6/8/21
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 | Report Month: June | Year: 2021

General Physical is Collected: Monthly

June

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	06/09 13:42	ND	2	7.4	27.1	0.16
DOM-D-002R	06/09 13:27	ND	ND	7.6	28.1	0.31
DOM-D-003	06/09 13:12	ND	ND	7.5	27.7	0.24
DOM-D-004	06/09 12:32	ND	ND	7.8	23.2	0.23
DOM-D-005	06/09 12:55	ND	ND	7.5	29.6	0.18
DOM-D-006	06/16 11:31	ND	1	7.2	25.6	0.34
DOM-D-007	06/16 11:06	ND	2	7.3	24.4	0.18
DOM-D-008	06/16 10:42	ND	ND	7.3	25.7	0.2
DOM-D-009	06/16 10:22	ND	ND	7.2	27.7	0.2
DOM-D-010	06/16 08:38	ND	ND	7.6	23.4	0.13
DOM-D-011	06/09 13:22	ND	ND	8.1	23.6	0.18
DOM-D-012	06/09 13:09	ND	ND	8.1	24.1	0.22
DOM-D-013	06/09 11:47	ND	ND	8.1	23.3	0.27
DOM-D-014	06/09 12:01	ND	ND	8.0	22.4	0.3
DOM-D-015	06/09 11:03	ND	ND	8.0	22.9	0.27
DOM-D-016	06/16 12:40	ND	ND	7.8	23.4	0.21
DOM-D-017	06/16 13:10	ND	ND	7.5	27.2	0.17
DOM-D-018	06/16 13:40	ND	ND	7.6	26.4	0.29
DOM-D-019	06/23 09:10	ND	ND	7.7	23.1	0.22
DOM-D-020	06/23 09:35	ND	ND	7.5	23.8	0.14
DOM-D-021	06/16 08:35	ND	ND	6.3	21.3	0.36
DOM-D-022	06/16 09:00	ND	ND	7.4	22.9	0.21
DOM-D-023	06/23 10:30	ND	ND	7.9	24.9	0.24
DOM-D-024	06/23 10:50	ND	ND	7.8	25.6	0.16
DOM-D-025	06/23 10:15	ND	ND	8.1	26.9	0.18
DOM-D-026	06/23 10:35	ND	ND	8.1	27.2	0.19
DOM-D-027	06/23 09:05	ND	ND	7.9	25.4	0.26
DOM-D-028	06/23 09:20	ND	ND	7.9	24.5	0.21
DOM-D-029	06/23 14:20	ND	ND	7.9	25.6	0.2
DOM-D-030	06/23 09:45	ND	ND	8.0	26.8	0.17

Number of Samples Collected for this Month: 30

Manager of Water Quality

7/8/21
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 | Report Month: July | Year: 2021

General Physical is Collected: Monthly

July

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	07/07 13:40	ND	ND	8.0	26	0.18
DOM-D-002R	07/07 13:15	ND	ND	7.9	25.4	0.18
DOM-D-003	07/07 13:00	ND	1	7.8	25.1	0.19
DOM-D-004	07/07 12:45	ND	ND	7.9	25.4	0.25
DOM-D-005	07/07 12:20	ND	2	7.9	26.5	0.31
DOM-D-006	07/14 12:10	ND	ND	6.6	29.2	0.28
DOM-D-007	07/14 11:45	ND	1	6.5	27.6	0.25
DOM-D-008	07/14 11:30	ND	2	6.6	26.2	0.15
DOM-D-009	07/14 11:10	ND	2	6.6	26.6	0.16
DOM-D-010	07/14 09:30	ND	ND	6.6	24.1	0.19
DOM-D-011	07/07 08:35	ND	ND	6.3	24.1	0.38
DOM-D-012	07/07 08:50	ND	ND	7.3	24.2	0.16
DOM-D-013	07/07 09:26	ND	ND	8.0	25	0.17
DOM-D-014	07/07 09:10	ND	ND	7.7	25	0.16
DOM-D-015	07/07 10:10	ND	ND	8.1	24.8	0.19
DOM-D-016	07/14 12:51	ND	2	8.0	26.1	0.19
DOM-D-017	07/14 13:26	ND	2	7.9	25.2	0.19
DOM-D-018	07/14 13:41	ND	1	7.9	24.9	0.21
DOM-D-019	07/21 08:56	ND	ND	7.3	25.7	0.2
DOM-D-020	07/21 09:21	ND	ND	7.8	27.1	0.26
DOM-D-021	07/14 08:47	ND	ND	7.1	24.3	0.24
DOM-D-022	07/14 09:09	ND	ND	7.1	24.3	0.24
DOM-D-023	07/21 09:41	ND	ND	7.6	27.1	0.22
DOM-D-024	07/21 10:03	ND	ND	7.9	30	0.11
DOM-D-025	07/21 10:20	ND	ND	7.6	29.5	0.26
DOM-D-026	07/21 10:38	ND	ND	7.7	30.1	0.29
DOM-D-027	07/21 08:59	ND	ND	7.4	25.9	0.2
DOM-D-028	07/21 09:21	ND	ND	7.5	25.9	0.29
DOM-D-029	07/21 14:16	ND	ND	7.9	33.5	0.15
DOM-D-030	07/21 09:53	ND	ND	7.7	27.5	0.12

Number of Samples Collected for this Month: 30

Manager of Water Quality

8/6/2021
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 | Report Month: August | Year: 2021

General Physical is Collected: Monthly

August

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	08/11 13:19	ND	ND	8.0	30.5	0.2
DOM-D-002R	08/11 12:59	ND	2	8.1	31.3	0.26
DOM-D-003	08/11 12:36	ND	2	7.7	33.3	0.2
DOM-D-004	08/11 11:06	ND	1	8.0	31.5	0.11
DOM-D-005	08/11 11:33	ND	ND	8.2	30.4	0.2
DOM-D-006	08/18 11:30	ND	1	7.8	26.4	0.34
DOM-D-007	08/18 11:06	ND	ND	7.8	26.1	0.19
DOM-D-008	08/18 10:48	ND	ND	7.8	25.7	0.14
DOM-D-009	08/18 10:20	ND	ND	7.7	26	0.24
DOM-D-010	08/18 08:31	ND	ND	6.4	25.4	0.32
DOM-D-011	08/11 08:48	ND	ND	7.3	25	0.29
DOM-D-012	08/11 09:08	ND	ND	7.9	25.3	0.16
DOM-D-013	08/11 09:17	ND	ND	7.9	26.1	0.26
DOM-D-014	08/11 09:37	ND	ND	7.9	26.9	0.19
DOM-D-015	08/11 10:17	ND	ND	8.0	26.3	0.2
DOM-D-016	08/18 10:17	ND	ND	8.0	25.3	0.31
DOM-D-017	08/18 09:53	ND	ND	7.8	25.2	0.26
DOM-D-018	08/18 09:42	ND	ND	7.7	25.4	0.13
DOM-D-019	08/04 08:43	ND	ND	7.4	26.6	0.14
DOM-D-020	08/04 09:14	ND	ND	7.7	28.4	0.24
DOM-D-021	08/18 13:09	ND	ND	8.1	28	0.47
DOM-D-022	08/18 12:57	ND	ND	8.1	25.8	0.38
DOM-D-023	08/04 09:49	ND	ND	7.6	30.2	0.19
DOM-D-024	08/04 10:18	ND	ND	7.7	31.5	0.14
DOM-D-025	08/04 10:26	ND	ND	7.8	29.3	ND
DOM-D-026	08/04 10:48	ND	ND	7.8	29.3	0.22
DOM-D-027	08/04 09:07	ND	ND	7.4	27.2	0.24
DOM-D-028	08/04 09:36	ND	ND	7.6	27.8	0.23
DOM-D-029	08/04 13:15	ND	1	7.9	27.8	ND
DOM-D-030	08/04 10:03	ND	ND	7.6	27.4	0.17

Number of Samples Collected for this Month: 30

Manager of Water Quality

9/8/2021
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 Report Month: September Year: 2021

General Physical is Collected: Monthly

September

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	09/15 13:33	ND	2	8.3	29.1	0.18
DOM-D-002R	09/15 13:09	ND	2	8.1	31.1	0.14
DOM-D-003	09/15 12:46	ND	1	7.9	30.3	0.23
DOM-D-004	09/15 11:07	ND	ND	7.8	30	0.21
DOM-D-005	09/15 11:31	ND	ND	7.9	29.1	0.23
DOM-D-011	09/15 13:55	ND	ND	7.8	26.7	0.24
DOM-D-012	09/15 13:30	ND	ND	7.8	26.9	0.19
DOM-D-013	09/15 12:58	ND	ND	7.9	26.9	0.27
DOM-D-014	09/15 13:10	ND	ND	7.7	27.5	0.12
DOM-D-015	09/15 11:35	ND	2	7.7	26.2	0.17
DOM-D-016	09/01 10:58	ND	ND	7.9	26.5	ND
DOM-D-017	09/01 11:34	ND	ND	9.8	26.4	0.23
DOM-D-018	09/01 11:56	ND	1	9.7	26.1	0.14
DOM-D-019	09/01 09:15	ND	ND	7.5	23.7	0.22
DOM-D-020	09/01 09:35	ND	ND	7.8	24.4	0.35
DOM-D-021	09/01 08:24	ND	ND	8.5	25.3	0.2
DOM-D-022	09/01 08:48	ND	ND	9.1	24.5	0.23
DOM-D-023	09/01 09:55	ND	ND	7.8	24.8	0.2
DOM-D-024	09/01 10:35	ND	1	7.7	28.7	ND
DOM-D-029	09/01 14:20	ND	ND	7.8	27.4	0.14

Number of Samples Collected for this Month: 20

Manager of Water Quality

10/6/2021
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 **Report Month: October** **Year: 2021**

General Physical is Collected: Monthly

October

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	10/06 13:15	ND	2	8.1	25.5	0.2
DOM-D-002R	10/06 13:00	ND	2	8.0	25.6	0.34
DOM-D-003	10/06 12:25	ND	2	8.0	25.6	0.24
DOM-D-004	10/06 12:10	ND	1	7.9	25.1	0.25
DOM-D-005	10/06 11:50	ND	ND	7.9	25.6	0.17
DOM-D-006	10/13 11:23	ND	2	7.2	26.2	0.33
DOM-D-007	10/13 10:45	ND	ND	7.4	25.2	0.22
DOM-D-008	10/13 10:31	ND	ND	7.4	23.4	0.22
DOM-D-009	10/13 10:11	ND	1	7.2	24.8	0.18
DOM-D-010	10/13 08:41	ND	ND	6.3	23.3	0.12
DOM-D-011	10/13 14:48	ND	1	8.1	25	0.16
DOM-D-012	10/13 14:34	ND	ND	8.0	25	0.22
DOM-D-013	10/13 13:54	ND	2	8.0	24.6	0.19
DOM-D-014	10/13 14:15	ND	ND	8.0	26.5	0.16
DOM-D-015	10/13 13:09	ND	2	8.1	24.2	0.16
DOM-D-016	10/06 12:16	ND	2	8.1	26	0.25
DOM-D-017	10/06 12:56	ND	2	8.1	25.1	0.15
DOM-D-018	10/06 13:27	ND	2	8.1	24.6	0.13
DOM-D-019	10/20 09:36	ND	ND	7.7	22.3	0.16
DOM-D-020	10/20 10:05	ND	ND	7.6	23.7	0.25
DOM-D-021	10/06 08:28	ND	ND	7.3	24.3	0.31
DOM-D-022	10/06 09:04	ND	ND	7.9	23.5	0.29
DOM-D-023	10/20 10:21	ND	ND	7.7	24.4	0.16
DOM-D-024	10/20 10:41	ND	ND	7.9	24.7	0.15
DOM-D-025	10/20 10:16	ND	1	7.7	23.2	0.23
DOM-D-026	10/20 10:35	ND	1	7.9	23.9	0.18
DOM-D-027	10/20 08:55	ND	ND	7.7	21.2	0.19
DOM-D-028	10/20 09:13	ND	ND	8.0	21.5	0.16
DOM-D-029	10/20 14:15	ND	ND	7.4	24.5	0.19
DOM-D-030	10/15 10:15	ND	1	8.4	25.3	ND
DOM-D-030	10/20 09:39	ND	ND	8.0	21.4	0.3

Number of Samples Collected for this Month: 31

Manager of Water Quality 11/8/2021 **Date**

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 **Report Month: November** **Year: 2021**

October

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	**10/06 13:15**	ND	2	8.1	25.5	0.2
DOM-D-002R	**10/06 13:00**	ND	2	8.0	25.6	0.34
DOM-D-003	**10/06 12:25**	ND	2	8.0	25.6	0.24
DOM-D-004	**10/06 12:10**	ND	1	7.9	25.1	0.25
DOM-D-005	**10/06 11:50**	ND	ND	7.9	25.6	0.17
DOM-D-006	**10/13 11:23**	ND	2	7.2	26.2	0.33
DOM-D-007	**10/13 10:45**	ND	ND	7.4	25.2	0.22
DOM-D-008	**10/13 10:31**	ND	ND	7.4	23.4	0.22
DOM-D-009	**10/13 10:11**	ND	1	7.2	24.8	0.18
DOM-D-010	**10/13 08:41**	ND	ND	6.3	23.3	0.12
DOM-D-011	**10/13 14:48**	ND	1	8.1	25	0.16
DOM-D-012	**10/13 14:34**	ND	ND	8.0	25	0.22
DOM-D-013	**10/13 13:54**	ND	2	8.0	24.6	0.19
DOM-D-014	**10/13 14:15**	ND	ND	8.0	26.5	0.16
DOM-D-015	**10/13 13:09**	ND	2	8.1	24.2	0.16
DOM-D-016	**10/06 12:16**	ND	2	8.1	26	0.25
DOM-D-017	**10/06 12:56**	ND	2	8.1	25.1	0.15
DOM-D-018	**10/06 13:27**	ND	2	8.1	24.6	0.13
DOM-D-019	**10/20 09:36**	ND	ND	7.7	22.3	0.16
DOM-D-020	**10/20 10:05**	ND	ND	7.6	23.7	0.25
DOM-D-021	**10/06 08:28**	ND	ND	7.3	24.3	0.31
DOM-D-022	**10/06 09:04**	ND	ND	7.9	23.5	0.29
DOM-D-023	**10/20 10:21**	ND	ND	7.7	24.4	0.16
DOM-D-024	**10/20 10:41**	ND	ND	7.9	24.7	0.15
DOM-D-025	**10/20 10:16**	ND	1	7.7	23.2	0.23
DOM-D-026	**10/20 10:35**	ND	1	7.9	23.9	0.18
DOM-D-027	**10/20 08:55**	ND	ND	7.7	21.2	0.19
DOM-D-028	**10/20 09:13**	ND	ND	8.0	21.5	0.16
DOM-D-029	**10/20 14:15**	ND	ND	7.4	24.5	0.19
DOM-D-030	**10/15 10:15**	ND	1	8.4	25.3	ND
DOM-D-030	**10/20 09:39**	ND	ND	8.0	21.4	0.3

Number of Samples Collected for this Month: 31

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 **Report Month: November** **Year: 2021**

November

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	11/09 14:31	ND	1	8.3	23.4	ND
DOM-D-002R	11/09 14:15	ND	1	8.2	22.9	0.11
DOM-D-003	11/09 13:55	ND	1	8.2	23.6	0.18
DOM-D-004	11/09 13:12	ND	ND	8.0	24.5	0.18
DOM-D-005	11/09 12:50	ND	1	7.8	26.4	0.11
DOM-D-006	11/09 12:20	ND	1	8.0	24.4	0.29
DOM-D-007	11/09 11:52	ND	2	8.0	24.3	0.16
DOM-D-008	11/09 11:24	ND	1	8.0	24.1	0.1
DOM-D-009	11/09 11:00	ND	ND	8.0	23.4	0.18
DOM-D-010	11/09 08:54	ND	ND	6.2	21.1	0.13
DOM-D-011	11/03 14:36	ND	ND	8.3	23.6	ND
DOM-D-012	11/03 14:11	ND	ND	8.3	22.7	ND
DOM-D-013	11/03 13:36	ND	ND	8.3	22.6	0.16
DOM-D-014	11/03 13:56	ND	ND	8.2	22	0.12
DOM-D-015	11/03 12:40	ND	ND	8.3	25.7	0.21
DOM-D-016	11/09 12:06	ND	ND	7.5	23.9	0.16
DOM-D-017	11/09 12:54	ND	ND	7.6	23.7	0.11
DOM-D-018	11/09 13:06	ND	ND	7.9	23	0.25
DOM-D-019	11/17 08:42	ND	ND	7.0	20	0.17
DOM-D-020	11/17 09:07	ND	ND	7.7	20.2	0.15
DOM-D-021	11/09 08:33	ND	ND	6.2	18.7	0.18
DOM-D-022	11/09 09:03	ND	1	7.7	20.6	0.21
DOM-D-023	11/17 09:37	ND	ND	7.9	20.3	0.2
DOM-D-024	11/17 09:59	ND	1	7.5	20.7	0.13
DOM-D-025	11/17 11:35	ND	1	7.6	23.4	0.3
DOM-D-026	11/17 11:30	ND	1	7.5	24.4	0.33
DOM-D-027	11/17 09:35	ND	1	7.8	21	0.26
DOM-D-028	11/17 10:05	ND	ND	7.7	21.9	0.2
DOM-D-029	11/17 13:39	ND	1	7.9	24.2	0.28
DOM-D-030	11/17 11:05	ND	ND	8.0	22.2	0.2

Number of Samples Collected for this Month: 30

Manager of Water Quality

12/8/2021
Date

GENERAL PHYSICAL SUMMARY

Name of Water System: DOMINGUEZ

System No: 1910033 **Report Month: December** **Year: 2021**

December

	Collected Date/Time	COLOR	ODOR	pH FIELD	TEMP	TURB
DOM-D-001	**12/08 11:50**	ND	1	8.3	24	0.6
DOM-D-002R	**12/08 11:34**	ND	1	8.3	23.9	0.14
DOM-D-003	**12/08 11:17**	ND	ND	8.1	21.4	0.21
DOM-D-004	**12/08 10:58**	ND	ND	8.0	20.1	0.2
DOM-D-005	**12/08 10:40**	ND	ND	8.0	20.9	0.16
DOM-D-011	**12/08 10:20**	ND	1	7.9	20	0.27
DOM-D-012	**12/08 10:01**	ND	ND	7.9	19.6	0.19
DOM-D-013	**12/08 09:25**	ND	ND	7.7	19	0.2
DOM-D-014	**12/08 09:40**	ND	1	7.8	19.3	0.23
DOM-D-015	**12/08 08:35**	ND	ND	7.1	18.5	0.18

Number of Samples Collected for this Month: 10

Manager of Water Quality 1/6/2022 **Date**

TRICHLOROETHYLENE Sampling Results for 10 years

CA Drinking Water Watch

CALIFORNIA WATER SERVICE CO. - DOMINGUEZ (1910033)

TRICHLOROETHYLENE Sampling Results From 02/01/2012 To 02/01/2022

WELL 215-01 (CA1910033_004_004)

Click to hide / show columns: Analyte Number | Analyte Name | Sampling Date | Less Than | Reporting Level | Result | Counting Error (+/-) | MCL | DLR | Unit | Qualifier

Tips on Using Table

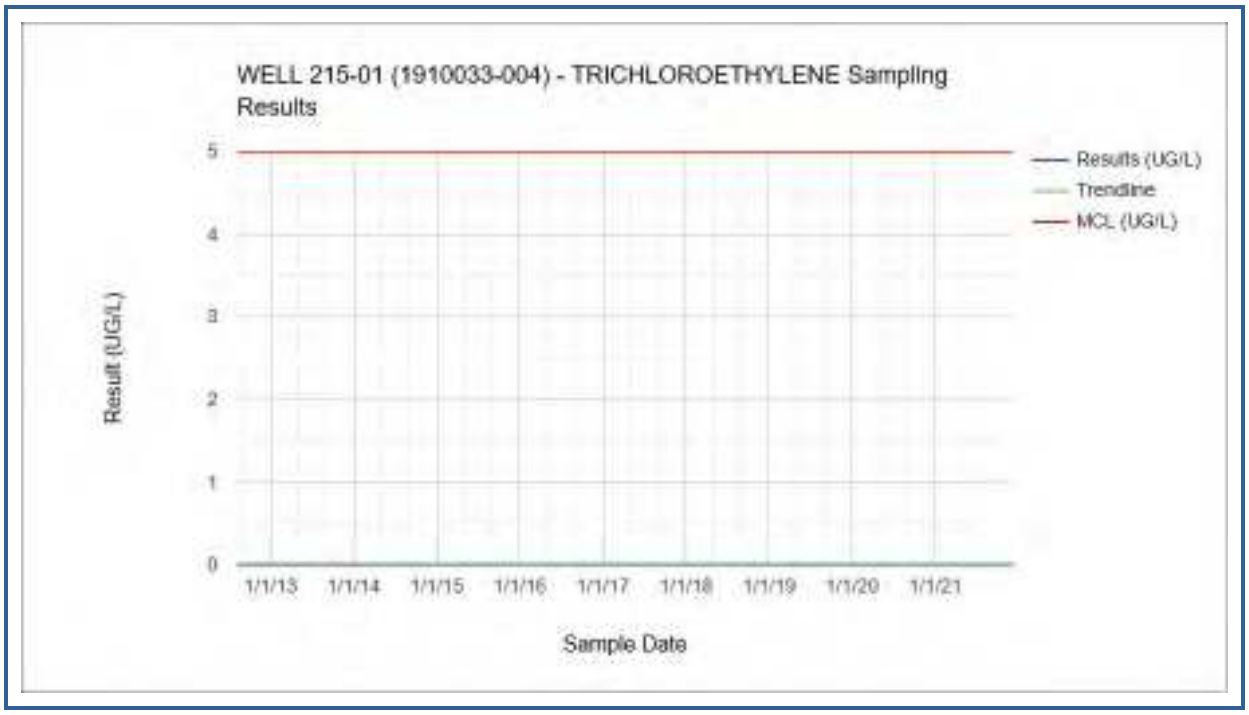
Display All records Search:

Analyte Number	Analyte Name	Sampling Date	Less Than	Reporting Level**	Result	Counting Error (+/-)	MCL	DLR	Unit	Qualifier
2984	TRICHLOROETHYLENE	12-07-2021	<	0.5			5	.5	UG/L	
2984	TRICHLOROETHYLENE	09-15-2021	<	0.5			5	.5	UG/L	
2984	TRICHLOROETHYLENE	06-15-2021	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	03-09-2021	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	12-15-2020	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	09-16-2020	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	05-26-2020	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	03-23-2020	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	12-17-2019	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	09-25-2019	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	06-10-2019	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	12-20-2018	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	09-19-2018	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	06-20-2018	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	03-21-2018	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	12-13-2017	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	08-23-2017	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	06-21-2017	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	03-15-2017	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	12-14-2016	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	09-21-2016	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	06-22-2016	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	03-16-2016	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	12-17-2015	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	09-23-2015	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	06-17-2015	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	03-25-2015	<	0.5	0.0000000		5	.5	UG/L	

Analyte Number	Analyte Name	Sampling Date	Less Than	Reporting Level**	Result	Counting Error (+/-)	MCL	DLR	Unit	Qualifier
2984	TRICHLOROETHYLENE	12-17-2014	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	10-08-2014	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	09-24-2014	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	07-09-2014	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	03-19-2014	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	09-19-2013	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	08-08-2012	<	0.5	0.0000000		5	.5	UG/L	

Showing 1 to 34 of 34 entries Previous 1 Next

** For radionuclides, Reporting Level is the MDA95.



Right click on the graph to save or copy

CA Drinking Water Watch

CALIFORNIA WATER SERVICE CO. - DOMINGUEZ (1910033)

TRICHLOROETHYLENE Sampling Results From 02/01/2012 To 02/01/2022

WELL 216-02 - PENDING (CA1910033_065_065)

Click to hide / show columns: Analyte Number | Analyte Name | Sampling Date | Less Than | Reporting Level | Result | Counting Error (+/-) | MCL | DLR | Unit | Qualifier

Tips on Using Table

Display All records

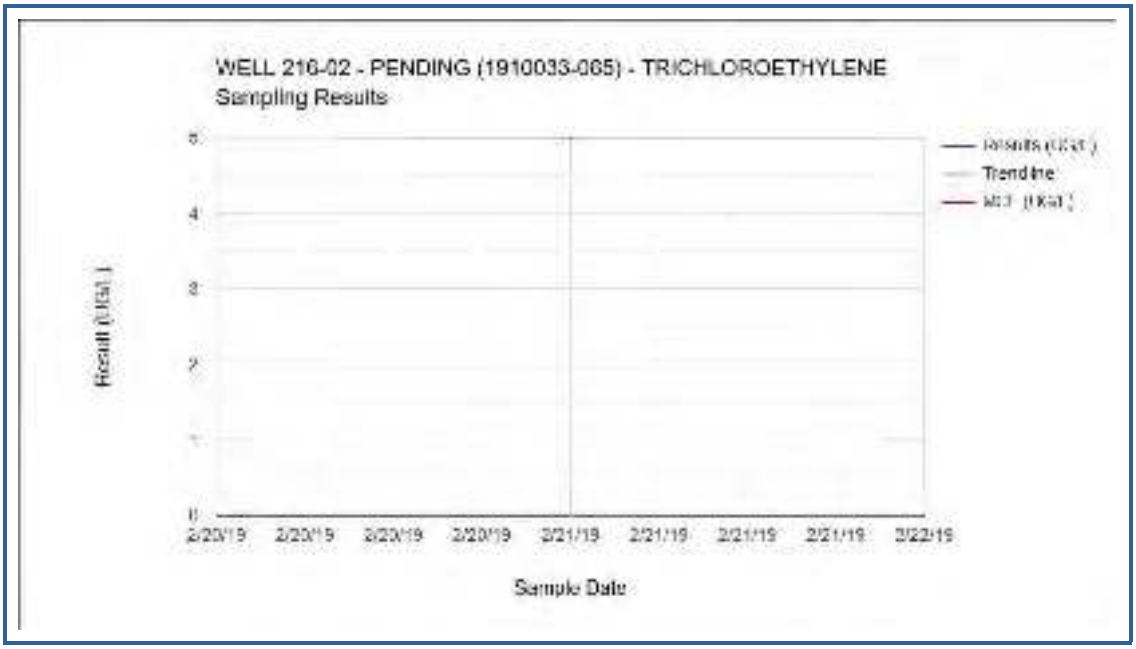
Search:

Analyte Number	Analyte Name	Sampling Date	Less Than	Reporting Level**	Result	Counting Error (+/-)	MCL	DLR	Unit	Qualifier
2984	TRICHLOROETHYLENE	02-21-2019	<	0.5	0.0000000		5	.5	UG/L	

Showing 1 to 1 of 1 entries

Previous 1 Next

** For radionuclides, Reporting Level is the MDA95.



Right click on the graph to save or copy

CA Drinking Water Watch

CALIFORNIA WATER SERVICE CO. - DOMINGUEZ (1910033)

TRICHLOROETHYLENE Sampling Results From 02/01/2012 To 02/01/2022

WELL 275-01 (CA1910033_022_022)

Click to hide / show columns: Analyte Number | Analyte Name | Sampling Date | Less Than | Reporting Level | Result | Counting Error (+/-) | MCL | DLR | Unit | Qualifier

Tips on Using Table

Display All records

Search:

Analyte Number	Analyte Name	Sampling Date	Less Than	Reporting Level**	Result	Counting Error (+/-)	MCL	DLR	Unit	Qualifier
2984	TRICHLOROETHYLENE	12-07-2021	<	0.5			5	.5	UG/L	
2984	TRICHLOROETHYLENE	05-12-2021	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	12-15-2020	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	12-15-2020	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	12-17-2019	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	12-04-2018	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	12-23-2015	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	11-06-2014	<	0.5	0.0000000		5	.5	UG/L	
2984	TRICHLOROETHYLENE	09-11-2013	<	0.5	0.0000000		5	.5	UG/L	
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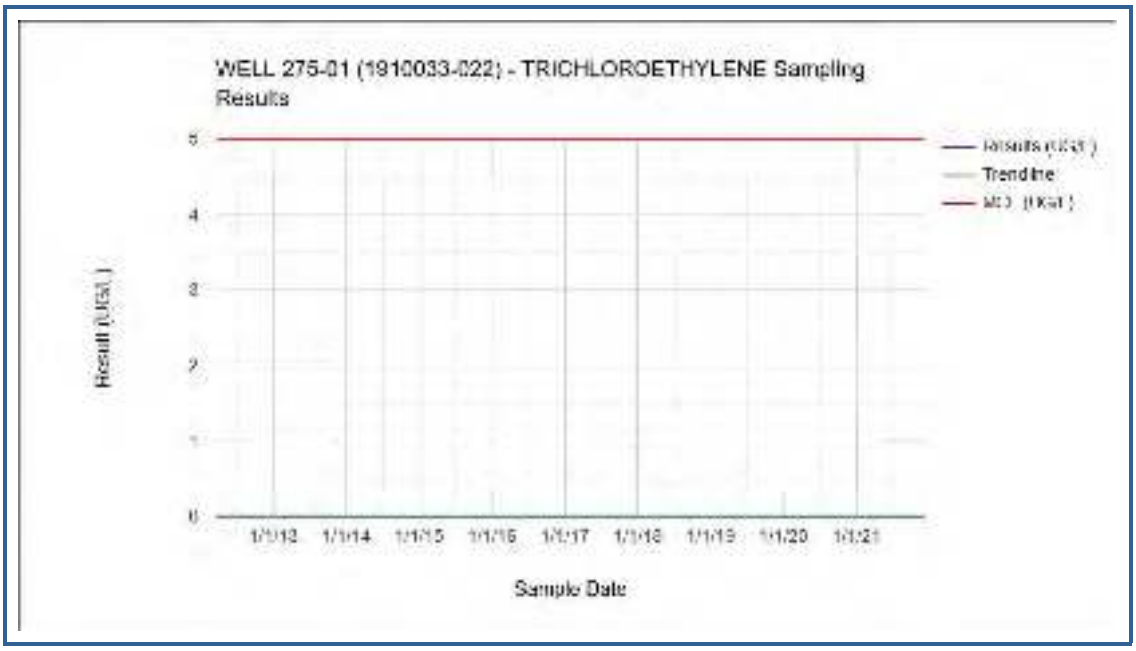

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CA Drinking Water Watch

CALIFORNIA WATER SERVICE CO. - DOMINGUEZ (1910033)

TRICHLOROETHYLENE Sampling Results From 02/01/2012 To 02/01/2022

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Tips on Using Table

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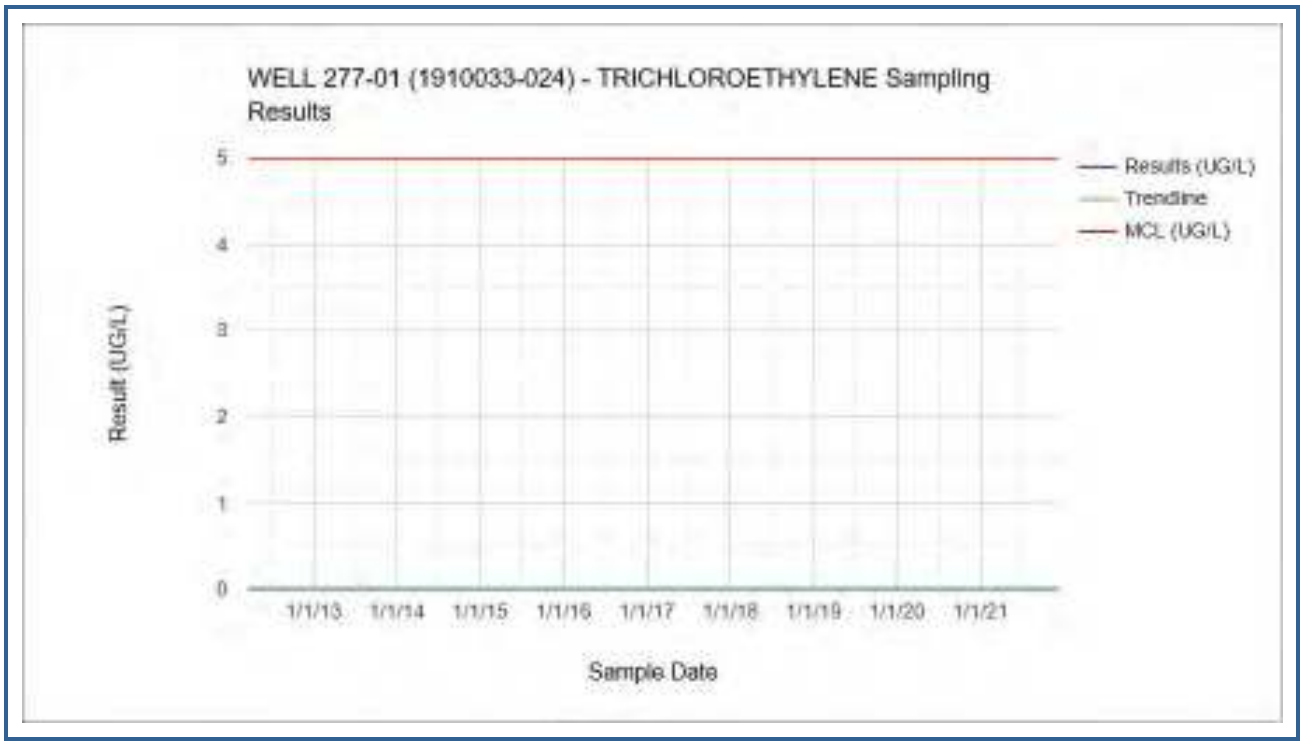

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CA Drinking Water Watch

CALIFORNIA WATER SERVICE CO. - DOMINGUEZ (1910033)

TRICHLOROETHYLENE Sampling Results From 02/01/2012 To 02/01/2022

WELL 279-01 (CA1910033_019_019)

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Qualifier

Tips on Using Table

Display All records Search:

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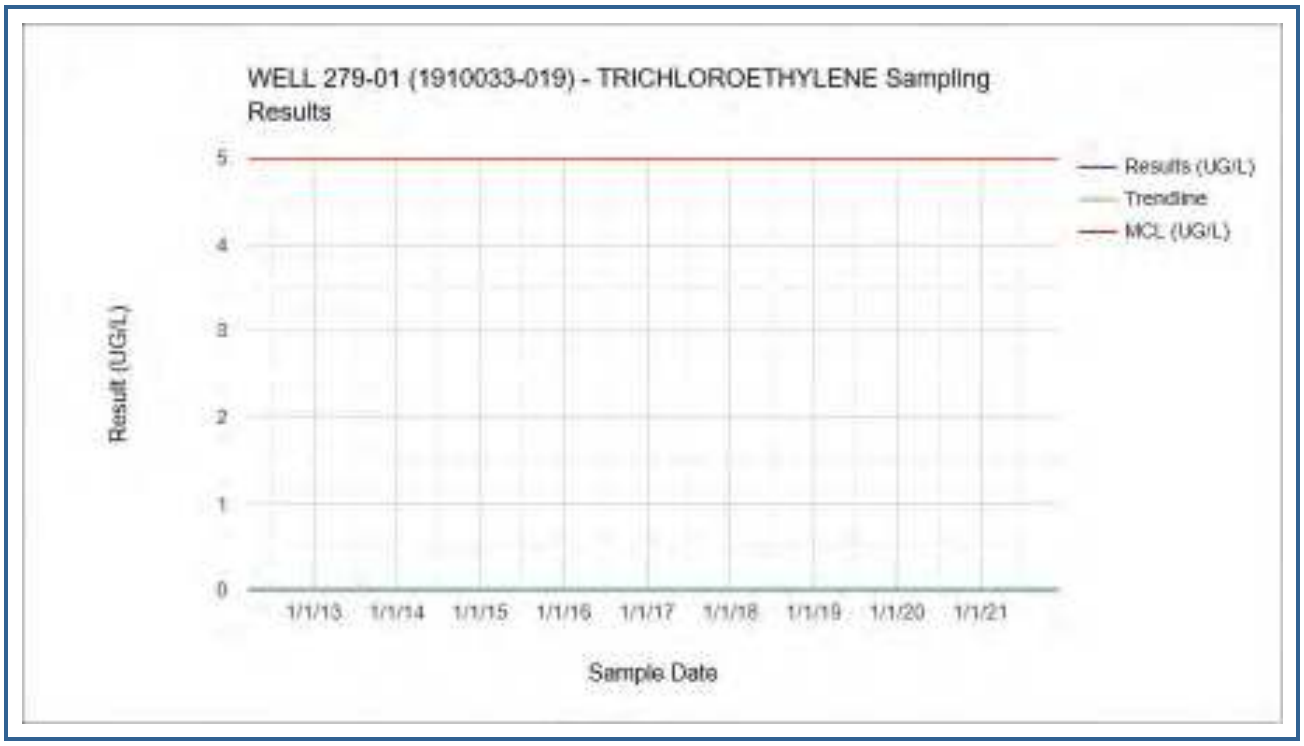

Right click on the graph to save or copy

CA Drinking Water Watch

CALIFORNIA WATER SERVICE CO. - DOMINGUEZ (1910033)

TRICHLOROETHYLENE Sampling Results From 02/01/2012 To 02/01/2022

WELL 294-01 (CA1910033_028_028)

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Tips on Using Table

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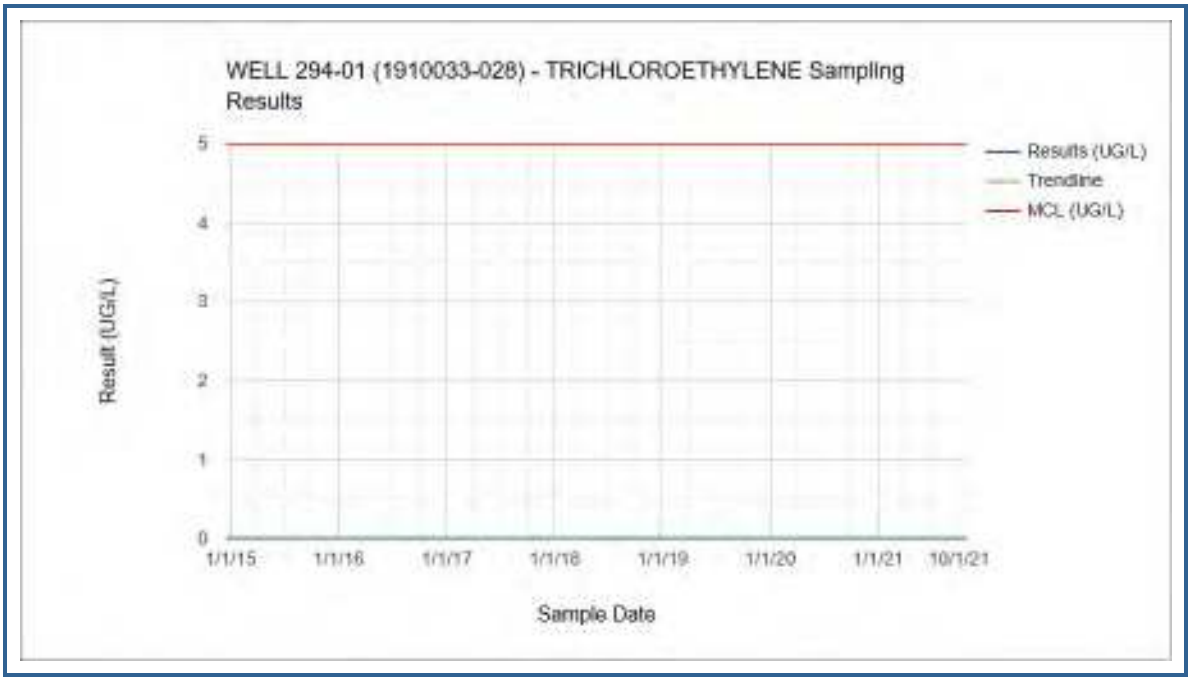

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CA Drinking Water Watch

CALIFORNIA WATER SERVICE CO. - DOMINGUEZ (1910033)

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Qualifier

Tips on Using Table

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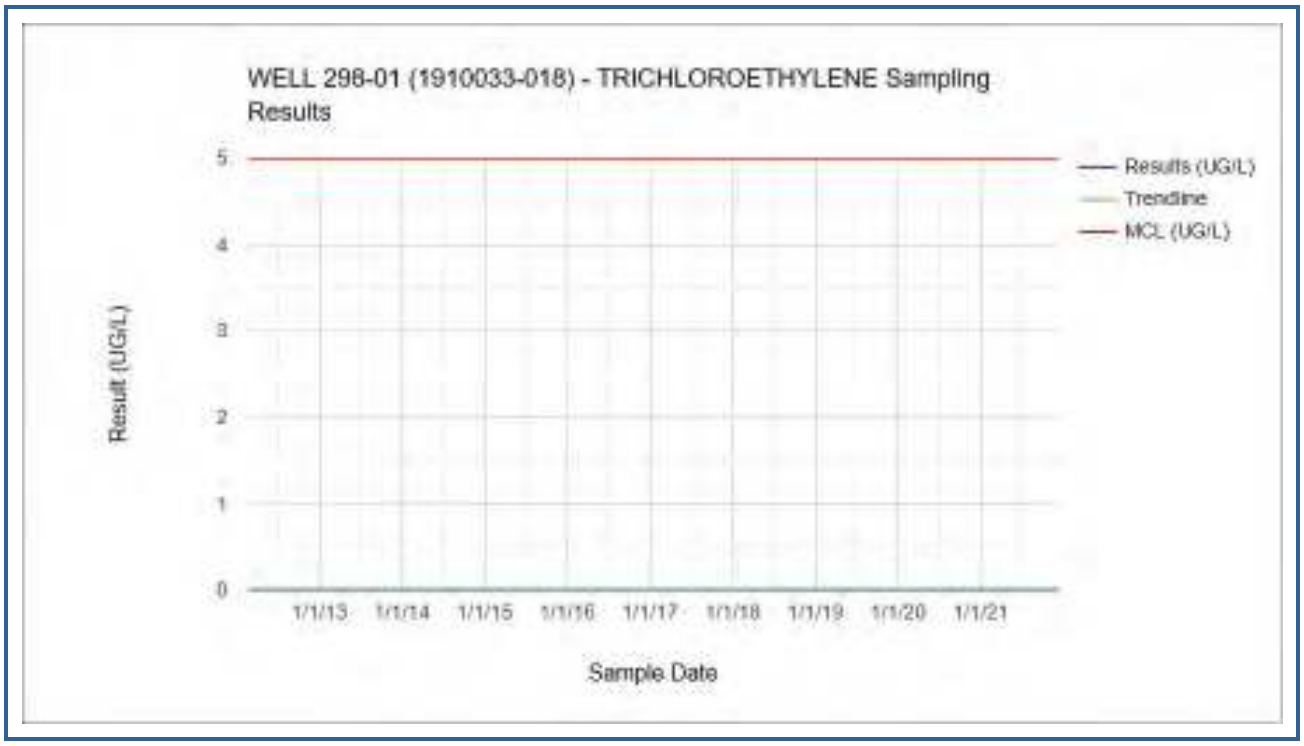

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Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie L. Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	Isaac Gendler
Witness(es)	:	

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

Report on Rate Base

California Water Service Company

General Rate Case (GRC) A.21-07-002

San Francisco, California
February 4, 2022

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ATTACHMENT 1: QUALIFICATIONS OF WITNESS **A-1**

MEMORANDUM

This Report on Rate Base for California Water Service Company (Cal Water) General Rate Case (GRC) A.21-07-002 is prepared by Isaac Gendler of the Public Advocates Office of the California Public Utilities Commission (Cal Advocates) - Water Branch, and under the general supervision of Program Manager Richard Rauschmeier, Program & Project Supervisors Syreeta Gibbs, and Project Lead Brian Yu. Marybelle Ang and Caryn Mandelbaum serve as legal counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any particular issue connotes neither agreement nor disagreement of the underlying request, methodology, or policy position related to that issue.

CHAPTER 1 Rate Base

I. INTRODUCTION

This report presents analysis and recommendations for rate base for General Rate Case Application (A.) 21-07-002 filed by California Water Service Company (Cal Water or CWS).

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize a total rate base amount of $259,371,876 for 2021, $116,651,980 for 2022, $147,903,909 for 2023, and $160,181,652 for 2024.

The Commission should require Cal Water to align the interest rate it utilizes for projects under construction with its short-term interest rate.

The Commission should require Cal Water to adjust its Contribution in Aid of Construction (CIAC) balance by $4.1M for the East Los Angeles district to account for a grant and avoid "double dipping".

III. ANALYSIS

A. Utility Plant in Service

1. *Utility Plant in Service*

Utility Plant in Service projections are contingent on which plant additions are permitted into service. Cal Water requests $266,712,611 for 2021, $328,368,768 for 2022, $326,631,604 for 2023, and $323,203,064 for 2024. These values should be adjusted to exclude cost for contingencies, special inspections and account for Cal Advocates recommended plant adjustments. Therefore, the Commission should adopt $259,371,876 for 2021, $116,651,980 for 2022, $147,903,909 for 2023, and $160,181,652 for 2024.

B. Construction Work in Progress

1. *Construction Work in Progress (CWIP)*

Construction Work in Progress (CWIP) is the dollar value of projects currently under construction. Allowance for Funds Used During Construction (AFUDC) is the interest allowed by the Commission to accumulate on these projects. Upon completion of a project, both the projects' costs and accumulated AFUDC is added to rate base. Cal Water's allowed AFUDC rate must be lower than Cal Water's full rate of return. Allowing an AFUDC rate equal or greater to Cal Water's full rate of return violates the basic risk-return relationship, contravenes the actual financing Cal Water utilizes for projects under construction, and harms ratepayers by allowing the abusive monopolistic practice of compounding profits on incomplete projects—a practice that would not be permitted in a competitive environment. It is important that the Commission fulfill its fundamental role as a substitute for competition and prevent ratepayers from funding AFUDC at Cal Water's full rate of return.[1]

Investor-owned utilities are typically compensated for financing the cost of projects under construction in one of two ways.[2] Either an *estimated* amount of CWIP is included in rate base, which generates interest at the utility's full rate of return, or the utility accumulates interest during construction on the *actual* CWIP amount at a rate allowed by the Commission (i.e. AFUDC).

Since at least 2016, Cal Water has excluded estimated CWIP from rate base and accumulated AFUDC on its actual CWIP amount.[3] The AFUDC rate that Cal Water has used and proposes to continue using is its full rate of return. Cal Water is currently

---

[1] "Our objective through regulation is to act as a substitute for competition." D.96-04-050 citing D.86-08-083.

[2] *Regulated Utilities Manual*, Deloitte & Touche USA, LLP 2004.

[3] California Water Services Decision 16-12-042 P. 138 Construction Work in Progress (CWIP).

1 authorized a 7.48% full rate of return.[4] This full rate of return is comprised of about half
2 long-term debt (costing approximately 5% per year) and half shareholder equity earning a
3 9.2% annual return, which Cal Water proposes increasing to 10.35% in a separate
4 proceeding.[5]

5 A fundamental difference between the two methods of compensating a utility for
6 the financing of CWIP is forecasting risk. When CWIP is estimated and included in rate
7 base, there is forecasting risk because the actual amount of CWIP three years into the
8 future is unknown. When AFUDC accumulates on actual CWIP amounts, there is no
9 forecasting risk. Because the method of including an estimate of CWIP in rate base
10 accumulates interest at the full rate of return, the less risky process of accumulating
11 AFUDC on actual CWIP amounts must be afforded a rate lower than the full rate of
12 return. The risk-return relationship is proportional. Lower risk should result in a lower
13 expected return.

14 In its annual report to the Securities and Exchange Commission, Cal Water
15 acknowledges that the actual financing of CWIP occurs at a cost less than its full rate of
16 return. For example, Cal Water has access to $550 million in short-term credit lines,
17 which it uses for "short-term financing of capital projects."[6] Because Cal Water's full
18 rate of return does not include any of these lower-cost, short-term credit lines, it
19 unequivocally overstates the actual cost of Cal Water's financing of CWIP and should
20 not be authorized as the AFUDC rate. In fact, the average cost of Cal Water's short-term
21 credit lines in 2019 was 1.54%--or less than one-quarter the cost it charged ratepayers by
22 using its full rate of return as the AFUDC rate.[7]

---

[4] D.20-12-007.

[5] A.21-05-001, *et. al.*

[6] Annual Report Pursuant to Section 13 or 15(d) of the Securities and Exchange Act for the fiscal year ended December 31, 2020, p. 67.

[7] Annual Report Pursuant to Section 13 or 15(d) of the Securities and Exchange Act for the fiscal year ended December 31, 2020, p. 67.

As a substitute for competition, the Commission must prevent monopoly utilities from collecting from captive ratepayers amounts that would not be tolerated in a competitive environment. In a competitive environment, businesses can be expected to secure the most favorable financing possible. Short-term financing of CWIP relies on short-term credit facilities—as Cal Water itself acknowledges in its Annual Report to the Securities and Exchange Commission. However, Cal Water proposes to charge customers more than double the actual cost of short-term financing by utilizing its full rate of return as the AFUDC rate. The Commission should not authorize this practice.

No business that follows U.S. Generally Accepted Accounting Principles is able to recognize, much less capitalize, profit on a project under construction. In a competitive environment, a business is allowed to capitalize interest during construction, but that cannot include shareholder profit. To allow Cal Water to utilize its full rate of return as its AFUDC rate requires ratepayers to not only fund profit on assets that are not providing service but to then fund additional profit compounded on previous profits that have been capitalized for ratemaking purposes. As a substitute for competition, the Commission should authorize Cal Water to capitalize and collect from ratepayers an AFUDC equal to its weighted cost of short-term debt (its lowest cost source of project funding) during project construction. After construction is completed and reviewed for reasonableness and prudency, all of the project costs (including capitalized interest) should be added to rate base, earning Cal Water's full rate of return.

C. Contributions in Aid of Construction (CIAC)

1. *East Los Angeles Grants*

Cal Water adjusted the CIAC Balances for the East Los Angeles district to offset $4.1M in estimated grants that may be received for a PFAS treatment project. The $4.1M should be offset to account for the actual amount of any grant funds once they have been received and avoid "double dipping," i.e., to prevent ratepayers from paying for something that has already been adequately funded.

IV. RECOMMENDATIONS

The Commission should authorize a total rate base amount of $266,699,259 for 2021, $160,411,889 for 2022, $200,829,903 for 2023, and $218,622,820 for 2024.

The Commission should deny Cal Water's current rate of return and stipulate that it should adopt the return rate of its short-term loans of 1.54% if it turns out that all its capital projects are being covered by the short-term loans.

The Commission should offset $4.1M from the CIAC balance for the East Los Angeles district by the amount of any grant funds received.

Attachment 1: Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY

OF

Isaac Gendler

Q.1 Please state your name and address.

A.1 My name is Isaac Gendler, and my business address is 505 Van Ness Avenue, San Francisco, California 94102.

Q.2 By whom are you employed and what is your job title?

A.2 I am employed by the California Public Utilities Commission Public Advocates Office as a Utilities Engineer.

Q.3 Please describe your educational and professional experience.

A.3 I received a Bachelor of Science Degree in Mechanical Engineering from San Jose State University in May 2019.

I have been with the Public Advocates Office – Water Branch since September 2020.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am responsible for analyzing and writing about the condition of plant infrastructure and equipment in the Bakersfield, Kern River Valley, Selma, and Visalia districts as well as rate base for all of California Water System's districts.

Q.5 Does that complete your prepared testimony?

A.5 Yes.

Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	
Witness(es)	:	Sam Lam

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

Report on Sales Forecast, Conservation Budgets, Rate Design, and Special Request 2 – RSF Program Update

California Water Service Company
General Rate Case
Application 12-07-002

San Francisco, California
February 4, 2022

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MEMORANDUM

The Public Advocates Office at the California Public Utilities Commission ("Cal Advocates") examined application material, data request responses, and other information presented by California Water Service Company ("Cal Water or CWS") in Application ("A.") 21-07-002 to provide the California Public Utilities Commission ("Commission" or "CPUC") with recommendations in the interests of ratepayers for safe and reliable service at the lowest cost. Brian Yu is Cal Advocates project lead for this proceeding. Syreeta Gibbs is the oversight supervisor, and Caryn Mandelbaum and Marybelle Ang are the legal counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any particular issue connotes neither agreement nor disagreement of the underlying request, methodology, or policy position related to that issue.

CHAPTER 1 - Sales Forecast

I. INTRODUCTION

For a given test year (TY), a forecast of customer counts by customer class, and average sales per customer for each customer class are necessary to forecast revenues at current rates. The customer forecast multiplied by the average sales per customer forecast for each class is the total sales forecast for each class:

(Number of Customer Forecast)
x (Average Use per Customer Forecast)
= Total Sales Forecast

Revenue obtained from the total sales is referred to as the operational revenue.[1] This chapter discusses Cal Water's sales forecast in this General Rate Case (GRC).

II. SUMMARY OF RECOMMENDATIONS

- The Commission should adopt Cal Water's number of customers forecast.
- The Commission should reject Cal Water's usage per customer forecast and instead, adopt the three-year average methodology.
- The Commission should require Cal Water to update and include the 2021 sales data in the sales forecast to increase the number of data points for all customer class forecasts and capture the most recent sales trend.

III. ANALYSIS

A. Number of Customers Forecast

Cal Water uses the number of customer forecasting methodology outlined in the Commission's Rate Case Plan (RCP) for each district.[2] The methodology estimates the

[1] Revenue is also generated from Non-Tariffed Products and Services (NTP&S), which is discussed in Cal Advocates' Report in Chapter 2 on Allocations and Plant for CSS, RDOM District, Pipeline Replacement, and Physical Security.

[2] D.07-05-062, p. A-23, footnote 4.

number of customers in the test year using the most recent 5-year average of the annual growth rate to determine customer growth.

The RCP permits the utilities to adjust the number of customers forecast methodology for expected or unexpected, unusual situations.[3] In this GRC, specific adjustments were made to the number of customers forecast in the Bakersfield and Selma district as Cal Water continues to convert customers from flat rate services to metered residential services.[4] Cal Water separates service growth in these districts into two components, (1) growth from flat rate service conversion and (2) growth from new services.[5] The same methodology was used to generate Cal Water's 2018 GRC's number of customers forecast.[6] This forecasting methodology is tested against the historical recorded number of customers in this GRC and the number of customers forecast methodology has less than an 1% of error when compared to recorded data.[7] Figure 1-1 below summarizes Cal Water's TY 2023 number of customers forecast compared to recorded customer count in 2015 and 2020. The Commission should adopt Cal Water's TY 2023 number of customers forecast.

---

[3] R.07-05-062, p. A-23, footnote 4.

[4] M.Cubed, California Water Service Sales Forecast Report, March 2021, p.11.

[5] M.Cubed, California Water Service Sales Forecast Report, March 2021, p.11.

[6] M.Cubed, California Water Service Sales Forecast Report, March 2021, p.11.

[7] M.Cubed, California Water Service Sales Forecast Report, March 2021, p.4.

Figure 1-1: Number of Customers Forecast[8]

District	Residential 2015	Residential 2020	Residential Test Year 2023	Multi-Family 2015	Multi-Family 2020	Multi-Family Test Year 2023	Business 2015	Business 2020	Business Test Year 2023	Public Authority 2015	Public Authority 2020	Public Authority Test Year 2023
AV-FRE	76	79	80	0	0	0	0	0	0	0	0	0
AV-LAN[2]	647	654	658	0	0	0	14	11	11	7	7	7
AV-LEO	586	604	614	5	5	5	22	22	22	7	7	7
BG	16,970	16,944	16,929	114	187	252	1,326	1,248	1,204	119	136	147
BK[1]	41,541	56,184	61,444	1,199	1,202	1,204	6,305	6,267	6,245	712	731	743
CH	23,996	25,563	26,551	948	1,028	1,080	2,976	3,074	3,134	433	429	427
DIX	2,633	2,801	2,906	26	27	28	156	154	153	28	31	33
DOM	28,733	28,975	29,120	746	750	752	2,870	2,832	2,810	279	252	237
ELA	20,300	20,382	20,430	713	729	739	4,610	4,584	4,568	351	355	358
HR	22,299	22,657	22,875	1,850	1,847	1,845	1,838	1,811	1,795	364	357	354
KC	2,121	2,310	2,432	34	35	35	311	308	306	60	59	59
KIN[3]	3,929	3,870	3,955	7	7	7	104	108	111	16	16	16
LAS	16,915	16,985	17,026	162	171	177	1,161	1,173	1,180	203	208	211
LIV	16,773	17,147	17,375	96	101	104	1,010	999	992	233	230	228
MPS	31,222	31,347	31,422	715	759	787	3,370	3,384	3,393	314	317	319
MRL	2,145	3,059	3,086	134	134	134	483	474	469	42	50	55
ORO	2,638	2,669	2,687	70	81	89	665	672	676	86	96	102
PV	22,789	22,921	23,001	223	225	226	672	672	672	260	254	250
RDV-CSP	242	244	245	0	0	0	5	5	5	2	2	2
RDV-LUC	1,120	1,154	1,175	14	14	14	40	41	42	8	8	8
RDV-UNI	412	417	421	3	3	3	6	6	6	3	3	3
SEL	4,341	5,409	5,799	57	66	72	438	458	470	119	121	122
SLN	24,355	24,601	24,812	425	435	441	2,538	2,588	2,618	287	293	297
SSF	13,952	14,052	14,113	167	182	191	1,895	1,921	1,936	209	203	200
STK	37,961	39,034	39,692	413	416	418	3,797	3,832	3,854	319	318	317
VIS	37,266	40,443	42,478	985	973	966	2,951	3,071	3,146	803	936	1,026
WIL[4]	2,016	2,036	2,046	35	35	35	267	263	263	48	49	50
WLK[5]	6,166	6,174	6,179	125	125	125	528	519	519	89	89	89

Notes: 1. Business services kept at 2020 level. Negative growth not expected. 2. Residential service growth incorporates conversion of Flat customers. See Table 8. 3. Residential service growth based on most recent 3 years due to effects of 2016 Erskine Fire. 4. Business services kept at 2020 level. Negative growth not expected. 5. Business services kept at 2020 level. Negative growth not expected.

Table 8. Decomposition of Service Growth in Districts with Flat Residential Service Conversion

BK	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Flat Services	19,753	15,610	12,283	10,367	8,795	7,658	6,438	5,219	4,000	2,000	0	
Residential Services	41,541	46,080	49,785	52,171	54,226	56,184	57,031	59,684	61,444	63,991	66,545	
Flat Conversions	4,143	3,327	1,918	1,570	1,137	1,219	1,219	1,219	2,000	2,000	0	
New Services		376	388	466	484	821	528	534	541	547	554	5-Yr CAGR
Residential, excl. conversions	41,541	41,917	42,315	42,783	43,267	44,088						1.2%
SEL	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Flat Services	1,233	796	467	316	306	304	203	101	0	0	0	
Residential Services	4,341	4,831	5,053	5,356	5,380	5,400	5,530	5,669	5,799	5,828	5,857	
Flat Conversions	437	329	152	10	1	101	101	101	0	0	0	
New Services		53	-106	151	14	28	28	28	29	29	29	5-Yr CAGR
Residential, excl. conversions	4,341	4,194	4,207	4,438	4,452	4,480						0.6%
MRL	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Flat Services	870	441	0	0	0	0	0	0	0	0	0	
Residential Services	2,145	2,032	3,029	3,043	3,049	3,059	3,068	3,077	3,086	3,095	3,104	
Flat Conversions	429	441	0	0	0	0	0	0	0	0	0	
New Services		59	-44	14	6	10	9	9	9	9	9	5-Yr CAGR
Residential, excl. conversions	2,145	2,201	2,159	2,173	2,179	2,189						0.4%

[8] M.Cubed, California Water Service Sales Forecast Report, March 2021, p.12-13.

B. Usage per Customer Forecast

The TY 2023 usage per customer forecast is completed for each district separately. Cal Water states that its methodology aligns with D.20-08-047,[9] which ordered that sales forecasts in future rate cases address the following factors: [10]

- Impact of revenue collection and rate design on sales and revenue collection
- Impact of planned conservation programs
- Changes in customer counts
- Previous and upcoming changes to building codes requiring low flow fixtures and other water-saving measures, as well as any other relevant code changes
- Local and statewide trends in consumption, demographics, climate, population density, and historic trends by RMA
- Past sales trends

1. Cal Water's Use per Customer Forecast

Cal Water's sales forecasting methodology should not be used to forecast TY 2023 sales in this GRC. In this GRC, Cal Water builds on the use per customer forecast methodology used in the 2018 GRC. Use per customer and sales per customer (sales) are used interchangeably in this section. In response to discovery concerning, Sales Forecast Coefficients, Cal Water explained the difference between the forecasting methodologies used in the 2018 GRC and the 2021 GRCs as follows: [11]

> *In its 2018 GRC, Cal Water presented a sales forecast conditional on average weather and economic conditions and the absence of water use restrictions. In its 2021 GRC, Cal*

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[9] D.20-08-047, p.105-106

[10] M.Cubed, California Water Service Sales Forecast Report, March 2021 p.3.

[11] Response to DR SLM-001, Q5.

Water presented an unconditional sales forecast. The primary differences between the 2018 and 2021 sales forecast are:

- *Whereas the 2018 GRC sales forecast was conditional on average rainfall and temperatures, the 2021 GRC sales forecast uses Monte Carlo simulation in combination with historical weather sequences to generate an unconditional forecast – that is, a forecast that does not depend on the assumption of average rainfall and temperature.*
- *Whereas the 2018 GRC sales forecast was conditional on Cal Water being in Stage 0 of its Water Shortage Contingency Plan (WSCP) in the Test Year, the 2021 GRC sales forecast uses Monte Carlo simulation in combination with historical hydrology sequences to generate an unconditional forecast - that is, a forecast that does not depend on the assumption of being in Stage 0 of the WSCP.*

Ultimately, the 2021 GRC use per customer forecast methodology is the same as the 2018 GRC use per customer forecast methodology with exceptions to the stated differences in Cal Water's response to data request (DR) SLM-001 (referenced above).

There is reasonable doubt regarding the accuracy of Cal Water's use per customer forecast. Cal Water states that overall, the 2018 GRC sales forecast has performed well.[12] California Water Service Sales Forecast Report (M.Cubed's sales report), specifically states that the forecast errors for the companywide service count and joint sales are less than 1% and 3%, respectively.[13] M.Cubed's sales report states that companywide forecast error of Residential and Multi-Family sales are less than 2%.[14] Errors in the

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[12] M.Cubed, California Water Service Sales Forecast Report, March 2021, p.4.

[13] M.Cubed, California Water Service Sales Forecast Report, March 2021, p.4.

[14] M.Cubed, California Water Service Sales Forecast Report, March 2021, p.4.

forecast in the Business and Public Authority customer classes are 10.1% and 16.7%, respectively. Cal Water states that the forecasting error may be in large measure a consequence of public health policies put in place in response to the COVID-19 pandemic.[15] It is reasonable to suggest that the COVID-19 pandemic and the public health policies have affected Business and Public Authority sales as Californians were ordered to stay at home to decrease the spread of COVID-19.[16] However, the observed decrease in sales for Business and Public Authority customers is inversely related to the changes observed in sales for Residential and Multi-Family customers.

Cal Water's statement that the 2018 GRC sales forecast performed well is flawed and unreasonable. The assumption that the COVID-19 pandemic and California's public health policies have unilaterally affected Business and Public Authority sales whilst not affecting Residential and Multi-Family sales is a contradiction. On March 04, 2020, Executive Order N-33-20 ordered all individuals living in the State of California to stay home or at their place of residence except as needed to maintain continuity of operations of the federal critical infrastructure sectors.[17] In retrospect, it is logical to expect the 2018 GRC's 2020 sales forecast to not account for the effect on sales from the pandemic and the stay-at-home order. Thus, it is puzzling how Cal Water determined that the 2018 GRC residential and Multi-Family sales forecast performed well.[18] Based on the unexpected impact of the pandemic, residential sales in 2020 should be greater than what was forecasted as residential customers spent more time at home - which will alter an individual's water usage patterns. For example, we can expect a number of individuals to use water to cook at home instead of dining out at businesses. Telecommuting workers and students would use water at home for indoor water usages, instead of using water at

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[15] M.Cubed, California Water Service Sales Forecast Report, March 2021, p.4.

[16] https://www.gov.ca.gov/2020/03/19/governor-gavin-newsom-issues-stay-at-home-order/

[17] Executive Order N-33-20.

[18] M.Cubed, California Water Service Sales Forecast Report, March 2021, p.4.

their place of business or at school during the day. Figure 1-2 below shows the actual recorded residential sales in 2020 compared to the 2018 GRC's 2020 residential sales forecast.

Figure 2-2: Cal Water's 2018 GRC 2020 Residential Sales Forecast vs Recorded 2020 Residential Sales (Thou. CCF)[19],[20]

District	2018 GRC Forecast	Realized	Error %
AV	254	236	-7.4%
BG	4,332	4,617	6.2%
BK	15,128	13,114	-15.4%
CH	5,396	5,457	1.1%
DIX	380	391	2.9%
DOM	3,610	3,658	1.3%
ELA	2,960	2,875	-3.0%
HR	2,515	2,591	2.9%
KC	321	330	2.7%
KRV	237	225	-5.1%
LAS	3,678	3,766	2.3%
LIV	2,903	2,866	-1.3%
MPS	3,576	3,600	0.7%
MRL	401	415	3.4%
ORO	370	341	-8.7%
PV	5,574	5,823	4.3%
RDV	99	104	4.2%
SEL	1,201	1,126	-6.6%
SLN	3,018	3,116	3.2%
SSF	1,169	1,168	0.0%
STK	5,358	5,355	-0.1%
VIS	8,373	8,434	0.7%
WIL	333	343	2.7%
WLK	2,041	2,006	-1.8%
Total	73,228	71,957	-1.8%
		MAPE	3.7%

As Figure 1-2 above shows, the actual recorded residential sales in 2020 is 1.8% less than what was forecasted. The 2018 GRC sales forecast methodology forecasted

[19] M.Cubed, California Water Service Sales Forecast Report, March 2021, p.7.

[20] MAPE - Mean Absolute Percentage Error is a measure of prediction accuracy of a forecasting method in statistics.

residential sales of 73,288,000 CCF in 2020 and Cal Water recorded 71,957,000 CCF of residential sales in 2020. Thus, despite the stay-at-home orders issued in March of 2020, the 2018 GRC's 2020 sales forecast over-estimated residential sales. Ultimately, Cal Water's 2018 GRC sales forecast did not perform well and Cal Water's analysis of the 2018 GRC sales forecast methodology and the TY 2023 GRC sales forecast methodology should be disregarded. As the main components of the 2021 GRC sales forecasting methodology does not differ from the 2018 GRC sales forecasting methodology,[21] Cal Water's sales forecasting methodology should not be used to forecast TY 2023 sales in this GRC.

2. COVID-19 Pandemic and the Public Health Policies' Effect on Residential Sales

It is reasonable to suggest that the COVID-19 pandemic and the public health policies affected the Residential, Business and Public Authority sales as Californians were ordered to stay at home to decrease the spread of COVID-19.[22] As explained in Section 1 of this chapter, the observed changes in sales for Business and Public Authority customers is inversely related to the changes in sales for Residential and Multi-Family customers. As customers sheltered at home, the usual day-to-day water usage outside of the homes will be transferred to at home water usage. In 2020, the recorded single-family residential sales are 5.5% higher than the previous three-year (2017-2019) average of single-family residential sales. Figure 1-3 below compares the recorded sales per customer in 2020 compared to 2017-2019 across all districts.

---

[21] Response to DR SLM-001, Q.5.

[22] https://www.gov.ca.gov/2020/03/19/governor-gavin-newsom-issues-stay-at-home-order/

1 **Figure 3-3: 2020 Single-Family Residential Sales per Customer Comparison**

2020 Single-Family Residential Sales per Customer Comparison				
District	2017-2019 Recorded Avg	2020 Recorded	Difference (CCF)	Difference (%)
AV	195.3	200.1	4.8	2.5%
BK	230.0	236.8	6.8	3.0%
BG	254.4	271.7	17.3	6.8%
CH	199.2	215.1	15.9	8.0%
DIX	129.9	138.9	9.0	6.9%
DOM	121.3	125.5	4.2	3.5%
ELA	138.6	142.3	3.7	2.7%
HR	110.8	114.9	4.1	3.7%
KRV	66.8	71.2	4.5	6.7%
KC	137.8	141.9	4.1	3.0%
LIV	156.7	168.1	11.4	7.3%
LOS	206.9	222.3	15.4	7.4%
MRL	127.3	135.9	8.6	6.7%
MPS	107.5	115.4	7.9	7.4%
ORO	120.8	127.8	7.0	5.8%
PV	246.6	255.6	9.0	3.6%
SLN	121.3	126.7	5.4	4.5%
SEL	201.4	209.8	8.4	4.2%
SSF	79.4	83.8	4.3	5.5%
STK	127.8	137.6	9.7	7.6%
VIS	202.6	209.2	6.5	3.2%
WLK	309.5	326.6	17.1	5.5%
WIL	154.6	171.1	16.5	10.7%
RDV	101.0	107.0	6.0	5.9%
Average			***8.7***	***5.5%***

2 On average, 2020 single-family residential sales per customer is 5.5% higher than
3 the average of the three years prior (2017-2019), further indicating that the COVID-19
4 pandemic and the stay-at-home order has affected (increased) residential consumption.

5 **3. Three-Year Average Methodology**

6 The Commission should adopt a TY 2023 sales forecast based on the three-year
7 average sales forecast methodology based on 2019 through 2021 recorded sales. It is
8 notable that the three-year average sales forecast methodology also addresses the factors

discussed in D.20-08-047. As these factors are used to derive the final sales forecast, the three-year average of the recorded sales will take into account the D.20-08-047 factors' effect on consumption over the three years (2019 – 2021). The D.20-08-047 factors' aggregate effect on sales is considered without the need to isolate the individual factors under a regression modeling (such as the New Committee Method). In addition, the three-year average forecast methodology best represents recent consumption behaviors in this GRC. The three-year average sales forecast in Figure 1-4 includes consumption data from 2018-2020, of which two years of data (2018-2019) represents the water consumption behavior prior to the COVID-19 pandemic and a year of data (2020) will represent the water consumption behavior during the COVID-19 pandemic. Figure 1-4 below compares Cal Water's sales forecast with the three-year average sales forecast (using consumption data from 2018 – 2020).

Figure 4-4: TY 2023 Per Customer Residential Sales Forecast Comparison

TY2023 Per Customer Residential Sales Forecast Comparison		
District Abbreviations	Cal Water's Methodology	3YR Average Methodology
AV	149.0	166.3
BK	227.1	213.9
BG	248.6	241.5
CH	194.1	181.6
DIX	131.7	117.9
DOM	120.2	111.3
ELA	134.4	129.0
HR	109.4	102.7
KRV	55.6	59.4
KC	135.8	127.8
LIV	156.4	144.6
LOS	198.7	193.1
MRL	118.7	134.0
ORO	117.8	110.5
PV	238.4	232.2
SLN	118.2	112.6
SEL	188.0	178.9
STK	119.8	117.8
VIS	198.8	187.3
WLK	296.9	288.3
WIL	148.2	141.7
RDV	143.3	103.0
BAY	99.0	87.0
Note(s):		
1. RDV = COS + LUC+ UNI		
2. BAY = MPS + SSF		

Cal Advocates compared the three-year average sales forecast result with recorded sales data between 2013 through 2020 and summarized the results in Figure 1-5 below. Figure 1-5 shows the forecast error for the following four customer classes, Single-Family Residential (SFR), Multi-Family Residential (MFR), Business (COM), and Public Authority (GOV), between 2013 and 2020.

Figure 5-5: 3 Year Average Sales Forecast vs Recorded Sales (2013-2020)

3-YR AVG Forecast Error on Aggregate vs Recorded				
Aggregate Error %	Customer Classes			
	SFR	MFR	COM	GOV
	8.89%	7.99%	7.03%	13.13%

On average, when using the three-year average methodology to forecast sales, the margin of error for the Single-Family Residential, Multi-Family Residential, Commercial, and the Public Authorities (GOV) customer classes are 8.89%, 7.99%, 7.03%, and 13.13%, respectively. The aggregate forecast error percentages include years where the three-year average methodology is not appropriate and should not be applied to forecast sales. For example, using the three-year average between 2012-2014 to forecast 2015 sales is inappropriate as then-Governor Brown issued Executive Order B-29-15 in April 2015 to achieve a statewide 25% reduction (compared to 2013 consumption levels) in potable urban water usage through February 28, 2016. Similarly, it may be inappropriate to use a three-year average forecast of 2013-2015 to forecast 2016 sales as it includes two years of unrestricted water use (2013-2014) and a single year of restricted water use (2015) when 2016 was a restricted water use year. Figure 1-6 shows the three-year average sales forecast methodology's 2015 and 2016 forecast error for the following four customer classes, Single-Family Residential (SFR), Multi-Family Residential (MFR), Business (COM), and Public Authority (GOV).

Figure 6-6: 3-Year Average Sales Forecast vs Recorded Sales (2015 & 2016)

3-Yr Avg 2015 Forecast Error on Aggregate vs Recorded				
Aggregate Error %	Customer Classes			
	SFR	MFR	COM	GOV
	20.86%	14.90%	13.24%	32.63%

3-Yr Avg 2016 Forecast Error on Aggregate vs Recorded				
Aggregate Error %	Customer Classes			
	SFR	MFR	COM	GOV
	17.76%	13.45%	10.90%	14.25%

A three-year average sales forecast methodology based on two years of pre-pandemic water usage (2018-2019) and a single year of mid-pandemic water usage (2020) may not accurately represent future water consumption as the COVID-19 pandemic continues to affect ratepayers[23],[24] – thus, the Commission should require Cal Water to include the 2021 sales data in the final adopted sales forecast.[25] Effectively shifting the years (datapoints) used in the three-year average sales forecast to 2019-2021 – where the TY 2023 sales forecast is then represented by two years of mid-pandemic water use (2020-2021) and a single year of pre-pandemic water use (2019).

It is unclear when the COVID-19 pandemic will cease to impact California's ratepayers but it is certain that the most recent three years (2019-2021) of consumption best represents water consumption in the near future. Likewise, by using the three-year average to forecast 2017 sales, which includes two years of restricted water use data (2015-2016) and one year of unrestricted water use data (2014), the forecast error percentages are 3.80%, 6.63%, 6.68%, and 9.77% for the SFR, MFR, COM, and GOV customer classes, as summarized in Figure 1-7.

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[23] A skewed dataset such as the discussed 2016 three-year average sales forecast example.

[24] The United States Center for Disease Control and Prevention predicts growing cases of COVID-19 hospitalizations going into 2022. https://www.cdc.gov/coronavirus/2019-ncov/science/forecasting/hospitalizations-forecasts.html

[25] Cal Water will have this information prior to the final Commission's decision in this proceeding.

Figure 7-7: 3-Year Average Sales Forecast vs Recorded Sales (2017)

3-Yr Avg 2017 Forecast Error on Aggregate vs Recorded				
Aggregate Error %	Customer Classes			
	SFR	MFR	COM	GOV
	3.80%	6.63%	6.68%	9.77%

Therefore, prior to adopting the final sales forecast of this GRC, the Commission should require Cal Water to include the 2021 sales data in the sales forecast – altering the three-year average sales forecast methodology to include 2019-2021 sales data instead of 2018-2020 sales data – which will reflect a sales forecast with two years of mid-pandemic water use (2020-2021) and one year of pre-pandemic water use (2019). The most recent three years of water consumption best represents the near future as California continues to transition through the evolving COVID-19 pandemic situation.

4. Achieving the Governor's Call to Increase Water Conservation

The Commission should adopt the sales forecast recommendation, based on the three-year average forecast methodology, because it better aligns with the Governor's goal to expand water conservation efforts.[26] Figure 1-8 below shows the three-year average TY 2023 residential sales forecast, based on sales data between 2018 through 2020, compared to the 2020 recorded sales.

[26] https://www.gov.ca.gov/2021/10/19/governor-newsom-expands-drought-emergency-statewide-urges-californians-to-redouble-water-conservation-efforts/

Figure 8-8: Sales Forecast in TY 2023, 2024, 2025 Compared to Recorded 2020 Sales.

Sales Forecast vs Recorded 2020 Sales.					Difference (%)		
District Abbreviations	TY2023 Forecast	2024 Forecast	2025 Forecast	2020 Recorded	TY2023 vs 2020	2024 vs 2020	2025 vs 2020
AV	166.3	164.4	162.6	200.1	-16.9%	-17.8%	-18.8%
BK	213.9	211.6	209.2	236.8	-9.7%	-10.7%	-11.7%
BG	241.5	238.8	236.1	271.7	-11.1%	-12.1%	-13.1%
CH	181.6	179.6	177.6	215.1	-15.6%	-16.5%	-17.5%
DIX	117.9	116.6	115.3	138.9	-15.1%	-16.1%	-17.0%
DOM	111.3	110.0	108.8	125.5	-11.3%	-12.3%	-13.3%
ELA	129.0	127.6	126.1	142.3	-9.4%	-10.4%	-11.4%
HR	102.7	101.6	100.4	114.9	-10.6%	-11.6%	-12.6%
KRV	59.4	58.7	58.0	71.2	-16.7%	-17.6%	-18.5%
KC	127.8	126.3	124.9	141.9	-10.0%	-11.0%	-12.0%
LIV	144.6	143.0	141.4	168.1	-13.9%	-14.9%	-15.9%
LOS	193.1	191.0	188.8	222.3	-13.1%	-14.1%	-15.0%
MRL	134.0	132.5	131.0	135.9	-1.4%	-2.5%	-3.6%
ORO	110.5	109.3	108.1	127.8	-13.5%	-14.5%	-15.4%
PV	232.2	229.6	227.0	255.6	-9.2%	-10.2%	-11.2%
SLN	112.6	111.3	110.1	126.7	-11.2%	-12.2%	-13.1%
SEL	178.9	176.9	174.9	209.8	-14.7%	-15.7%	-16.6%
STK	117.8	116.5	115.2	137.6	-14.4%	-15.3%	-16.3%
VIS	187.3	185.2	183.1	209.2	-10.5%	-11.5%	-12.5%
WLK	288.3	285.1	281.9	326.6	-11.7%	-12.7%	-13.7%
WIL	141.7	140.1	138.6	171.1	-17.2%	-18.1%	-19.0%
RDV	103.0	101.8	100.7	107.0	-3.8%	-4.9%	-5.9%
BAY	173.9	172.0	170.1	199.2	-12.7%	-13.7%	-14.6%
Average					*-11.9%*	*-12.9%*	*-13.9%*

The Governor has authorized the State Water Board to ban wasteful water uses and has called on Californians to reduce water use by 15% compared to 2020 to protect water reserves and complement local conservation mandates. The three-year average sales forecast in Figure 1-8 is based on sales data between 2018 through 2020, if 2021 sales is on a similar level, then the Commission should expect residential consumption across Cal Water's district to decrease on average by approximately 11.9%, 12.9%, and 13.9% in TY 2023, 2024, and 2025, respectively, when compared to the recorded

consumption in 2020.[27] As such, the three-year average sales forecast based on 2019 through 2021 recorded sales better supports the Governor's water conservation goals.[28]

C. Revenue from Sales (Operational Revenue)

Cal Water uses the number of customers forecast and the sales forecast to calculate the operational revenue. The Commission should adopt the operational revenues based on Cal Water's number of customers forecast and the three-year average sales forecast based on 2019 through 2021 sales data.

IV. CONCLUSION

The Commission should adopt Cal Water's number of customers forecast and adopt the three-year average sales forecast methodology as it is more reasonable and better represents recent consumption patterns. In addition, the Commission should require Cal Water to include the 2021 sales data in its final adopted sales forecast, as the most recent three years of water usage best represents water usage in the near future.

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[27] Cal Advocates' full sales forecast based on 2018-2020 sales data for all district's individual customer classes in TY 2023, 2024, and 2025 is attached in Attachment 1-1 – Three-Year Average Methodology Sales Forecast. (Source workpaper: Cal Water Historic Sales_SLM, worksheet: Sales Forecast).

[28] https://www.gov.ca.gov/2021/10/19/governor-newsom-expands-drought-emergency-statewide-urges-californians-to-redouble-water-conservation-efforts/

Attachment 1-1: Three Year Average (2018 – 2020) Sales Forecast

Rolling 3-YR Avg Forecast						
AV						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	441.9	436.9	432.1	427.2	422.5	417.7
FIRE	0.0					
GOV	1083.5	1078.3	1073.1	1067.9	1056.0	1044.2
MFR	67.5	63.2	59.2	55.5	54.8	54.2
OTH	90.5	181.0	362.0	724.0	715.9	707.9
SFR	195.3	185.1	175.4	166.3	164.4	162.6

Rolling 3-YR Avg Forecast						
BK						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	712.0	694.3	676.9	660.1	652.7	645.4
FIRE	0.0					
FLT	0.0					
GOV	2997.3	2876.8	2761.1	2650.1	2620.5	2591.2
IND	568.3	550.3	532.8	515.8	510.1	504.4
MFR	1233.2	1209.2	1185.7	1162.7	1149.7	1136.8
OTH	1240.6	1314.9	1393.7	1477.2	1460.7	1444.4
REC	0.0					
SFR	230.0	224.5	219.2	213.9	211.6	209.2

Rolling 3-YR Avg Forecast						
BG						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	384.3	379.6	375.0	370.5	366.4	362.3
FIRE	0.0					
GOV	1045.9	1027.0	1008.4	990.2	979.1	968.2
IND	980.0	897.4	821.8	752.5	744.1	735.8
IRR	1407.0	1473.5	1543.1	1616.0	1598.0	1580.1
MFR	619.2	567.4	520.0	476.6	471.2	466.0
OTH	287.2	286.6	285.9	285.3	282.1	278.9
SFR	254.4	250.0	245.7	241.5	238.8	236.1

Rolling 3-YR Avg Forecast						
CH						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	628.4	619.1	609.9	600.9	594.2	587.5
FIRE	0.0					
FLT	0.0					
GOV	898.6	867.6	837.6	808.7	799.7	790.7
IND	927.6	706.2	537.6	409.3	404.7	400.2
MFR	1234.0	1202.0	1170.8	1140.4	1127.7	1115.1
OTH	548.6	575.3	603.3	632.7	625.6	618.6
SFR	199.2	193.2	187.3	181.6	179.6	177.6

Rolling 3-YR Avg Forecast						
DIX						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	230.5	223.6	216.9	210.4	208.0	205.7
FIRE	0.0					
GOV	563.6	538.6	514.7	491.9	486.4	480.9
IND	35.7	34.6	33.5	32.5	32.2	31.8
IRR	524.7	717.6	981.4	1342.2	1327.2	1312.4
MFR	1366.0	1355.6	1345.3	1335.0	1320.1	1305.3
OTH	215.7	1157.3	6209.4	33317.3	32945.1	32577.1
SFR	129.9	125.8	121.8	117.9	116.6	115.3

Rolling 3-YR Avg Forecast						
DOM						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	943.4	908.8	875.4	843.2	833.8	824.5
FIRE	0.0					
GOV	1626.8	1575.6	1526.1	1478.1	1461.6	1445.2
IND	32561.7	33167.1	33783.7	34411.8	34027.4	33647.3
MFR	1362.6	1327.8	1294.0	1261.0	1246.9	1233.0
OTH	275.8	229.3	190.7	158.5	156.8	155.0
REC	30561.0	24129.1	19051.0	15041.5	14873.5	14707.3
SFR	121.3	117.9	114.5	111.3	110.0	108.8

Rolling 3-YR Avg Forecast						
ELA						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	397.2	391.9	386.7	381.6	377.3	373.1
FIRE	0.0					
GOV	1434.7	1364.6	1297.8	1234.4	1220.6	1207.0
IND	3386.8	3213.9	3049.8	2894.1	2861.8	2829.8
MFR	500.1	487.8	475.8	464.1	458.9	453.7
OTH	298.5	275.7	254.6	235.1	232.5	229.9
REC	5111.7	5932.9	6886.0	7992.2	7902.9	7814.6
SFR	138.6	135.3	132.1	129.0	127.6	126.1

Rolling 3-YR Avg Forecast						
HR						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	330.9	325.5	320.1	314.8	311.3	307.8
FIRE	0.0					
GOV	501.4	483.5	466.3	449.6	444.6	439.6
IND	8353.0	8059.6	7776.4	7503.3	7419.5	7336.6
IRR	85.8	87.8	89.8	91.8	90.8	89.8
MFR	496.6	483.2	470.2	457.5	452.4	447.4
OTH	201.8	191.5	181.8	172.5	170.6	168.7
REC	2531.5	2478.6	2426.8	2376.1	2349.5	2323.3

SFR	110.8	108.0	105.3	102.7	101.6	100.4
Rolling 3-YR Avg Forecast						
KRV						
Customer Class	**2020**	**2021**	**2022**	**TY2023**	**2024**	**2025**
COM	271.7	280.9	290.5	300.4	297.0	293.7
FIRE	0.0					
GOV	444.8	437.7	430.7	423.9	419.2	414.5
MFR	264.4	241.9	221.2	202.4	200.1	197.9
OTH	40.2	47.6	56.5	67.0	66.2	65.5
SFR	66.8	64.2	61.7	59.4	58.7	58.0
Rolling 3-YR Avg Forecast						
KC						
Customer Class	**2020**	**2021**	**2022**	**TY2023**	**2024**	**2025**
COM	612.8	602.6	592.5	582.6	576.1	569.6
FIRE	0.0					
GOV	1039.5	1004.7	971.0	938.5	928.0	917.6
IND	1619.2	1596.4	1573.9	1551.7	1534.4	1517.2
IRR	0.0					
MFR	995.3	995.2	995.0	994.8	983.7	972.7
OTH	908.5	945.4	983.7	1023.6	1012.1	1000.8
SFR	137.8	134.4	131.0	127.8	126.3	124.9
Rolling 3-YR Avg Forecast						
LIV						
Customer Class	**2020**	**2021**	**2022**	**TY2023**	**2024**	**2025**
COM	562.2	553.1	544.1	535.2	529.2	523.3
FIRE	0.0					
FLT	0.0					
GOV	1412.9	1366.9	1322.4	1279.3	1265.0	1250.9
IRR	3728.0	4118.0	4548.8	5024.7	4968.6	4913.0
MFR	1824.9	1713.6	1609.1	1510.9	1494.1	1477.4
OTH	242.9	246.5	250.1	253.8	251.0	248.2
SFR	156.7	152.6	148.6	144.6	143.0	141.4
Rolling 3-YR Avg Forecast						
LOS						
Customer Class	**2020**	**2021**	**2022**	**TY2023**	**2024**	**2025**
COM	893.1	888.1	883.1	878.1	868.3	858.6
FIRE	0.0					
GOV	1101.4	1093.9	1086.5	1079.1	1067.0	1055.1
IND	666.3	581.3	507.1	442.4	437.4	432.5
MFR	1692.0	1651.8	1612.6	1574.3	1556.7	1539.3
OTH	247.9	264.3	281.8	300.4	297.1	293.8
REC	12489.7	14582.3	17025.7	19878.4	19656.3	19436.7
SFR	206.9	202.2	197.6	193.1	191.0	188.8

Rolling 3-YR Avg Forecast						
MRL						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	386.8	404.3	422.5	441.6	436.7	431.8
FIRE	0.0					
GOV	1773.1	1790.8	1808.6	1826.6	1806.2	1786.0
IND	245.5	221.1	199.2	179.4	177.4	175.4
MFR	936.8	942.2	947.5	953.0	942.3	931.8
OTH	337.1	401.4	478.0	569.2	562.8	556.5
SFR	127.3	129.5	131.7	134.0	132.5	131.0

Rolling 3-YR Avg Forecast						
MPS						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	338.9	334.8	330.7	326.6	323.0	319.4
FIRE	0.0					
GOV	1027.0	1025.1	1023.3	1021.5	1010.1	998.8
IND	170.1	160.2	150.9	142.2	140.6	139.0
MFR	1182.7	1152.1	1122.3	1093.3	1081.1	1069.0
OTH	1009.5	939.7	874.7	814.1	805.1	796.1
SFR	107.5	105.0	102.5	100.1	99.0	97.9

Rolling 3-YR Avg Forecast						
ORO						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	473.6	470.4	467.3	464.1	458.9	453.8
FIRE	0.0					
FLT	0.0					
GOV	1100.7	1120.2	1140.0	1160.2	1147.2	1134.4
IND	13786.2	13879.2	13972.7	14066.9	13909.7	13754.4
IRR	20.7	18.6	16.8	15.2	15.0	14.8
MFR	856.2	813.5	772.8	734.2	726.0	717.9
OTH	582.7	635.8	693.7	756.9	748.5	740.1
SFR	120.8	117.3	113.9	110.5	109.3	108.1

Rolling 3-YR Avg Forecast						
PV						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	1450.4	1435.0	1419.7	1404.7	1389.0	1373.4
FIRE	0.0					
GOV	1205.6	1178.1	1151.2	1124.9	1112.3	1099.9
IRR	688.7	703.2	718.0	733.1	724.9	716.8
MFR	1143.9	1125.0	1106.4	1088.1	1075.9	1063.9
OTH	237.4	230.6	224.1	217.7	215.3	212.9
SFR	246.6	241.7	236.9	232.2	229.6	227.0

Rolling 3-YR Avg Forecast						
SLN						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	771.2	769.7	768.2	766.8	758.2	749.7
FIRE	0.0					
GOV	1409.9	1419.9	1430.0	1440.1	1424.0	1408.1
IND	21987.7	21848.5	21710.1	21572.6	21331.6	21093.3
IRR	523.0	539.7	557.0	574.8	568.4	562.0
MFR	1422.4	1397.9	1373.9	1350.3	1335.2	1320.3
OTH	378.4	356.9	336.7	317.6	314.0	310.5
SFR	121.3	118.3	115.4	112.6	111.3	110.1

Rolling 3-YR Avg Forecast						
SEL						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	455.4	435.4	416.2	397.8	393.4	389.0
FIRE	0.0					
FLT	0.0					
GOV	982.0	956.8	932.4	908.5	898.3	888.3
IND	951.2	909.8	870.3	832.4	823.1	813.9
MFR	2127.9	2049.1	1973.1	1900.0	1878.8	1857.8
OTH	283.9	290.0	296.2	302.5	299.2	295.8
SFR	201.4	193.6	186.1	178.9	176.9	174.9

Rolling 3-YR Avg Forecast						
SSF						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	705.4	690.7	676.3	662.2	654.8	647.5
FIRE	0.0					
GOV	627.7	614.7	602.0	589.6	583.0	576.5
IND	4647.2	4509.2	4375.3	4245.4	4197.9	4151.0
MFR	906.8	888.8	871.1	853.8	844.2	834.8
OTH	435.4	498.2	570.0	652.2	644.9	637.7
SFR	79.4	77.5	75.6	73.8	72.9	72.1

Rolling 3-YR Avg Forecast						
STK						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	592.3	579.5	567.0	554.8	548.6	542.4
FIRE	0.0					
GOV	2524.6	2429.6	2338.1	2250.1	2224.9	2200.1
IND	9434.9	9351.2	9268.2	9185.9	9083.3	8981.9
IRR	923.0	1005.7	1095.9	1194.1	1180.8	1167.6
MFR	1583.3	1540.0	1497.9	1457.0	1440.7	1424.6
OTH	153.9	140.2	127.7	116.3	115.0	113.7
SFR	127.8	124.4	121.1	117.8	116.5	115.2

Rolling 3-YR Avg Forecast						
VIS						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	768.3	762.5	756.8	751.1	742.7	734.4
FIRE	0.0					
GOV	1256.5	1221.2	1186.8	1153.4	1140.5	1127.8
IND	2691.8	2762.5	2835.1	2909.6	2877.1	2845.0
MFR	669.1	648.7	628.9	609.8	603.0	596.2
OTH	1352.9	1468.3	1593.5	1729.4	1710.1	1691.0
SFR	202.6	197.4	192.3	187.3	185.2	183.1

Rolling 3-YR Avg Forecast						
WLK						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	1328.7	1303.5	1278.8	1254.5	1240.5	1226.7
FIRE	0.0					
GOV	901.3	849.6	800.9	755.0	746.5	738.2
MFR	682.3	672.6	663.1	653.6	646.3	639.1
OTH	257.2	320.3	398.9	496.8	491.2	485.7
REC	8683.3	8251.6	7841.3	7451.5	7368.2	7285.9
SFR	309.5	302.2	295.2	288.3	285.1	281.9

Rolling 3-YR Avg Forecast						
WIL						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	370.7	369.0	367.4	365.8	361.7	357.6
FIRE	0.0					
FLT	0.0					
GOV	577.9	537.4	499.8	464.8	459.6	454.4
MFR	1108.1	1090.9	1073.9	1057.3	1045.5	1033.8
OTH	208.4	199.7	191.4	183.4	181.3	179.3
SFR	154.6	150.2	145.9	141.7	140.1	138.6

Rolling 3-YR Avg Forecast						
RDV						
Customer Class	2020	2021	2022	TY2023	2024	2025
COM	193.7	188.4	183.3	178.2	176.2	174.3
FIRE						
GOV	369.1	383.4	398.3	413.7	409.1	404.5
MFR	1643.9	1640.6	1637.3	1634.0	1615.7	1597.7
OTH						
SFR	101.0	101.7	102.3	103.0	101.8	100.7

CHAPTER 2 - Conservation Expense Budget

I. INTRODUCTION

This chapter addresses Cal Water's request to increase the conservation expense budgets for all districts and presents analysis and recommendations to the conservation expense budget.

II. SUMMARY OF RECOMMENDATIONS

The Commission should adopt Cal Water's inflation adjustment request but deny the request to make specific adjustments to the total conservation budget to offset the rate design effect.

The Commission should reject Cal Water's request to increase its conservation budget to offset the impact from weaker conservation incentives and modest increases in water use due to its proposed rate design changes.[29] As explained in Chapter 3 of this report, the Commission should reject Cal Water's requested revenue allocation adjustment.

III. ANALYSIS

Cal Water uses the conservation expense budget to carry out various conservation programs across all districts.[30] For TY 2023, Cal Water requests an annual conservation expense budget of $8,981,038, an increase of 9.5% over its previous authorized conservation budget in the 2018 GRC. The increase to the budget requests includes (1) an inflation adjustment of 4.46% to the TY 2023 budget to maintain purchasing power parity with the 2018 GRC authorized budget [31] and (2) a specific adjustment to a district's total

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[29] M.Cubed, California Water Service Conservation Budget Report, March 2021, p.5.

[30] Conservation programs include administrative and research programs, school education programs, public information programs, and other programs (such as direct installs). M.Cubed, California Water Service Conservation Budget Report, March 2021, p.5.

[31] M.Cubed, California Water Service Conservation Budget Report, March 2021, p.5.

conservation budget (administrative, school education, public information, and other conservation programs) to offset the potential decrease in conservation efforts from Cal Water's rate design request in this GRC. Cal Water's conservation program's cost-benefit analysis is attached in Attachment 2-1.

A. TY 2023 Conservation Expense Budget w/ Inflation Adjustment

The Commission should adopt and escalate the 2018 GRC authorized conservation expense budget by the latest Consumer Price Index (CPI) rates. Figure 2-1 below summarizes the TY 2023 conservation expense budget. The TY 2023 budget in Figure 2-1 includes a 4.46% inflation escalation to the 2018 GRC authorized conservation expense budget. This adjustment is reasonable to maintain Cal Water's purchasing power in funding the conservation programs. However, the Commission should require Cal Water to escalate the 2018 GRC authorized conservation expense budget with the latest CPI rates at the adoption of the final decision.

Figure 2-1: Conservation Expense Budget with Inflation Adjustment

Budget Category	2020 Test Year Budget	2023 Test Year Budget at Purchasing Power Parity with 2020 Test Year Budget
Administration/Research	$2,472,587	$2,582,978
School Education	$475,404	$496,629
Public Information	$1,034,149	$1,080,320
Programs	$4,217,846	$4,406,156
Total	$8,199,986	$8,566,084

B. Total Conservation Budget Adjustment

The Commission should deny Cal Water's request to adjust the total conservation expense budget, Cal Water proposes an alternative rate design that may increase water use and requests to make an adjustment to the total conservation expense budget to offset the potential increase in water use.[32] As discussed in Chapter 3 of this report, the

[32] M.Cubed, California Water Service Conservation Budget Report, p.6.

Commission should reject Cal Water's alternative rate design request and thus, there lacks a need to make an adjustment to the total conservation expense budget for offsetting purposes.

IV. CONCLUSION

The Commission should adopt Cal Water's requested inflation adjustment to the conservation expense budget but should deny Cal Water's request to make specific adjustments to the total conservation budget to offset the impact from Cal Water's requested rate design changes.

Attachment 2-1: Conservation Program Analysis

Introduction

This report recommends conservation program budgets for Test Year 2023 and Forecast Years 2024 and 2025 for Cal Water's 25 operating districts. The goals of the recommended conservation budgets include:

- Maintaining continuity with and furthering implementation of conservation programs approved by the 2018 GRC Decision covering Test Year 2020 and Forecast Years 2021 and 2022.
- Ensuring districts have the resources needed to comply with the state's urban water conservation and groundwater management regulations.
- Advancing cost-effective conservation in districts with high water supply costs or significant water supply constraints.

The 2018 GRC Decision adopted district conservation program budgets that were determined in relation to compliance risk associated with the state's urban conservation and groundwater management regulations. These regulations include:

- The Sustainable Groundwater Management Act (AB 1739, SB 1168, and SB 1319)[1]
- Making Conservation a California Way of Life (SB 606 and AB 1668)[2]
- Urban Water Loss Management (SB 555)[3]

As part of the 2018 GRC, M.Cubed assessed each Cal Water district's compliance risk with these regulations in terms of its: [4]

- Groundwater dependence and groundwater basin management priority
- Residential indoor and outdoor per capita water use
- Prevalence of and water use by large CII customers
- AWWA infrastructure leakage index score
- Water supply marginal cost

The results of that assessment supplied the basis for the adopted conservation budgets shown in Table 1. We recommend continuing these budgets with two new adjustments. First, we recommend adjusting the budgets for general price inflation. Second, we recommend adjusting the budgets to address the expected effects on residential water use of proposed changes to Cal Water's residential rate design.[5]

The remainder of this report describes these proposed adjustments and the recommended conservation program budgets for Test Year 2023 and Forecast Years 2024 and 2025.

[1] https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management
[2] https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/Make-Water-Conservation-A-California-Way-of-Life/Files/PDFs/Final-WCL-Primer.pdf
[3] https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Validated-Water-Loss-Reporting
[4] M.Cubed (2018). Conservation Program Budget Recommendations for California Water Service Districts: Years 2020 through 2022. Report prepared by M.Cubed for California Water Service. March 2018.
[5] M.Cubed (2021). California Water Service Rate Design Analytics Report: 2021 General Rate Case. Report prepared by M.Cubed for California Water Service. March 2021.

Table 1. 2018 GRC Adopted 2020 Test Year Conservation Budget by District ($/Yr)

District	Admin/ Research	School Education	Public Information	Programs	Total
AV	$5,466	$2,062	$6,990	$9,327	$23,845
BG	$178,811	$30,124	$57,743	$305,027	$571,705
BK	$218,558	$46,972	$93,408	$372,833	$731,771
CH	$88,147	$20,851	$42,225	$150,368	$301,591
DIX	$10,885	$2,011	$7,604	$18,489	$38,989
DOM	$267,209	$47,015	$92,153	$455,823	$862,200
ELA	$108,629	$28,790	$66,352	$185,307	$389,078
HR	$167,707	$32,166	$66,866	$286,087	$552,826
KC	$5,790	$1,190	$2,564	$9,878	$19,422
KRV	$12,851	$2,138	$7,672	$21,925	$44,586
LAS	$98,491	$22,873	$47,922	$168,012	$337,298
LIV	$148,149	$25,325	$50,733	$252,722	$476,929
MPS	$225,098	$36,238	$75,838	$383,986	$721,160
MRL	$14,972	$2,079	$7,544	$25,542	$50,137
ORO	$11,653	$2,317	$8,211	$19,881	$42,062
PV	$183,749	$33,538	$66,965	$313,452	$597,704
RDV	$5,692	$1,265	$5,736	$9,711	$22,404
SEL	$26,850	$3,644	$12,299	$45,804	$88,597
SLN	$198,670	$31,885	$68,649	$338,905	$638,109
SSF	$111,832	$18,003	$37,678	$190,770	$358,283
STK	$161,434	$25,561	$84,342	$275,386	$546,723
VIS	$134,447	$32,615	$66,799	$229,348	$463,209
WIL	$2,263	$1,919	$6,926	$3,863	$14,971
WLK	$74,379	$22,812	$43,326	$126,881	$267,398
Travis	$10,855	$2,011	$7,604	$18,519	$38,989
Total	**$2,472,587**	**$475,404**	**$1,034,149**	**$4,217,846**	**$8,199,986**

Conservation Budget Inflation Adjustment

General price inflation will erode the purchasing power of the conservation budget approved in the 2018 GRC. Maintaining purchasing power parity with the 2020 Test Year budget requires adjusting it for expected inflation. Table 2 shows the inflation factors Cal Water is using in its operations model for this GRC. The Non-labor inflation factor is used to adjust the budget in Table 1. The compound adjustment is 4.46%, as shown in the last column of Table 2. Table 3 shows the 2023 Test Year budget at purchasing power parity with the 2020 Test Year budget.

Table 2. General Price Inflation Factors

Cal PA Inflation Factors	2021	2022	2023	2020-2023 Compound Adjustment %
Compensation per hour, non-farm rate	1.0150	1.0120	1.0300	5.80%
Labor	1.0120	1.0210	1.0250	5.91%
Non-Labor	1.0130	1.0150	1.0160	4.46%
Composite	1.0138	1.0138	1.0216	5.00%
Escalation for union wage increases	1.0263	1.0263	1.0263	8.10%

Table 3. 2023 Test Year Budget at Purchasing Power Parity with 2020 Test Year Budget

Budget Category	2020 Test Year Budget	2023 Test Year Budget at Purchasing Power Parity with 2020 Test Year Budget
Administration/Research	$2,472,587	$2,582,978
School Education	$475,404	$496,629
Public Information	$1,034,149	$1,080,320
Programs	$4,217,846	$4,406,156
Total	**$8,199,986**	**$8,566,084**

Conservation Budget Rate Design Adjustment

Significant changes to Cal Water's rate design were adopted in the 2018 GRC. These changes were intended to balance affordability, conservation, and revenue stability objectives. Importantly, the changes were predicated on continuation of the WRAM/MCBA. Given the CPUC's decision to eliminate the WRAM/MCBA, Cal Water is proposing further changes to the rate design to address revenue stability and affordability concerns highlighted in the D.20-08-47 proceeding.[6] As documented in M.Cubed (2021), these changes are

[6] Mitchell, D., G. Fiske, and T. Chesnutt (2020). Impacts on Customer Bills and Water Use of Recoupling Water Utility Revenue and Sales: Analysis of CPUC Proposed Decision to Transition all Class A Utilities to a

expected to result in weaker conservation incentives and modest increases in water use.[7] Table 4 shows the expected impact to Test Year 2023 water use.[8] To offset these effects, Cal Water proposes to expand conservation programs offered to its customers.

Table 4. Expected Increase in Test Year 2023 Water Use due to Rate Design

District	Rate Design Impact (AF)	District	Rate Design Impact (AF)
AV	2	MPS	76
BG	63	MRL	25
BK	461	ORO	33
CH	287	PV	50
DIX	19	RDV	2
DOM	86	SEL	20
ELA	102	SLN	111
HR	42	SSF	26
KC	12	STK	147
KRV	9	VIS	541
LAS	26	WIL	14
LIV	57	WLK	7

The program and public information budgets shown in Table 1 jointly fund Cal Water's conservation programs.[9] Cal Water is proposing to increase these two budgets only. It is not proposing adjustments to the administration and school education budgets (other than for general price inflation) or to the current conservation program staffing level.

The maximum adjustment to the program/public information budget was set to the expected cost of offsetting the water use increases shown in Table 4. This was calculated by multiplying the water use increase in Table 4 by the average cost of conservation savings (adjusted for general price inflation) reported in each district's Conservation Master Plan.[10] These maximum adjustment amounts are reported in Table 5.

Monterey-Style Water Revenue Adjustment Mechanism. Report prepared for California Water Service and California American Water Company, August 2020.

[7] M.Cubed (2021). California Water Service Rate Design Analytics Report: 2021 General Rate Case. Report prepared by M.Cubed for California Water Service. March 2021.

[8] Travis was not included in the rate design impact analysis and therefore is not included in Table 4. No change to the Travis budget, other than for general price inflation, is proposed.

[9] The program budget covers expenses for labor, materials, services, and rebates while the public information budget covers program marketing and outreach costs.

[10] The Conservation Master Plan is an appendix to each district's 2015 Urban Water Management Plan. These plans can be accessed here: https://www.calwater.com/conservation/uwmp/. The Non-labor compound inflation factor in Table 2 was used to update the unit conservation costs for general price inflation.

Table 5. Maximum Increase to Public Information/Program Budget

District	Rate Design Impact (AF)	Unit Cost of Savings[1] ($/AF)	Maximum Increase to Public Information/ Program Budget[2]	2020 Test Year Public Information/ Program Budget[3]	Maximum Percentage Increase[4]
AV	2	$568	$1,099	$17,045	6.4%
BG	63	$684	$43,134	$378,966	11.4%
BK	461	$390	$179,602	$487,057	36.9%
CH	287	$393	$112,752	$201,192	56.0%
DIX	19	$405	$7,755	$27,258	28.5%
DOM	86	$776	$66,703	$572,441	11.7%
ELA	102	$709	$72,294	$262,895	27.5%
HR	42	$700	$29,684	$368,711	8.1%
KC	12	$655	$7,812	$12,997	60.1%
KRV	9	$211	$1,953	$30,918	6.3%
LAS	26	$665	$17,123	$225,575	7.6%
LIV	57	$762	$43,361	$317,003	13.7%
MPS	76	$721	$54,900	$480,354	11.4%
MRL	25	$441	$11,012	$34,563	31.9%
ORO	33	$426	$13,894	$29,346	47.3%
PV	50	$542	$26,986	$397,401	6.8%
RDV	2	$240	$508	$16,137	3.1%
SEL	20	$376	$7,405	$60,697	12.2%
SLN	111	$593	$65,937	$425,750	15.5%
SSF	26	$829	$21,922	$238,647	9.2%
STK	147	$474	$69,895	$375,788	18.6%
VIS	541	$455	$246,238	$309,369	79.6%
WIL	14	$493	$6,682	$11,271	59.3%
WLK	7	$757	$5,309	$177,806	3.0%

Notes:
1. From district's Conservation Master Plan, adjusted for general price inflation using Non-labor inflation factor in Table 2.
2. Rate design impact x unit cost of savings.
3. From Table 1, adjusted for general price inflation using Non-labor inflation factor in Table 2.
4. Maximum increase as a percentage of 2020 Test Year public information and program budget.

Recommended Conservation Budget

The amounts in Table 5 are not the final recommended budget adjustments. To further balance affordability and conservation, the final recommended budgets incorporate additional constraints on the allowable amount of increase, as follows:

CHAPTER 3 – Rate Design

I. INTRODUCTION

Rate design is the structure of prices charged to utility customers for tariffed services. The process for creating a rate design involves determining the revenue requirement, the allocation of revenue recovery between fixed and quantity charges (revenue allocation), finding appropriate tier breakpoints for tiered meter services, calculating the standard quantity rate, and establishing a tiered quantity rate structure for tiered meter services. Effective rate design encourages conservation, offers affordable options for baseline water use, and is revenue neutral.[33]

II. SUMMARY OF RECOMMENDATIONS

- The Commission should adopt Cal Water's request to set the Tier 1 breakpoint at 6 CCF.
- The Commission should reject Cal Water's request to recover 50-100% of fixed costs from the monthly service charges.
- The Commission should adopt Cal Advocates' recommended tier design and breakpoints.
- The Commission should establish a new Customer Assistance Program (CAP) discount equal to 25% of the total monthly water bill for CAP customers, up to $48.

III. ANALYSIS

Cal Water proposes alterations to its rate design in this GRC. The proposed rate design changes are (1) new tier breakpoints for Tiers 1 through 3 for all districts, (2) establishing a new Tier 4 to capture high-volume water users, (3) establishing the Tier 1 breakpoint at 6CCF, and (4) a new revenue allocation ratio between fixed and quantity charges.

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[33] D.20-08-047, p. 106.

This report uses the following abbreviations for California Water Service districts.

District	Abbreviation
Antelope Valley	AV
Bear Gulch	BG
Bakersfield	BK
Chico-Hamilton City	CH
Dixon	DIX
Dominguez	DOM
East Los Angeles	ELA
Hermosa-Redondo	HR
Kern River Valley	KRV
King City	KC
Los Altos	LAS
Livermore	LIV
Marysville	MRL
Mid-Peninsula	MPS
Oroville	ORO
Redwood Valley	RDV
Salinas	SLN
Selma	SEL
South San Francisco	SSF
Stockton	STK
Salinas Valley Region	SVR
Visalia	VIS
Willows	WIL
Westlake	WLK
Travis	Travis

A. Tier Design

1. Tier 1 Breakpoint

The Commission should adopt Cal Water's request to establish the Tier 1 breakpoint at 6 CCF. The Commission ordered water utilities to provide analysis in their next GRC to determine the appropriate Tier 1 breakpoint that is not less than the monthly baseline quantity of water necessary for basic human needs for each ratemaking area.[34] The Commission further explained that 6 CCF per household (of three) is the minimum

[34] D.20-08-047, Ordering Paragraph No.2.

monthly quantity of water that should be allocated to Tier 1 of a conservation-oriented rate design.[35]

Consequently, establishing the Tier 1 breakpoint at 6 CCF is likely to result in additional burden to larger households. Thus, the Commission should adopt the recommended tier design as Tier 1 represents a household's sufficient indoor water usage and Tier 2 represents a reasonable additional allocation that is equal to or less than the standard quantity rate for indoor and outdoor usage. Under this tier design, a strong price signal is sent to ratepayers to promote conservation and to reduce wasteful water consumption in Tier 3 and Tier 4.

2. Tiers 2-4 Breakpoint

The Commission should reject Cal Water's proposal to shift the existing breakpoints one tier, such that the current Tier 1 breakpoint becomes the Tier 2 breakpoint, the current Tier 2 breakpoint becomes the Tier 3 breakpoint, and the current Tier 3 breakpoint becomes the Tier 4 breakpoint.[36] It is clear that Cal Water did not put forth much effort in analyzing how reasonable each districts' tier breakpoint designs are and how its proposed tier breakpoints will negatively impact ratepayers. Under Cal Water's tier breakpoint and tier width proposal, certain districts will be provided only one to two CCFs of water usage in Tier 2. Figure 3-1 below shows Cal Water's proposed tier breakpoints.[37]

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[35] Based on the standards established in California Water Code §10609.4(a).

[36] M.Cubed, California Water Service Rate Design Analytics Report, p.7.

[37] Source: Cal Water's RO Model, workpaper: Y_CH12_RD_SD_Tier Breaks and Sales Distribution, worksheet: Out_Tiers and Sales.

Figure 3-1: Cal Water's Proposed Tier Breakpoints (CCF)

		Tier Breaks			
District Name	District Abbreviation	Tier 1	Tier 2	Tier 3	Tier 4
Antelope Valley	AV	First 6	Next 11	Next 8	Over 25
Bakersfield	BAK	Tier 6	Next 8	Next 12	All Over 26
Bayshore	BAY	First 6	Next 3	Next 5	Over 30
Beer/Calico	BC	Tier 6	Next 6	Next 17	All Over 29
Chico	CH	First 6	Next 4	Next 14	All Over 24
Dixon	DIX	Tier 6	Next 2	Next 8	All Over 16
Dominguez	DOM	First 6	Next 4	Next 5	All Over 15
East Los Angeles	ELA	Tier 6	Next 2	All Over 8	Excepted
Hamilton/Redondo	HR	First 6	Next 5	Next 3	All Over 11
Kern River Valley	KRV	Tier 6	Next 4	All Over 10	Excepted
King City	KC	First 6	Next 1	Next 7	Over 14
Livermore	LIV	Tier 6	Next 3	Next 8	All Over 17
Los Altos	LOS	First 6	Next 6	Next 11	All Over 23
Marysville	MRS	Tier 6	Next 1	Next 7	All Over 14
Oroville	ORO	First 6	Next 1	Next 7	All Over 14
Palos Verdes	PV	Tier 6	Next 11	Next 8	Over 25
Salinas	SAL	First 6	Next 1	Next 7	Over 14
Selma	SEL	Tier 6	Next 6	Next 17	All Over 29
Stockton	STK	First 6	Next 2	Next 7	All Over 15
Visalia	VIS	Tier 6	Next 5	Next 12	All Over 23
Westlake	WES	First 6	Next 11	Next 15	All Over 32
Willows	WIL	Tier 6	Next 3	Next 10	All Over 19
Redwood Valley	RDV	First 6	Next 1	Next 5	Over 10

Cal Water's proposed tier breakpoints lacks justification. For example, in the Dixon district, Tier 2's breakpoint (8) is set at 2 CCF away from the Tier 1's breakpoint (6). In the same district, the Tier 3 breakpoint (16) is then 8 CCF away from the Tier 2 breakpoint. While Tier 2 captures 2 CCFs of consumption, Tier 3 will capture 8 CCFs of consumption. Another extreme case of this unjustified tier width design is evident in, but is not limited to, the King City, Marysville, Oroville, and Salinas District where Cal Water proposes to set Tier 2's breakpoint at 7 CCF, effectively capturing only one CCF of consumption in Tier 2. Certain districts, such as King City, Salinas, and Redwood Valley, do not require an additional Tier 4. In the Redwood Valley district, Cal Water proposes the following tier breakpoint design – where Tier 2 and Tier 3 only captures 1 and 3 CCF of consumption, respectively.

Cal Water's Redwood Valley District Tier Width Request (CCF)				
	Tier 1	Tier 2	Tier 3	Tier 4
Breakpoints (CCF)	6	7	8-10	All over 10

Instead, the Commission should adopt the recommended tier breakpoint/width design outlined in Figure 3-2. For districts with four tiers, the recommended tier width design aims to capture 60% of the district's residential sales in Tiers 1 and 2 and splits the remaining 40% of the district's residential sales between Tiers 3 and 4.

For districts with three tiers, the recommended tier width design aims to capture 75% of the district's residential sales in Tiers 1 and 2 and will capture the remaining 25% of the district's residential sales in Tier 3. In the following districts, Tier 1's tier width will capture around 50% of the district's consumption, Dixon (48%), Dominguez (53%), East Los Angeles (47%), and Hermosa Redondo (55%). Therefore, it is unnecessary to have three-tier districts follow the same Tier 1 and Tier 2 tier width design as four-tier districts.

1 **Figure 3-2: Cal Advocates Tier Design Recommendation (CCF)**

Cal Adv. Tier Width Recommendation				
District Abbreviations	Tier Widths			
	Tier 1	Tier 2	Tier 3	Tier 4
AV	1-6	7-16	17-30	31+
BK	1-6	7-16	17-26	27+
BG	1-6	7-27	28-64	65+
CH	1-6	7-15	16-28	29+
DIX*	1-6	7-13	14+	
DOM*	1-6	7-10	11+	
ELA*	1-6	7-12	13+	
HR*	1-6	7-10	11+	
KRV*	1-6	7-11	12+	
KC*	1-6	7-12	13+	
LIV	1-6	7-11	12-20	21+
LOS	1-6	7-16	17-29	30+
MRL*	1-6	7-13	14+	
MPS	1-6	7-11	12+	
ORO*	1-6	7-14	15+	
PV	1-6	7-17	18-34	35+
SLN*	1-6	7-12	13+	
SEL	1-6	7-13	14-23	24+
SSF**	1-6	6+		
STK*	1-6	7-12	13+	
VIS	1-6	7-14	15-24	25+
WLK	1-6	7-29	30-65	66+
WIL	1-6	7-11	12-25	26+
RDV	1-6	7-12	13+	

2

3 Under this tier design recommendation, the Commission should adopt Cal Water's
4 request to establish a Tier 4 in some of the districts.[38] While these districts (in Footnote
5 38) will benefit from a Tier 4 targeting high water users, it is clear that a Tier 4 is not
6 necessary across all districts and by forcing a Tier 4 into the tier design in those districts,
7 it will create unreasonable tier widths that captures one to two CCFs of consumption (as
8 shown in the King City and Redwood Valley districts). In addition, the Commission

[38] District Abbreviations: AV, BK, BG, CH, LIV, LOS, MPS, PV, SEL, VIS, WLK, WIL, RDV.

should revert the SSF district back to a two-tier rate design as 70% of the district's monthly consumption is expected to be within Tier 1.

3. Expected Tiered Sales

The Commission should adopt the following tiered sales percentage, summarized in Figure 3-3 below. The expected percentage of sales in each tier is derived by the historic sales data from 2018 through 2020 - a three-year distribution analysis was conducted to determine the expected consumption in each tier. The recommended tiered sales percentage more accurately reflects recent consumption patterns and reflects the recommended tier breakpoints and tier width design. The Commission should require Cal Water to include 2021 sales distribution data in the final adopt tiered sales forecast to better represent the sales data used to forecast 2023 use per customer, as discussed in Chapter 1 of this report.

Figure 3-3: Percentage of Tiered Sales under Cal Advocates Recommended Tier Design.

% of Tiered Water Sales (3YR AVG) under Cal Adv. Proposed Tier Breakpoints					
District Abbreviations	Tier 1	Tier 2	Tier 3	Tier 4	Total
AV	31.31%	30.07%	18.85%	19.77%	100.00%
BK	28.74%	33.31%	17.55%	20.40%	100.00%
BG	24.22%	35.61%	20.00%	20.17%	100.00%
CH	31.61%	28.01%	19.98%	20.41%	100.00%
DIX*	47.92%	28.62%	23.46%	0.00%	100.00%
DOM*	52.87%	21.96%	25.17%	0.00%	100.00%
ELA*	46.87%	28.35%	24.78%	0.00%	100.00%
HR*	55.05%	20.06%	24.90%	0.00%	100.00%
KRV*	62.99%	13.01%	24.01%	0.00%	100.00%
KC*	46.82%	28.31%	24.87%	0.00%	100.00%
LIV	39.56%	21.02%	20.00%	19.43%	100.00%
LOS	30.84%	30.93%	19.18%	19.05%	100.00%
MRL*	47.03%	27.74%	25.22%	0.00%	100.00%
MPS	55.69%	22.85%	21.46%	0.00%	100.00%
ORO*	47.61%	29.36%	23.03%	0.00%	100.00%
PV	27.00%	32.48%	21.19%	19.33%	100.00%
SLN*	50.49%	26.97%	22.53%	0.00%	100.00%
SEL	32.97%	27.24%	20.90%	18.89%	100.00%
SSF**	70.33%	29.67%	0.00%	0.00%	100.00%
STK	48.04%	26.18%	25.79%	0.00%	100.00%
VIS	32.56%	29.26%	19.14%	19.05%	100.00%
WLK	20.77%	39.55%	20.43%	19.25%	100.00%
WIL	39.69%	20.73%	18.61%	20.98%	100.00%
RDV	50.49%	24.71%	24.80%	0.00%	100.00%
Average	42.56%	27.33%	21.08%	9.03%	100.00%
CUM TOT.	42.56%	69.89%	90.97%	100.00%	

4. Rate Ratios

Rate ratio is the measure of relative price per CCF at different tiers. An increasing rate ratio will send stronger price signals to consumers and increase conservation at

higher levels of water consumption. The Commission should reject Cal Water's rate ratio request. In this GRC, Cal Water requests to establish the following rate ratio structure (Figure 3-5) for rates in Tiers 1 through 4 – the percentages are then applied to each district's standard quantity rate (SQR) to derive the final tiered rates for each tier in the district. Cal Water proposes the following rate ratio structure across all districts.

Figure 3-5: Cal Water's Rate Ratio Request

Cal Water's Rate Ratio Request	
Tier 1	25.0%
Tier 2	100.0%
Tier 3	125.0%
Tier 4	187.5%
*Percentages are of the SQR	

Cal Water's rate ratio request does not sufficiently consider the impact on ratepayers. For example, in the East Los Angeles (ELA) district, Cal Water requests the following tier width and rate ratio design.

Cal Water's East Los Angeles District Rate Design Request [39]				
	Tier 1	Tier 2	Tier 3	Tier 4
Breakpoints (CCF)	6	8	8+	NA
Sales %	47%	12%	41%	0
Rate Ratio	25%	100%	125%	187.5%

Cal Water's rate ratio and tier structure in the ELA district will result in a disproportionate number of ratepayers billed at above SQR rates – where Cal Water

[39] Cal Water's RO Model, workpaper: Y_CH12_RD_SD_Tier Breaks and Sales Distribution, worksheet: OUT_Tiers and Sales.

estimates 41% of the district's consumption is billed at Tier 3. Under Cal Water's rate design request, only 12% of consumption will be capture in ELA district's Tier 2. Based on 2018 through 2020 recorded per customer usage data, an average ratepayer in the ELA district will consume 12 CCFs of water each month. It is unreasonable that an average ratepayer will be considered a Tier 3 water user in the ELA district when the district's highest tier is designed to capture the highest-level of water users in multi-tiered districts. This unreasonable tier breakpoint design and rate ratio design will result in the East Los Angeles ratepayers paying a reduced rate for the first six CCFs in Tier 1 usage, the SQR for the next two CCFs in Tier 2 usage, and 125% of the SQR for any consumption over 8 CCFs. Instead, the Commission should adopt the following rate ratio recommendation, summarized in Figure 3-6. The recommended rate ratio corresponds to the recommended tier width/breakpoint design.

Figure 3-6: Cal Advocates' Rate Ratio Recommendation (%)

Cal Adv. Rate Ratio Recommendation				
Districts	Tier 1	Tier 2	Tier 3	Tier 4
AV	46%	75%	125%	200%
BK	43%	75%	125%	200%
BG	33%	75%	125%	200%
CH	42%	75%	125%	200%
DIX*	63%	100%	175%	
DOM*	64%	100%	175%	
ELA*	60%	100%	175%	
HR*	66%	100%	175%	
KRV*	78%	100%	175%	
KC*	60%	100%	175%	
LIV	52%	75%	125%	200%
LOS	48%	75%	125%	200%
MRL*	60%	100%	175%	
ORO*	64%	100%	175%	
PV	39%	75%	125%	200%
SLN*	67%	100%	175%	
SEL	48%	75%	125%	200%
STK*	60%	100%	175%	
VIS	49%	75%	125%	200%
WLK	30%	75%	125%	200%
WIL	48%	75%	125%	200%

Cal Advocates' recommended rate ratio design is more responsive to the Commission's order to provide analysis to determine the appropriate [rate design].[40] The Commission states that 6 CCF per household (of 3) is the minimum monthly quantity of water that should be allocated to Tier 1 of a conservation-oriented rate design.[41] Consequently, establishing the Tier 1 breakpoint at 6 CCF is likely to result in additional burden to larger households. As such, the Commission should adopt the rate ratio recommendation where Tier 1 and Tier 2 rates are set at below or equal to the SQR to

[40] D.20-08-047, Ordering Paragraph No.2.

[41] Based on the standards established in California Water Code §10609.4(a) – stating that the standard for indoor residential water use shall be 55 gallons per capita daily until January 1, 2025.

ensure that Tier 1 and Tier 2 incorporates a basic allocation for affordable indoor and outdoor water usage. In addition, this rate ratio structure aims to send a price signal to ratepayers in Tier 3 and Tier 4 to increase conservation and reduce consumption in the higher tiers.

B. Revenue Allocation

On average, Cal Water currently recovers 42% of fixed costs from monthly service charges.[42] The remaining fixed cost amounts and all variable cost amounts are recovered through variable charges. The Commission should reject Cal Water's request to recover 50-70% of its fixed costs from monthly service charges.[43] The Commission should adopt a fixed cost recovery of 42% across all districts. Figure 3-7 summarizes Cal Water's current revenue allocation structure and Cal Water's requested revenue allocation adjustment in this GRC.

Figure 3-7: Cal Water's Alternative Revenue Allocation Request[44]

Table 4. Percentage of Fixed Cost Recovered from Monthly Service Charges

Rate Area	Reference Rate Design	Alternative Rate Design	Rate Area	Reference Rate Design	Alternative Rate Design
BAR	43%	50%	LAS	47%	50%
BG	42%	50%	LIV	51%	60%
BK	38%	50%	MRL	36%	50%
CH	34%	50%	ORO	35%	50%
DIX	35%	50%	SEL	45%	50%
DOM	53%	60%	STK	42%	50%
ELA	37%	50%	SVR	30%	50%
HR	47%	50%	VIS	31%	50%
KRV	52%	60%	WIL	39%	50%
LAR	55%	60%	WLK	70%	70%

Cal Water suggests that (1) the proposed revenue allocation adjustment aims to increase revenue stability in the absence of the WRAM/MCBA and (2) that Cal Water is

[42] M.Cubed, California Water Service Rate Design Analytics Report, p.3.

[43] M.Cubed, California Water Service Rate Design Analytics Report, p.3.

[44] M.Cubed, California Water Service Rate Design Analytics Report, p.11.

concerned the rate design will not perform as intended in the absence of the WRAM/MCBA.[45] Cal Water's justification for the adjustment request is completely unreasonable and out of order. Under the 2018 GRC authorized revenue allocation, Cal Water recorded revenues of $704,112,947 compared to the authorized revenue requirement of $696,501,780 in 2020.[46] It is clear that revenue stability is not a worry under the current revenue allocation structure.

In addition, Cal Water's concern that the rate design will not perform as intended in the absence of the WRAM/MCBA is unwarranted as the existence of the WRAM/MCBA should not influence the parties' ability to design a responsible sales forecast, revenue allocation, and rate design. As such, the Commission should reject Cal Water's request and instead adopt a fixed cost recovery of 42% through monthly service charges across all districts.

C. Customer Assistance Program Credit Adjustment

The Commission should adjust the CAP credit to reflect 25% of the overall bill, up to $48. The current CAP program subsidizes 50% of the CAP customer's monthly service charges, up to $48. This adjustment will ensure that a larger portion of CAP customer's water bill is subsidized and provide additional relief to CAP customers.

Cal Water states that CAP customer bills decrease by an average of 9% under the Cal Water proposed rate design.[47] However, it should be noted that this bill reduction percentage is artificial and is inflated under Cal Water's proposed revenue allocation adjustment, which increases the monthly service charge and therefore, increases the monthly CAP credit.

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[45] M.Cubed, California Water Service Rate Design Analytics Report, p.3.

[46] Despite the fact that 2020 recorded sales is lower than the 2020 sales forecast, as explained in Chapter 1 of this report.

[47] Cal Water 2021 GRC, General Report, p.29.

Figure 3-8 below summarizes the difference in the average monthly bill of a CAP customer using 20 CCFs between the current CAP program and Cal Advocates' recommended CAP program.[48]

Figure 3-8: CAP Program Average Bill Analysis

CAP Program Average Bill Analysis							
District	TY2023 Per Customer Usage Forecast	Average Bill under Cal Water's Rate Design Request	Average Bill under Cal Adv. Rate Design Recommendation	Current CAP Credit	% of Bill Subsidized by Current CAP	New CAP Credit	% of Bill Subsidized by New CAP
AV	20.0	$ 105.9	$ 99.9	$ 13.6	13%	$ 25.0	25%
BK	20.0	$ 56.9	$ 53.5	$ 8.9	16%	$ 13.4	25%
BG	20.0	$ 150.6	$ 126.7	$ 14.2	9%	$ 31.7	25%
CH	20.0	$ 43.3	$ 41.2	$ 7.7	18%	$ 10.3	25%
DIX	20.0	$ 133.4	$ 168.3	$ 14.8	11%	$ 42.1	25%
DOM	20.0	$ 116.4	$ 154.5	$ 11.6	10%	$ 38.6	25%
ELA	20.0	$ 128.5	$ 165.6	$ 11.2	9%	$ 41.4	25%
HR	20.0	$ 137.4	$ 187.8	$ 7.8	6%	$ 47.0	25%
KRV	20.0	$ 671.8	$ 939.4	$ 26.7	4%	$ 234.8	25%
KC	20.0	$ 79.5	$ 100.7	$ 9.3	12%	$ 25.2	25%
LIV	20.0	$ 116.7	$ 118.4	$ 13.0	11%	$ 29.6	25%
LOS	20.0	$ 129.0	$ 121.9	$ 12.5	10%	$ 30.5	25%
MRL	20.0	$ 84.4	$ 103.5	$ 12.6	15%	$ 25.9	25%
ORO	20.0	$ 75.8	$ 91.0	$ 13.6	18%	$ 22.8	25%
PV	20.0	$ 123.9	$ 112.4	$ 13.6	11%	$ 28.1	25%
SLN	20.0	$ 79.8	$ 102.5	$ 9.3	12%	$ 25.6	25%
SEL	20.0	$ 54.2	$ 53.4	$ 9.4	17%	$ 13.4	25%
STK	20.0	$ 116.7	$ 149.0	$ 11.9	10%	$ 37.2	25%
VIS	20.0	$ 31.7	$ 31.0	$ 5.1	16%	$ 7.8	25%
WLK	20.0	$ 111.3	$ 94.4	$ 14.6	13%	$ 23.6	25%
WIL	20.0	$ 106.5	$ 107.6	$ 16.4	15%	$ 26.9	25%
				Average (%) under Current CAP	*12%*	*Average (%) under New CAP*	*25%*

On average, the current CAP program will subsidize 12% of a CAP customer's monthly bill whereas Cal Advocates' recommended CAP program will subsidize around 25% of a CAP customer's monthly bill. The Commission should adopt this CAP program adjustment recommendation to provide additional bill assistance where possible to CAP customers.

[48] Which includes Cal Advocates' tier design recommendation, rate ratio recommendation, and revenue allocation recommendation.

D. Average Bill Analysis

The average customer in a four-tiered district will see a monthly bill decrease of 7.1% under Cal Advocates' rate design recommendation when compared to Cal Water's rate design request (using Cal Water's proposed revenue requirements). A bill comparison analysis is not conducted for three-tiered districts as Cal Water requests to establish a Tier 4 for all districts (with exceptions to the East Los Angeles and Kern River Valley districts) and did not provide a specific rate ratio structure for three-tiered districts. Figure 3-9 below summarizes the average bill analysis under the Cal Water's rate design request and Cal Advocates' recommended rate design for districts with four tiers.

Figure 3-9: Average Bill Analysis

4-Tiered Districts Average Bill Analysis				
District	TY2023 Per Customer Usage Forecast (CCF)	Under Cal Water's Rate Design Request	Under Cal Adv's Rate Design Rec.	% Difference
AV	13.9	$ 71.8	$ 68.4	5.0%
BK	17.8	$ 50.4	$ 47.0	7.2%
BG	20.1	$ 151.4	$ 127.3	18.9%
CH	15.1	$ 33.0	$ 31.0	-6.7%
LIV	12.1	$ 66.0	$ 67.7	2.6%
LOS	16.1	$ 98.2	$ 91.0	-7.9%
PV	19.3	$ 119.0	$ 107.5	-10.6%
SEL	14.9	$ 41.1	$ 40.3	-2.0%
VIS	15.6	$ 24.8	$ 24.1	-2.9%
WLK	24.0	$ 132.7	$ 110.5	-20.1%
WH	11.8	$ 62.9	$ 63.5	1.0%
Average				7.1%

IV. CONCLUSION

The Commission should adopt Cal Water's request to set the Tier 1 breakpoint at 6 CCF. The Commission should adopt Cal Advocates' tier breakpoint and rate ratio recommendation. The Commission should reject Cal Water's request to adjust the current revenue allocation ratio as Cal Water's support for the request is unjustified.

1 Instead, the Commission should adopt the recommended revenue allocation. The
2 Commission should adopt the recommended CAP program adjustment to provide better
3 rate relief to CAP customers.

CHAPTER 4 – Special Request #2: Updating the Rate Support Fund

I. INTRODUCTION

The Rate Support Fund (RSF) currently provides a rate subsidy to customers in the Dixon, Kern River Valley, and Willows Districts, all of which are small, high-cost areas. The program was approved by D.06-08-011 and most recently affirmed in Cal Water's 2018 GRC by D.20-12-007. The program is funded by all Cal Water districts with a surcharge on the bills of customers not in the RSF program. In this GRC, Cal Water proposes to retain the RSF subsidies for all three districts, Dixon, Kern River Valley, and Willows – with updated amounts.

The RSF program functions by one of two methods that both benefit all customers in the district receiving the RSF benefits.[49] The first method is where all customers in the RSF districts receive a quantity rate discount on the first units of water consumption, up to a certain number of units per month. The second method is where the authorized revenue requirement for a district is decreased by the subsidy amount each year, before tariffed water rates are calculated. Kern River Valley district customers receive benefits under the first method and the Dixon and Willows district customers receive benefits under the second method.[50]

II. SUMMARY OF RECOMMENDATIONS

- The Commission should adopt Cal Water's request to reduce the RSF Index Rate from $5.61 to $5.29 per CCF to improve affordability in the Kern River Valley District.

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[49] Additional Testimony Book, "Chapter 2. Updating the Rate Support Fund (SR #2)" on p.15.

[50] Additional Testimony Book, "Chapter 2. Updating the Rate Support Fund (SR #2)" on p.16.

- The Commission should adjust the RSF program to subsidize the difference between the RSF Index Rate and the standard quantity rate for usage up to the district's tier 2 breakpoint.
- The RSF program subsidies should be funded by Cal Water customers company-wide who are not actively participating in the RSF program or the CAP program.

III. ANALYSIS

The Commission should adopt Cal Water's request to reduce the RSF Index Rate from $5.61 to $5.29 per CCF to increase affordability in Kern River Valley District. The RSF program subsidizes the difference between the RSF Index Rate and the general metered quantity rate (standard quantity rate) for usage up to 10 CCF.

In addition, the Commission should adjust the RSF program to subsidize the difference between the RSF Index Rate and the standard quantity rate for usage up to the district's tier 2 breakpoint. This aligns with Cal Advocates' recommended tier width design, in Chapter 3, such that Tier 1 and Tier 2 will capture sufficient indoor water usage and a reasonable additional allocation that is untaxed. Thus, the RSF program should subsidize usage up to a district's tier two breakpoint.

The Commission should adjust the RSF program cost recovery such that the RSF program subsidy is funded by all Cal Water districts from customers not in the RSF program and from customers not in the CAP program. It is unreasonable to seek subsidy recovery from those who are already in need of financial subsidies. As such, customers who participate in either the RSF program or the CAP program should not be burdened with the cost recovery of the RSF program. It is appropriate to update the RSF charge upon the final Commission decision.[51]

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[51] Cal Water 2021 GRC, Additional Testimony, p.16.

IV. CONCLUSION

The Commission should adopt Cal Water's request to reduce the RSF Index Rate from $5.61 to $5.29 per CCF and adopt the Cal Advocates recommended RSF program adjustments. Cal Water estimates that an RSF surcharge to fund the program will be between 0.5% to 1.0%, subjected to any remaining RSF balancing account balance from 2022.[52]

[52] Cal Water 2021 GRC, Additional Testimony, p.17.

1

Attachment 3-1: Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY

OF

SAM LAM

Q.1 Please state your name and address.

A.1 My name is Sam Lam and my business address is 320 West 4th Street, Suite 500, Los Angeles, California 90013.

Q.2 By whom are you employed and what is your job title?

A.2 I am employed by the Public Advocates Office – Water Branch and my job title is Public Utilities Regulatory Analyst.

Q.3 Please describe your educational and professional experience.

A.3 I received a Bachelor of Science degree in Business Administration from the University of Southern California. I have been with the Public Advocates Office – Water Branch since August of 2019.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am responsible for the preparation of Cal Advocates' Report on Sales Forecast, Conservation Expense Budget, Rate Design, and Special Request 2 – RSF Program Update.

Q.5 Does that complete your prepared testimony?

A.5 Yes, it does.

Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	
Witness(es)	:	Prashanta Adhikari

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

REPORT AND RECOMMENDATIONS ON TAXES AND SPECIAL REQUESTS 7 & 8

California Water Service Company

General Rate Case

Application 21-07-002

San Francisco, California
February 4, 2022

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MEMORANDUM

The Public Advocates Office at the California Public Utilities Commission (Cal Advocates) examined requests and data presented by California Water Service Company (CWSW) in Application (A.) 21-07-002 (Application) to provide the California Public Utilities Commission (Commission) with recommendations that represent the interests of CWS's ratepayers for safe and reliable service at the lowest cost. This Report is prepared by Prashanta Adhikari. Brian Yu is Cal Advocates' project lead for this proceeding. Syreeta Gibbs is the oversight Program & Project Supervisor, and Marybelle Ang & Caryn Mandelbaum are the legal counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect of the requests presented in the Application, the absence from Cal Advocates' testimony of any particular issue does not constitute its endorsement or acceptance of the underlying request, or the methodology or policy position supporting the request.

CHAPTER 1 Executive Summary

I. INTRODUCTION

This Report presents analysis and recommendation of California Water Service Company 's income taxes, taxes other than income, and Special Requests (SR) 7 & 8 for Test Year (TY) 2023.

II. SUMMARY OF RECOMMENDATIONS

1. The Commission should apply the current-year estimated State Income Tax or California Corporate Franchise Tax (CCFT) to calculate CWS's TY 2023 Federal Income Tax (FIT) expense amount because CWS does not have an approved previous-year CCFT amount.
2. The Commission should reject SR 7 and deny CWS's request to add to rate base taxes on government grants because the 2021 Infrastructure Act established an exception for water utilities.
3. The Commission should deny SR 8 because there is already an established process to address potential changes to tax laws.

CHAPTER 2 INCOME TAXES

I. INTRODUCTION

Income Tax expenses consist of Federal Income Tax (FIT) and California State Income Tax, also known as California Corporate Franchise Tax (CCFT). Recommendations in this report are based on analysis of CWS's Application, testimony, workpapers, and CWS's responses to Cal Advocates' discovery requests.

II. SUMMARY OF RECOMMENDATIONS

The Commission should apply the current-year estimated State Income Tax or California Corporate Franchise Tax (CCFT) to calculate TY 2023 Federal Income Tax (FIT) expense amount because CWS does not have an approved previous-year CCFT amount.

III. ANALYSIS

The Commission should adopt the projection of income taxes recommended in Cal Advocates' RO Model Table 1-1. CWS's method of deducting current-year CCFT from federally taxable income to calculate TY 2023 FIT is contrary to other California utilities, which deduct previous-year CCFT, as allowed by the IRS.[1] However, relying on current-year CCFT is permissible in some circumstances: "[w]here the prior year ratemaking CCFT number was not available then the test year CCFT number would have to be used as an approximation."[2]

In CWS's escalation filing Advice Letter (AL) 2395, it has not projected a CCFT expense.[3] Further review of AL 2395's supporting workpapers confirmed CWS

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[1] IRS Section 461, p. 4. *See also*, D.89-11-058, p. 10, Conclusion of Law 1 (explaining Commission's rationale for using adopted previous-year CCFT in CCFT deductions).

[2] D.89-11-058, p. 10.

[3] California Water Service Advice Letter 2395, Effective 1/1/2021.

calculated total income taxes and demonstrated that CCFT and FIT were not projected separately.[4] Therefore, there is no previously adopted amount for CWS to deduct from TY 2023 Federally Taxable Income.

In this circumstance, the projected TY 2023 CCFT amount is an acceptable deduction and consistent and compliant with D.89-11-058. Thus, the Commission should not deduct previous-year CCFT from CWS's 2023 Federally Taxable Income and should allow the utility to use current-year CCFT.

IV. CONCLUSION

The Commission should deduct the TY 2023 estimated CCFT in calculating CWS's TY 2023 FIT expense, as shown in Cal Advocates RO Model Table 1-1.

[4] California Water Service Advice Letter 2395, Workpapers, SOE.

CHAPTER 3 TAXES OTHER THAN INCOME

I. INTRODUCTION

Taxes Other Than Income include Ad Valorem taxes (property taxes), Franchise Taxes, and Payroll Taxes. TY 2023 recommendations for Taxes Other Than Income are primarily based on analysis of CWS's Application, testimony, workpapers, and the discovery process.

II. ANALYSIS

1. Payroll Taxes

The Commission should adopt the projected payroll taxes contained in Table 5-1 of Cal Advocates' RO Model. Payroll taxes consist of Federal Insurance Contribution Act (FICA) taxes, Federal Unemployment Insurance (FUI), and State Unemployment Insurance (SUI). The current FICA tax rate for Social Security is 6.2%, up to $142,800 in earnings and 1.45% for Medicare, with no maximum earning limit for paying taxes. Thus, the total tax rate is 7.65% for up to $142,800 in earnings, with an additional 1.45% for any earnings above that. Both California and the Federal Government collect taxes to fund Unemployment from the first $7,000 of each employee's salary. The state unemployment tax rate is 2.4%, and the federal unemployment tax rate is 0.6%.

Cal Water estimates the payroll tax rate in each district by dividing 2020 payroll taxes by 2020 payroll.[5] This results in an estimated payroll tax rate of 7.69% in TY 2023.[6] Given the percentages mentioned above, this is a reasonable payroll tax rate. Differences in total payroll tax amounts between CWS and Cal Advocates are the result of different estimates for the number of employees and salaries recommended by Cal Advocates witness Mr. Andrew Sweeney.

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[5] A.21-07-002, RO Model, CH06_TOTI_FDR_Payroll Taxes, Payroll Taxes WS-1

[6] A.21-07-002, RO Model, CH06_TOTI_FDR_Payroll Taxes, Payroll Taxes WS-1, Cell H77/G77

2. Ad Valorem Taxes

The Commission should adopt the projected property taxes contained in Table 5-1 of Cal Advocates' RO Model. CWS projects ad valorem taxes by averaging current-year tax basis and previous-year paid taxes.[7] Table 5-1 of Cal Advocates' RO Model uses the same methodology, however, differences in the estimation of Utility Plant in Service between Cal Advocates and CWS may lead to changes in the total Ad Valorem tax amount.[8]

3. Franchise Taxes

The Commission should adopt the projected franchise taxes contained in Cal Advocates' RO Model Table 5-1. CWS projects a franchise fee rate of 2% of revenues.[9] This is a typical utility franchise fee rate for cities where CWS operates, such as Bakersfield.[10] Table 5-1 of Cal Advocates' RO Model uses the same methodology, however, differences between CWS requested and Cal Advocates' recommended Franchise tax amounts result from the differences between CWS's and Cal Advocates' projected revenue for TY 2023.

4. Business License Fee

The Commission should adopt the projected Business License Fees in Cal Advocates' RO Model Table 5-1. CWS divides 2020 Business License Fees by 2020 revenues in each district to calculate the Business License Fee rate in each district.[11]

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[7] A.21-07-002, RO Model, CH06_TOTI_FDR_Ad Valorem.

[8] For a detailed comparison of the utility plant in service for each district, please refer to Cal Advocates Report on Plant for districts by witnesses Zaved Sarkar, Sari Ibrahim, Suliman Ibrahim (CSS), Niamh Murphy, Justin Menda, and Isaac Gendler.

[9] A.21-07-002, RO Model, CH06_TOTI_FDR_Local Franchise Tax, Local Franchise Tax Data WS-2.

[10] Ch. 3.04 Funds | Bakersfield Municipal Code, Section 3.04.140.

[11] A.21-07-002, RO Model, CH06_TOTI_FDR_Business License.

1 Using this method, CWS calculates Business License Fees of $1,310,487 in TY 2023.[12]
2 Table 5-1 of Cal Advocates' RO Model uses the same methodology, however,
3 differences between CWS requested and Cal Advocates' recommended Business License
4 Fee amounts result from the differences between CWS's and Cal Advocates' projected
5 revenue for TY 2023.

6 III. CONCLUSION

7 The Commission should adopt Cal Advocates' projected Payroll Taxes, Ad
8 Valorem taxes, Franchise Fees, and Business License Fees for TY 2023.

[12] A.21-07-002, RO Model, CH06_TOTI_FDR_Business License, Business License Tax WS-2, Cell H77.

CHAPTER 4 Special Request 7

I. INTRODUCTION

This chapter presents Cal Advocates' analysis and recommendations for Special Request (SR) 7. Through SR 7, CWS requests to add federal income taxes on grants from public agencies such as the California Department of Water Resources (DWR) to rate base.

II. SUMMARY OF RECOMMENDATIONS

The Commission should reject SR 7 and deny CWS's request to add to rate base taxes on government grants because the 2021 Infrastructure Act established an exception for water utilities

III. ANALYSIS

The Commission should reject SR 7 and deny CWS's request to add to rate base taxes on government grants. The federal tax law enacted in 2017, the Tax Cuts and Jobs Act (TCJA), made government grants federally taxable.[13] However, the 2021 Infrastructure Act made "a contribution to the capital…by a governmental entity providing for the protection, preservation, or enhancement of drinking water or sewerage disposal service" exceptions that will not be taxed.[14]

To verify whether CWS received grants from public agencies that would be taxable, Cal Advocates requested documentation on government grants CWS received and found that since 2018, CWS has received $746,469 in grants from the California

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[13] Johnson, B. and Panasewicz, M., Tax Reform Impacts on Section 118, Deloitte, 2018 (stating "What did change is the addition of language to Section 118 that makes grant proceeds from governmental entities or civic groups to a corporation taxable upon receipt as gross income…Grants from governmental entities may be grandfathered to the extent that they are…approved by the governmental entity before enactment of the TCJA.").

[14] Infrastructure Act (H.R. 3684), Title VI-Other Provisions, Sec. 80601

1 Department of Water Resources (DWR).[15] According to DWR, such grants "support
2 integrated water management activities addressing environmental stewardship, water
3 supply reliability, public safety, and economic stability."[16] With the change in federal tax
4 law coming from the Infrastructure Act, such funds would not be taxable. Therefore, the
5 Commission should deny CWS's request to add to rate base federal taxes on government
6 grants.

7 **IV. CONCLUSION**

8 The Commission should reject SR 7 and deny CWS's request to add to rate base
9 federal taxes on government grants.

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[15] CWS Response to DR PAD-001, Attachment 3.

[16] Grants and Loans at https://water.ca.gov/Work-With-Us/Grants-And-Loans (updated October 2021).

CHAPTER 5 Special Request 8

I. INTRODUCTION

This chapter presents analysis and recommendations for Special Request (SR) 8. With SR 8, CWS requests to modify A.21-07-002 for potential changes to federal tax law.

II. SUMMARY OF RECOMMENDATIONS

The Commission should deny SR 8 because there is already an established process for proceedings to address potential changes to tax laws.

III. ANALYSIS

The Commission already has an established process to address potential changes to tax laws in proceedings. SR 8 is not necessary, which CWS acknowledges in its application "the Commission's Rules of Practice and Procedure allow a party to make any request in a formal proceeding via motion".[17] In fact, the Commission's Rules of Practice and Procedure state "A motion may be made at any time during the pendency of a proceeding by any party to the proceeding."[18]

The Tax Cuts and Jobs Act (TCJA) is the most recent and potentially relevant change to federal tax laws which occurred in 2017. At the time, California American Water's 2016 GRC proceeding A. 16-07-002 was underway, and the parties met and conferred to schedule further testimony, hearings, and briefings to address potential impacts of federal tax law changes.[19] Administrative Law Judge Sophia J Park issued a ruling directing parties in the proceeding to meet, stating "This Act may have a

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[17] A.21-07-002, *Additional Testimony*, p. 42.

[18] California Public Utilities Commission, *Rules of Practice and Procedure* (California Code of Regulations, Title 20, Division 1, Chapter 1), Rule 11.1(b).

[19] A.16-07-002, Report on Meet and Confer Regarding Federal Tax Changes, p. 1.

significant impact on California-American Water Company's revenue requirement. For that reason, I anticipate receiving additional testimony and briefing for the Commission's deliberation on California American Water Company's application."[20] Subsequently, the Administrative Law Judges issued a ruling to adopt a new schedule to align with the TCJA.[21]

As in Cal-Am's 2016 GRC proceeding, CWS can, if necessary, pursue a similar process for addressing TCJA's potential impacts on its revenue requirement. Furthermore, potential changes to federal tax law would potentially affect all utilities, not just CWS. When asked in a Data Request about whether SR 8 requests anything different from the Commission's current practices, CWS's response was "Cal Water is not requesting a procedural treatment that is different from the procedures for motions in Rule 11.1 of the Commission's Rules of Practice and Procedure."[22] Therefore, allowing CWS to modify its application is unnecessary to reflect potential changes to federal tax law. The Commission should deny SR 8.

IV. CONCLUSION

The Commission should reject SR 8 and deny CWS's request to modify its GRC application for potential changes to tax law.

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[20] A.16-07-002, E-mail Ruling Directing Parties to Meet and Confer Regarding Federal Tax Changes, p. 2.

[21] A.16-07-002, Administrative Law Judges' Ruling Adopting Schedule Regarding Federal Tax Changes, p. 2.

[22] Attachment 4: Data Request PAD-002 Response

Attachment 1: Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY

OF

Prashanta Adhikari

Q.1 Please state your name and address.

A.1 My name is Prashanta Adhikari, and my business address is 505 Van Ness Avenue, San Francisco, California 94102.

Q.2 By whom are you employed and what is your job title?

A.2 I am employed by the Commission's Public Advocates Office as a Public Utilities Regulatory Analyst I.

Q.3 Please describe your educational and professional experience.

A.3 I have a BA in Economics from University of California, Davis (2017) and have worked as a PURA since October 2019.

Q.4 What is your area of responsibility in this proceeding?

A.4 My responsibility is preparing testimony on taxes and Special Requests 7 & 8.

Q.5 Does that complete your prepared testimony?

A.5 Yes

Attachment 2: CWS Response to PAD-001

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To: **Public Advocates Office**	
Brian Yu, P.E. Project Coordinator	Phone: (213) 576-7075 Email: byu@cpuc.ca.gov
Prashanta Adhikari Witness	Phone: (415) 703-3445 Email: prashanta.adhikari@cpuc.ca.gov
Marybelle Ang Attorney for CPUC	Phone: (415) 696-7329 Email: marybelle.ang@cpuc.ca.gov
Caryn L. Mandelbaum Attorney for CPUC	Phone: (213) 620-6456 Email: caryn.mandelbaum@cpuc.ca.gov
From: **Greg Milleman** Vice President, California Rates	Phone: (408) 367-8489 Email: gmilleman@calwater.com
Natalie D. Wales Director, Regulatory Policy & Compliance	Phone: (408) 367-8566 Email: nwales@calwater.com
Patrick Alexander General Rate Case Manager	Phone: (408) 367-8230 ext. 78230 Email: palexander@calwater.com
Date: **July 16, 2021** Re: **PAD-001** Subj: **FIT, CCFT and Repairs Deduction**	Request Received from CPUC: **July 9, 2021** Requested Due Date: **July 16, 2021**

Comments:
- **Complete Response has been provided.**
-

Data Requests and Responses

1. Please provide searchable PDF copies of CWS's Federal Income Tax returns (actual complete tax return, not pro-forma) for the last three years, 2018 through 2020. If CWS's parent company, California Water Service Group (CWSG), files consolidated tax returns, provide the parent company's full tax returns with all schedules, and indicate which pages and portions contain information regarding CWS.

   Response: Please see attachments:

   Attachment 1 - 2018 Income Tax Return (includes CCFT Return)-Final

   Pages - 9, 23-24, 57-58,74,76-78,,81-83, 88-89, 94,92-93,96,98-101, 103,105,107,109,112, 114,117,120,123-124,126,129, 131-132,135,138-139,164-165,172-175,186-187,200,203, 205,207

   Attachment 2 - 2019 Income Tax Return (includes CCFT Return)-Final

   Pages – 10, 24-25, 59-60, 78, 80, 82-84, 87-89, 93, 98, 103-105,107,109,111,113,114,116, 122,128,131,133,139,142,145-146

   Cal Water is currently working on 2020 Income Tax return which is due October 15, 2021. Cal Water will provide update to this response after 2020 Income-Tax return will be filed.

2. Please provide searchable PDF copies of CWS's California Corporate Franchise Tax (CCFT) returns (actual complete tax return, not pro-forma) for the last three years, 2018 through 2020. If CWS's parent company, CWSG, files consolidated tax returns, provide the parent company's full tax returns with all schedules, and indicate which pages and portions contain information regarding CWS.

   Response: Please see attachments:

   Attachment 1 - 2018 Income Tax Return (includes CCFT Return)-Final

   Pages - 219,226,229,246,250,253,256,259,262,265,268,271,276,282,286,289,293,295-297,302,308,310, 313,315,321-322,324,327,330,332,334,340,343,345-346,348,350-351,357-358

   Attachment 2 - 2019 Income Tax Return (includes CCFT Return)-Final

   Pages - 169,176,192,194,197,200,203,206,209,212,215,220,226,230,233,237,239-241, 246,252,254,257,259,265-266,273,289,294,300-301,332-333,348,360-361,364,366, 368,370,371,373,395-397,407

   Cal Water is currently working on 2020 California Corporate Franchise Tax return which is due October 15, 2021. Cal Water will provide update to this response after 2020 California Corporate Franchise Tax return will be filed.

3. Please provide searchable PDF copies of documents showing total dollar amounts in grants CWS received from public agencies for the last three years, 2018 through 2020.

   Response: Cal Water received two grants where we received grant funds from 2016 to 2018 for Chrome 6 projects in two of our districts. None the less, we have provided a complete listing of all the grant funds since the projects were closed in 2018 and 2019 at which time the

grant funds were booked as CIAC – Grant to offset the cost of the plant in rate base. Please see attachments:

Attachment 3 – Dept. Water Resources Grant Payments_Received

Attachment 4 - Prop 50 Grants - Summary (Willows)

4. On Page 126 of Attachment B (Proxy Statements, Financial Statements, and 2020 Summary Annual Report), CWS states "For 2020 income taxes decreased $4.8 million, or 29.8%, to $11.4 million as compared to 2019. The decrease was primarily due to the tax benefit from the flow through method of repairs deductions for California state income tax partially offset by an increase in operating income."

   a. Was there a change to the flow through method of repairs deductions? If so, state the source of the change, i.e., the Tax Cuts and Jobs Act.

Response: No, Cal Water uses "flow through method" for asset related item including tax repair consistently.

   b. Explain the change in income taxes between 2019 and 2020 using the flow through method of repairs deductions.

Response: The income tax change between 2019 and 2020 is mainly attributable to more being qualified for the repair deduction in 2020 than in 2019. The tax repair was estimated as $70 million and $164 million for year 2019 and 2020.

Attachment 3: CWS Response to PAD 001, Q.3 – Attachment 3 to PAD-001

Department of Water Resources Grant Received

THE BACK OF THIS DOCUMENT CONTAINS AN ARTIFICIAL WATERMARK - VIEW AT AN ANGLE

STATE OF CALIFORNIA

WARRANT NUMBER 06-513390

THE TREASURER OF THE STATE WILL PAY OUT OF THE

FUND NO. FUND NAME
6031 WTR SEC,CLN DRNKG WR, C

IDENTIFICATION NO.

MO. DAY YR.
3860 01 25 2016

06513390

TO
813390
CALIFORNIA WATER SERVICE CO

$**297,545.43

BETTY T. YEE
CALIFORNIA STATE CONTROLLER

⑆121134230⑆ 065133909⑈

STATE CONTROLLERS OFFICE
CLAIM SCHEDULE STATUS

AGENCY	SCHEDULE NUMBER	BATCH DATE	BATCH ID	BATCH SEQ	WARRANT FROM	SEQUENCE TO
3860	1320955	20160115	AUD1	08	06-513390	06-513390

CLAIMS TOTAL:	$997,545.43	WARRANT DATE	: 01/25/2016
NUMBER OF ISSUES:	000001	FIRST PROCESS DATE	: 01/15/2016
NUMBER OF VOIDS:	000000	LAST ERROR DATE	: 01/25/2016
FUND:	6031	POSTING DATE	: 01/25/2016
CCL DATE	: / /	SCHEDULE PRINT DATE	: / /
VOID DATE	: / /	SCHEDULE ISSUE DATE	: 01/25/2016
DELETE DATE	: / /	AUDIT SELECT DATE	: / /
SUSPENSE SEQUENCE NUMBER:	354795	AUDIT RELEASE DATE	: / /

THE BACK OF THIS DOCUMENT CONTAINS AN ARTIFICIAL WATERMARK - VIEW AT AN ANGLE

STATE OF CALIFORNIA

WARRANT NUMBER 06-556123

H THE TREASURER OF THE STATE WILL PAY OUT OF THE IDENTIFICATION NO.

FUND NO. 6031 FUND NAME WTR SEC,CLN DRNKG WR, C

NO. 3860 DAY 02 MO. 10 YR. 2016

SD-13429211

06556123

TO: 556123
CALIFORNIA WATER SERVICE CO

[redacted]

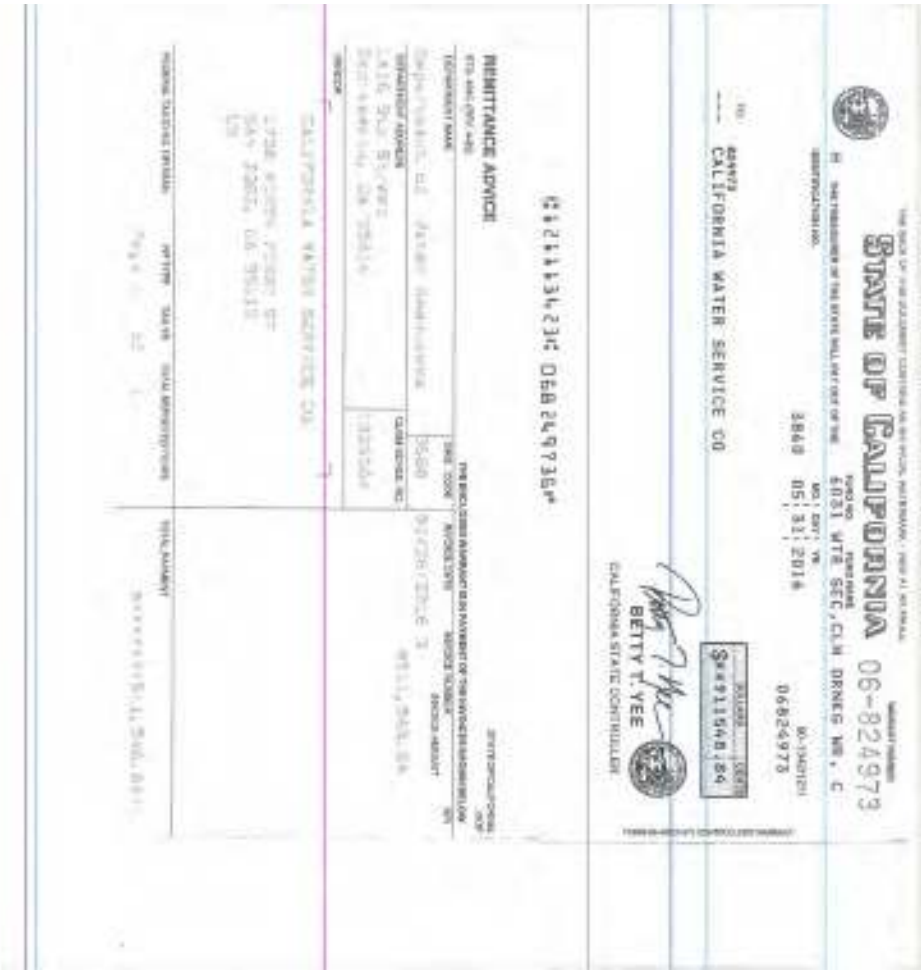
BETTY T. YEE
CALIFORNIA STATE CONTROLLER

⑆121113423⑆ 06556123⑈

STATE CONTROLLERS OFFICE
CLAIM SCHEDULE STATUS

AGENCY	SCHEDULE NUMBER	BATCH DATE	BATCH ID	BATCH SEQ	WARRANT FROM	SEQUENCE TO
3860	1321975	20160205	AUD1	13	06-556123	06-556123

CLAIMS TOTAL:	$464,760.55	WARRANT DATE	: 02/10/2016
NUMBER OF ISSUES:	000001	FIRST PROCESS DATE	: 02/05/2016
NUMBER OF VOIDS:	000000	LAST ERROR DATE	: 02/10/2016
FUND:	6031	POSTING DATE	: 02/10/2016
CCL DATE	: / /	SCHEDULE PRINT DATE	: / /
VOID DATE	: / /	SCHEDULE ISSUE DATE	: 02/10/2016
DELETE DATE	: / /	AUDIT SELECT DATE	: / /
SUSPENSE SEQUENCE NUMBER:	446243	AUDIT RELEASE DATE	: / /



STATE CONTROLLERS OFFICE
CLAIM SCHEDULE STATUS

AGENCY	SCHEDULE NUMBER	BATCH DATE	BATCH ID	BATCH SEQ	WARRANT FROM	SEQUENCE TO
3860	1326664	20160520	AUD1	02	06-824973	06-824973

CLAIMS TOTAL:	$911,548.84	WARRANT DATE	: 05/31/2016
NUMBER OF ISSUES:	000001	FIRST PROCESS DATE	: 05/20/2016
NUMBER OF VOIDS:	000000	LAST ERROR DATE	: 05/31/2016
FUND:	6031	POSTING DATE	: 05/31/2016
CCL DATE	: / /	SCHEDULE PRINT DATE	: / /
VOID DATE	: / /	SCHEDULE ISSUE DATE	: 05/31/2016
DELETE DATE	: / /	AUDIT SELECT DATE	: / /
SUSPENSE SEQUENCE NUMBER:	841358	AUDIT RELEASE DATE	: / /

REMITTANCE ADVICE

STD. 43HQ (REV. 4-89)

STATE OF CALIFORNIA
DGS

THE ENCLOSED WARRANT IS IN PAYMENT OF THE INVOICES SHOWN BELOW

DEPARTMENT NAME	ORG. CODE	INVOICE DATE	INVOICE NUMBER	INVOICE AMOUNT
Department of Water Resources	3860	05/06/2016	4	$210,529.55

DEPARTMENT ADDRESS
1416 9th Street
Sacramento, CA 95814

CLAIM SCHED. NO.
1328442

VENDOR
CALIFORNIA WATER SERVICE CO.

1720 NORTH FIRST ST
SAN JOSE, CA 95112
US

FEDERAL TAX ID NO. OR SSAN | RP TYPE | TAX YR | TOTAL AMOUNT TO BAR

TOTAL PAYMENT
$********210,529.55*

Page 1 of 1

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WARRANT NUMBER

STATE OF CALIFORNIA

06-918958

THE TREASURER OF THE STATE WILL PAY OUT OF THE

FUND NO. | FUND NAME
6031 WTR SEC,CLN DRNKG WR, C

IDENTIFICATION NO.
3860

MO. | DAY | YR.
07 | 11 | 2016

30-1949/1211
06918958

TO:
918958
--- CALIFORNIA WATER SERVICE CO

DOLLARS | TOTAL
$**210529.55

BETTY T. YEE
CALIFORNIA STATE CONTROLLER

FORM PAYEE-DEPT. DOCTYPE-STATE WARRANT

⑆121141342③⑆ 069189588⑈

REMITTANCE ADVICE

STD. 40HC (REV. 4-95)

STATE OF CALIFORNIA
DOF

THE ENCLOSED WARRANT IS IN PAYMENT OF THE INVOICES SHOWN BELOW

DEPARTMENT NAME	ORG. CODE	INVOICE DATE	INVOICE NUMBER	INVOICE AMOUNT
Department of Water Resources	3860	08/02/2016	S	$329,985.79

DEPARTMENT ADDRESS
1416 9th Street
Sacramento, CA 95814

CLAIM SCHED. NO.
1331518

VENDOR
CALIFORNIA WATER SERVICE CO.

1720 NORTH FIRST ST
SAN JOSE, CA 95112
US

FEDERAL TAX ID NO. OR SSAN | 1099 TYPE | TAX YR | TOTAL REPORTED TO IRS

Page 1 of 1

TOTAL PAYMENT
$*******329,985.79*

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STATE OF CALIFORNIA

WARRANT NUMBER
07-070817

H THE TREASURER OF THE STATE WILL PAY OUT OF THE

FUND NO. FUND NAME
6031 WTR SEC,CLN DRNKG WR, C

IDENTIFICATION NO.
3860

MO. DAY YR.
09 14 2016

90-1342123
07070817

PO
070817
CALIFORNIA WATER SERVICE CO

DOLLARS CENTS
$**329985.79

BETTY T. YEE
CALIFORNIA STATE CONTROLLER

⑆121141342⑆ 070708176⑈

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WARRANT NUMBER

STATE OF CALIFORNIA 07-201041

FUND NO. 6031 FUND NAME WTR SEC,CLN DRNKG WR, C

M THE TREASURER OF THE STATE WILL PAY OUT OF THE

VERIFICATION NO. 3860

MO. 11 DAY 04 YR. 2016

SB-1142/1211

07201041

DOLLARS $x*172748 CENTS 40

TO: 201041
CALIFORNIA WATER SERVICE CO

BETTY T. YEE
CALIFORNIA STATE CONTROLLER

FORM 9400-P-01 (CONTROLLING WARRANT)

⑈1261134234⑈ 07201041 3⑈

STATE OF CALIFORNIA

WARRANT NUMBER 07-251634

THE TREASURER OF THE STATE WILL PAY OUT OF THE FUND NO. 6031 FUND NAME WTR SEC,CLN DRNKG WR, C

IDENTIFICATION NO. 3860 MO.: 11 DAY: 29 YR.: 2016

05-1540/1211
07251634

TO: 251634
CALIFORNIA WATER SERVICE CO.

DOLLARS $**147603. CENTS 94

BETTY T. YEE
CALIFORNIA STATE CONTROLLER

⑆121113423⑆ 07251634⑈

REMITTANCE ADVICE
STD. 434C (REV. 4-98)

STATE OF CALIFORNIA
DOF

THE ENCLOSED WARRANT IS IN PAYMENT OF THE INVOICES SHOWN BELOW

DEPARTMENT NAME	ORG. CODE	INVOICE DATE	INVOICE NUMBER	INV. INVOICE AMOUNT	INR
Department of Water Resources	3860	09/26/2016	CLAIM#7	$147,603.94	

DEPARTMENT ADDRESS
1416 9th Street
Sacramento, CA 95814

CLAIM SCHED. NO. 1334682

VENDOR
CALIFORNIA WATER SERVICE CO.

1720 NORTH FIRST ST
SAN JOSE, CA 95112
US

FEDERAL TAX ID NO. OR SSAN | INT TYPE | TAX YR | TOTAL REPORTED TO IRS

TOTAL PAYMENT $********147,603.94+

Page 1 of 1

STATE OF CALIFORNIA

WARRANT NUMBER 07-339370

THE TREASURER OF THE STATE WILL PAY OUT OF THE FUND NO. 6031 FUND NAME WTR SEC,CLN DRNKG WR, C

IDENTIFICATION NO. 3860 MO. 01 DAY 09 YR. 2017

07339370

TO: 339570
--- CALIFORNIA WATER SERVICE CO

DOLLARS $***55243 CENTS .43

BETTY T. YEE
CALIFORNIA STATE CONTROLLER

⑆121113423⑆ 073393704⑈

REMITTANCE ADVICE

STD. 48A0 (REV. 4-85)

STATE OF CALIFORNIA
DOF

THE ENCLOSED WARRANT IS IN PAYMENT OF THE INVOICES SHOWN BELOW

DEPARTMENT NAME	ORG. CODE	INVOICE DATE	INVOICE NUMBER	INVOICE AMOUNT	RPT
Department of Water Resources	3860	12/01/2016	CLAIM 6	$55,243.43	

DEPARTMENT ADDRESS
1416 9th Street
Sacramento, CA 95814

CLAIM SCHED. NO. 1336717

VENDOR
CALIFORNIA WATER SERVICE CO.

1720 NORTH FIRST ST
SAN JOSE, CA 95112
US

FEDERAL TAX ID NO. OR SSNR | RF TYPE | TAX YR | TOTAL REPORTED TO IRS | TOTAL PAYMENT

Page 1 of 1

$********55,243.43*

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STATE OF CALIFORNIA

WARRANT NUMBER 07-586185

H THE TREASURER OF THE STATE WILL PAY OUT OF THE

FUND NO. 6031 FUND NAME WTR SEC,CLN DRNKG WR, C

IDENTIFICATION NO. 3860

MO. DAY YR. 04 27 2017

SD-19421211

07586185

TO: 586185
--- CALIFORNIA WATER SERVICE CO

DOLLARS CENTS
$**526965.16

BETTY T. YEE
CALIFORNIA STATE CONTROLLER

FORM 9400-0-01 CONTROLLER WARRANT

⑆121113423⑆ 07586185⑈

REMITTANCE ADVICE

STD. 46HC (REV. 4-96)

STATE OF CALIFORNIA
DGS

THE ENCLOSED WARRANT IS IN PAYMENT OF THE INVOICES SHOWN BELOW

DEPARTMENT NAME	ORG. CODE	INVOICE DATE	INVOICE NUMBER	INVOICE AMOUNT	RPI
Department of Water Resources	3860	03/21/2017	CLAIM#9	$526,965.16	
DEPARTMENT ADDRESS: 1416 9th Street, Sacramento, CA 95814	CLAIM SCHED. NO: 1342744				

VENDOR

CALIFORNIA WATER SERVICE CO.

1720 NORTH FIRST ST
SAN JOSE, CA 95112
US

FEDERAL TAXID NO. OR NAME	X TYPE	TAX YR	TOTAL REPORTED TO IRS	TOTAL PAYMENT

Page 1 of 1

$*******526,965.16*

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STATE OF CALIFORNIA

WARRANT NUMBER 07-586184

THE TREASURER OF THE STATE WILL PAY OUT OF THE FUND NO. 6031 FUND NAME WTR SEC,CLN DRNKG WR, C

IDENTIFICATION NO. 3860 MO. 04 DAY 27 YR. 2017

80-1962121 07586184

TO: 586184
CALIFORNIA WATER SERVICE CO

DOLLARS CENTS
$**195038.78

BETTY T. YEE
CALIFORNIA STATE CONTROLLER

⑆121113423⑆ 07586184 6⑈

REMITTANCE ADVICE

STD. 204C (REV. 4-98)

STATE OF CALIFORNIA
DOF

THE ENCLOSED WARRANT IS IN PAYMENT OF THE INVOICES SHOWN BELOW

DEPARTMENT NAME	ORG. CODE	INVOICE DATE	INVOICE NUMBER / INVOICE AMOUNT	RN
Department of Water Resources	3860	03/21/2017	CLAIM#10 $195,038.78	

DEPARTMENT ADDRESS
1416 9th Street
Sacramento, CA 95814

CLAIM SCHED. NO. 1342743

VENDOR
CALIFORNIA WATER SERVICE CO.

1720 NORTH FIRST ST
SAN JOSE, CA 95112
05

FEDERAL TAX ID NO. OR SSAN | RP TYPE | TAX YR | TOTAL REPORTED TO IRS | TOTAL PAYMENT

Page 1 of 1

$*******195,038.78*

REMITTANCE ADVICE

STD. 404C (REV. 4/98)

STATE OF CALIFORNIA

TO

THE ENCLOSED WARRANT IS IN PAYMENT OF THE INVOICES SHOWN BELOW

DEPARTMENT NAME	ORG. CODE	INVOICE DATE	INVOICE NUMBER	INVOICE AMOUNT
Department of Water Resources	3860	11/20/2017	CLAIM 11	$63,325.53
		11/20/2017	CLAIM 12	$79,505.75

DEPARTMENT ADDRESS
1416 9th Street
Sacramento, CA 95814

CLAIM SCHED. NO.
1354844

VENDOR
CALIFORNIA WATER SERVICE CO.

1720 NORTH FIRST ST
SAN JOSE, CA 95112
US

FEDERAL TAX ID NO. OR SSAN	RP TYPE	TAX YR	TOTAL REPORTED 1099S	TOTAL PAYMENT
				$*******142,831.28*

Page 1 of 1

THE BACK OF THIS DOCUMENT CONTAINS AN ARTIFICIAL WATERMARK - VIEW AT AN ANGLE

STATE OF CALIFORNIA

WARRANT NUMBER 08-177598

THE TREASURER OF THE STATE WILL PAY OUT OF THE

FUND NO. 6031 FUND NAME WTR SEC,CLN DRNKG WR, C

IDENTIFICATION NO. 3860

MO. DAY YR. 01 17 2018

00-13420211

08177598

TO: 177598
CALIFORNIA WATER SERVICE CO

DOLLARS	CENTS
$**142831	28

BETTY T. YEE
CALIFORNIA STATE CONTROLLER

⑆121141342③⑆ 08177598 9⑈

REMITTANCE ADVICE

STD. 404C (REV. 4/98)

STATE OF CALIFORNIA

THE ENCLOSED WARRANT IS IN PAYMENT OF THE INVOICES SHOWN BELOW

DEPARTMENT NAME	ORG. CODE	INVOICE DATE	INVOICE NUMBER	INVOICE AMOUNT
Department of Water Resources	3860	11/20/2017	CLAIM 11	$63,325.53
		11/20/2017	CLAIM 12	$79,505.75

DEPARTMENT ADDRESS
1416 9th Street
Sacramento, CA 95814

CLAIM SCHED. NO.
1354844

VENDOR
CALIFORNIA WATER SERVICE CO.

1720 NORTH FIRST ST
SAN JOSE, CA 95112
US

FEDERAL TAX ID NO. OR SSAN	RP TYPE	TAX YR	TOTAL REPORTED 1099S	TOTAL PAYMENT
				$*******142,831.28*

Page 1 of 1

THE BACK OF THIS DOCUMENT CONTAINS AN ARTIFICIAL WATERMARK - VIEW AT AN ANGLE

STATE OF CALIFORNIA

WARRANT NUMBER 08-177598

THE TREASURER OF THE STATE WILL PAY OUT OF THE FUND NO. 6031 FUND NAME WTR SEC,CLN DRNKG WR, C

IDENTIFICATION NO. 3860 MO. 01 DAY 17 YR. 2018

00-13420211
08177598

TO: 177598
CALIFORNIA WATER SERVICE CO

DOLLARS	CENTS
$**142831	28

BETTY T. YEE
CALIFORNIA STATE CONTROLLER

⑆121141342③⑆ 08177598 9⑈

THE BACK OF THIS DOCUMENT CONTAINS AN ARTIFICIAL WATERMARK - VIEW AT AN ANGLE

STATE OF CALIFORNIA

WARRANT NUMBER 08-348970

THE TREASURER OF THE STATE WILL PAY OUT OF THE FUND NO. 6031 FUND NAME WTR SEC,CLN DRNKG WR, C

IDENTIFICATION NO. 3860 MO. 04 DAY 12 YR. 2018

00-1945/0211
08348970

TO: 348970
CALIFORNIA WATER SERVICE CO

DOLLARS CENTS
$***23197.45

BETTY T. YEE
CALIFORNIA STATE CONTROLLER

⑆121113423⑆ 083489706⑈

REMITTANCE ADVICE

STD. 699C (REV. 4-80)

STATE OF CALIFORNIA

THE ENCLOSED WARRANT IS IN PAYMENT OF THE INVOICES SHOWN BELOW

DEPARTMENT NAME	ORG. CODE	INVOICE DATE	INVOICE NUMBER	INV. INVOICE AMOUNT
Department of Water Resources	3860	02/27/2018	CLAIM 13	$23,197.45

DEPARTMENT ADDRESS
1416 9th Street
Sacramento, CA 95814

CLAIM SCHED. NO. 1358792

VENDOR
CALIFORNIA WATER SERVICE CO.

1720 NORTH FIRST ST
SAN JOSE, CA 95112
US

FEDERAL TAX ID NO. OR SSAN | RP TYPE | TAX YR | TOTAL REPORTED TO IRS | TOTAL PAYMENT

Page 1 of 1

$*********23,197.45*

THE BACK OF THIS DOCUMENT CONTAINS AN ARTIFICIAL WATERMARK - VIEW AT AN ANGLE

STATE OF CALIFORNIA

WARRANT NUMBER 08-780132

THE TREASURER OF THE STATE WILL PAY OUT OF THE FUND NO. 6031 FUND NAME WTR SEC,CLN DRNKG WR, C

IDENTIFICATION NO. 3860 DATE 01 14 2019

86-1942/1211

08780132

TO 780132
CALIFORNIA WATER SERVICE CO

DOLLARS CENTS
$xx580439.85

BETTY T. YEE
CALIFORNIA STATE CONTROLLER

⑆121141342③⑆ 087801327⑈

REMITTANCE ADVICE

STD. 404C (REV. 4-93)

STATE OF CALIFORNIA
DOF

THE ENCLOSED WARRANT IS IN PAYMENT OF THE INVOICE(S) SHOWN BELOW

DEPARTMENT NAME	ORG. CODE	INVOICE DATE	INVOICE NUMBER	INVOICE AMOUNT
Department of Water Resources	0500	11/21/2018	CLAIM#14	3500,429.85

DEPARTMENT ADDRESS
1416 9th Street
Sacramento, CA 95814

CLAIM SCHED. NO. 1971362

VENDOR
CALIFORNIA WATER SERVICE CO.
1720 NORTH FIRST ST
SAN JOSE, CA 95112
US

FEDERAL TAX ID NO. OR SSAN | INT TYPE | TAX ER | TOTAL REPORTED TO IRS | TOTAL PAYMENT

Page 1 of 1

Attachment 4: CWS Response to PAD-002

RESPONSE TO DATA REQUEST

2021 GENERAL RATE CASE, A.21-07-002

To:	**Public Advocates Office**		
	Brian Yu Project Coordinator	Phone: Email:	(213) 576-7075 byu@cpuc.ca.gov
	Prashanta Adhikari Witness	Phone: Email:	(415) 703-3445 prashanta.adhikari@cpuc.ca.gov
	Marybelle Ang Attorney	Phone: Email:	(415) 696-7329 marybelle.ang@cpuc.ca.gov
	Caryn L. Mandelbaum Attorney	Phone: Email:	(213) 620-6456 caryn.mandelbaum@cpuc.ca.gov
From:	**California Water Service Company**		
	Greg Milleman Vice President, California Rates	Phone: Email:	(408) 367-8498 gmilleman@calwater.com
	Natalie D. Wales Director, Regulatory Policy (Regulatory Counsel)	Phone: Email:	(408) 367-8566 nwales@calwater.com
	Patrick Alexander General Rate Case Manager	Phone: Email:	(408) 367-8230 ext.78230 palexander@calwater.com

Date: **November 29, 2021** Re: **PAD-002** Subj: **Special Requests 7 & 8**	Request Received from CPUC: **November 22, 2021** Requested Due Date: **November 29, 2021**

Comments:

- **Full response attached.**
- **Response provided by Rates Department.**
- **Does not contain confidential information.**

Data Requests and Responses

1. Please share where CWS is including taxes on government grants in rate base, as requested in Special Request 7.

   Response:

   While Special Request #7 proposes to rate base taxes associated with government grants, Cal Water's 2021 GRC Application does not include any taxes associated with any grants in its rate base calculations.

   Cal Water does anticipate a grant of an estimated $4.1 million for PFAS treatment in the East Los Angeles District, and has adjusted the CIAC balance for that district in this GRC (see General Report, p. 101). The grant has not been finalized, however, and while Cal Water may track taxes on grants in its 2018 Tax Accounting Memo Account ("TAMA," Preliminary Statement AV) (see 2018 GRC Settlement, pp. 34, 47-48), no grant-related taxes are in the TAMA at this time.

   Note that, to the extent the Commission has not resolved the appropriate treatment of grant-related income taxes before Cal Water's first test year of 2023, Cal Water has proposed in this 2021 GRC that the TAMA remain open to track such costs (see Additional Testimony, pp. 76-77).

2. What is the difference between the Commission's current process for addressing motions in General Rate Case proceedings and CWS's request in Special Request 8?

   Response: In Special Request #8, Cal Water is alerting the Commission and interested parties that significant federal tax law changes could be adopted during this proceeding that may warrant an update to Cal Water's application. Cal Water is not requesting a procedural treatment that is different from the procedures for motions in Rule 11.1 of the Commission's Rules of Practice and Procedure.

Docket		A.21-07-002
Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie L. Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	Edward Scher
Witness(es)	:	Niamh Murphy

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

REPORT ON SPECIAL REQUESTS:

#3, #4, and #14

California Water Service Company

Test Year 2020 General Rate Case

A.21-07-002

San Francisco, California
February 4, 2022

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MEMORANDUM

This Report on Special Requests (SR) #3, #4, and #14 for California Water Service Company (Cal Water) General Rate Case (GRC) A.21-07-002 is prepared by Edward Scher of the *Public Advocates Office (Cal Advocates) - Water Branch,* and under the general supervision of Program Manager Richard Rauschmeier, and Program & Project Supervisor Syreeta Gibbs, and Project Lead Brian Yu. One section of the Report, Section 2 of Chapter 3 on Special Request (SR) #14, is prepared by Niamh Murphy of the *Public Advocates Office (Cal Advocates) - Water Branch,* and under the general supervision of Program Manager Richard Rauschmeier, and Program & Project Supervisor Syreeta Gibbs, and Project Lead Brian Yu.

Mr. Scher and Ms. Murphy's Statements of Qualifications are included as Attachment #1 to this Report. Marybelle Ang and Caryn Mandelbaum serve as Cal Advocates legal counsel.

CHAPTER 1 Special Request #3: Authorize Monterey-Style WRAM and ICBA and Deny Residual WRAM and MCBA Surcharges After December 31, 2022

I. INTRODUCTION

Commission Decision 20-08-047 orders IOUs to replace their Water Revenue Adjustment Mechanism (WRAM) and Modified Cost Balancing Account (MCBA) with a Monterey-Style WRAM (M-WRAM) and Incremental Cost Balancing Account (ICBA) in the next GRC. In SR 3 Cal Water requests that the Commission authorize a Monterey-style WRAM and ICBA to replace Cal Water's WRAM and MCBA at the end of the current GRC, effective January 1, 2023.

Cal Water's proposal that the Commission allow the company to use an average to calculate purchase power in the ICBA is based on the complexity of tracking and calculating the actual cost.[1] Cal Water is also requesting that the Commission authorize the collection of residual WRAM and MCBA surcharges after the end of these programs.

II. SUMMARY OF RECOMMENDATIONS

The Commission should authorize the Monterey-Style WRAM and ICBA to replace the terminated WRAM and MCBA as ordered in D. 20-08-047.[2] Because the Commission should end the pilot Sale Reconciliation Mechanism (SRM),[3] the Commission should require that Cal Water calculate single quantity rates by dividing the total adopted residential quantity revenue by total annual adopted residential sales.[4]

The Commission should authorize Cal Water to use the proposed average purchase water and pump tax ICBA calculation in the current GRC as an interim or pilot

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[1] Additional Testimony, Page 22, Line 23-24.

[2] D.20-08-047.

[3] See EDW Testimony for the 2021 Cal Water GRC on SR4 (Chapter 2).

[4] As described in Additional Testimony, Page 19, Line 13-17.

project until planned automated systems make using actual purchase power expense data in these calculations less burdensome.

The Commission should deny Cal Water's request to charge ratepayers WRAM and MCBA balances beyond the end date for those programs, which for Cal Water is December 31, 2022.

III. ANALYSIS

1. Authorize M-WRAM and ICBA

D. 20-08-047 states that in their next general rate applications water utilities (including Cal Water):

> …shall not propose continuing existing Water Revenue Adjustment Mechanisms/Modified Cost Balancing Accounts but may propose to use Monterey-Style Water Revenue Adjustment Mechanisms and Incremental Cost Balancing Accounts.

With SR3, Cal Water is requesting an M-WRAM and ICBA to replace the terminated WRAM and MCBA.

2. Simplify Power ICBA Calculations on an Interim Basis

Cal Water proposes to use an averaged single rate to calculate the ICBA. Cal Water states that the complex methodology required for the purchased power ICBA is "overly burdensome" because the company has "over 1,100 Facilities purchasing power from over 30 energy tariffs," further complicated by "seasonal rates, peak, mid-peak and off-peak rats and demand charges" and by "tariff rate changes 3 or 4 times per year."[5]

Using an average per district for purchased power for the ICBA should create efficiency and should not result in unfair or unreasonable costs. However, using the average should be allowed only on an interim basis. In the current GRC application, Cal Water is proposing, and Cal Advocates is not challenging, two systems that will automate

[5] Additional Testimony, Page 22, lines 18-26.

management of this information. Once these systems are in place, which Cal Water estimates will be in the 2024 GRC, Cal Water should use the actual recorded data and not an average.

Cal Water proposes an Energy Management System[6] that will create a data connection with the electrical utilities to download energy data daily and archive that data in a Supervisory Control and Data Acquisition (SCADA) system.[7] This Energy Management System (EAM) will allow Cal Water to aggregate and display data, including purchase water fees, in easy-to-read formats.

In addition, Cal Water is implementing an Operational Data Management System[8] that will monitor energy usage:

> Engineering and Rates can utilize the system for Water Production and Energy Usage for budgeting and identification of process improvements to save energy and reduce costs in the following two target areas."[9]

> In 2019, Cal Water's power cost was $22.3M in 2019 and is expected to be significantly higher in 2020. Using the ODMS to monitor energy usage will save staff time in preparing manual reports and provide ability to analyze data collected in our EAM, [10]

Cal Advocates does not oppose either of these two new systems. In the 2024 GRC, or next future GRC when these projects are implemented, these systems will reduce the burden of tracking and calculating actual purchase power. At that time, Cal Water should use the data collected by these systems in place of averages.

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[6] District – CSS, PID # 124978 Energy Management System, CSS & RDOM PJ – 256,

[7] CWS confirmed its ability to download data directly from the utility in Data Request SIB-034 #4.a.

[8] District – CSS, PID # 124702, *see* CSS & RDOM PJ – 167,

[9] CSS_2021_GRC_Justification_Book_FINAL / CSS & RDOM PJ – 167,

[10] CSS_2021_GRC_Justification_Book_FINAL / CSS & RDOM PJ - 168

3. End WRAM and MCBA Surcharges After 12/31/2022

The Commission should deny Cal Water's request to charge ratepayers WRAM and/or MCBA balances beyond the end date for those programs.[11] The current Cal Water GRC ends on December 31, 2022. The WRAM and MCBA mechanisms, and any residual surcharges related to those mechanisms, are unquestionably unfair and should not be included in ratepayers bills beyond December 31, 2022, the end date of those programs.

The Commission ended the WRAM and MCBA programs because, "the WRAM/MCBA transfers risk for utility operations from shareholders to ratepayers, eliminates the incentives to efficiently manage water production expenses, and eliminates the incentive to accurately forecast sales in a GRC".[12]

There is no provision in D. 20-08-047, or elsewhere, to collect WRAM or MCBA surcharges after the WRAM and/or MCBA programs end. Therefore, WRAM and MCBA surcharges should not be collected from ratepayers effective January 1, 2023.

IV. CONCLUSION

The Commission should authorize the Monterey-Style WRAM and ICBA as requested by Cal Water. The Commission should allow the use of averages to calculate purchase water and pump tax for the ICBA only until planned automated systems, paid for by ratepayers, make using actual purchase power expenses less burdensome. In addition, WRAM and MCBA surcharges, which the Commission has found to be unfair to ratepayers, should not be included in ratepayers' bills beyond December 31, 2022, the end date of those programs.

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[11] California Water Service, Additional Testimony, July 2021 (Additional Testimony), Chapter 11, Section C, Page 62. Preliminary Statement M: Water Revenue Adjustment Mechanisms and Modified Cost Balancing Accounts.

[12] D20-08-047 p. 53.

CHAPTER 2 SR#4: Discontinue SRM Pilot Program with the Elimination of the WRAM

I. INTRODUCTION

Cal Water's SR #4 seeks authorization to continue its Sales Reconciliation Mechanism (SRM) pilot program. The Commission authorized Cal Water's SRM as a pilot project specifically to reduce variability in revenue caused by the Water Revenue Adjustment Mechanism (WRAM). The SRM pilot is unnecessary and should be discontinued with elimination of the WRAM in 2023.

II. SUMMARY OF RECOMMENDATIONS

The Commission should deny SR #4 and discontinue Cal Water's SRM pilot with the elimination of the WRAM because it is unnecessary and creates an alternative ratemaking mechanism that unfairly shifts the cost burden from inaccurate forecasting to ratepayers.

III. ANALYSIS

In 2014 the Commission authorized a Sales Reconciliation Mechanisms (SRM) for Cal Water on a trial basis "subject to future review" as a pilot program.[13] The SRM pilot automatically adjusts customer rates by 50% of the variance in the sales forecast for escalation years if recorded aggregate sales for the past year in a district vary by more than 5%, either higher or lower from the forecast.[14]

Cal Water provides the following example:

> [I]f sales are 6% above adopted, consumption would be adjusted upward by 3 percent to develop an adjusted revenue requirement (calculated solely for these purposes.) Escalation year rates would then be set based upon the adjusted revenue

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[13] D. 14-08-011.

[14] D. 14-08-011.

requirement, and a sales forecast that has been increased 3%.[15]

The Commission authorized the SRM pilot specifically to function in tandem with the Water Revenue Adjustment Mechanism (WRAM).[16] The Commission authorized SRM pilot as a temporary measure to mitigate shortcomings of the WRAM and should be discontinued with the elimination of the WRAM in 2023.

1. The SRM distorts market price incentives and discourages conservation.

The Cal Water SRM pilot program was implemented to adjust sales to counteract large WRAM surcharges, which were a result of inaccurate sales forecasting.[17] However, SRM adjustments create perverse incentives that send the wrong economic signal to customers. The SRM raises prices (sending price signals that reduce demand) in situations of under-recovery. Although it is rare, the SRM can also lower prices (sending price signals that increase demand) in response to an over-recovery. The result is that the SRM can penalize customers that conserve with higher bills and lower the bills for customers that consume more than forecasted. Customer demand, because of the change to economic incentives, is artificially repressed or stimulated through the operation of the SRM.

Cal Water triggered its pilot SRM every year since it was implemented.[18] Of the total 82 district rate changes reported by Cal Water in that period, 76 districts recorded

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[15] Additional Testimony, Page 26, lines 13-17.

[16] "Cal Water has proposed a SRM to compensate for the inaccuracy of forecasting estimate of consumption of water which results in large WRAM balances." D. 14-08-011, Page 18.

[17] D. 14-08-011, Page 18.

[18] "Since the SRM was authorized by the Commission in August of 2014, Cal Water has implemented SRM adjustments every year for a significant number of its districts for all escalation years (2015, 2016, 2018, 2019 and 2021) since its inception." Additional Testimony, Page 27, Line 17-19.

rate increases due to SRM. The six instances when the SRM resulted in rate decreases all occurred in 2015.[19]

Table 1-1 Summary of Cal Water's SRM Rate Changes[20]

Year	Districts with rate changes	Rate Change Due to SRM	
		Decrease	Increase
2015	13	6	7
2016	22	0	22
2018	20	0	20
2019	20	0	20
2021	7	0	7
TOTAL	**82**	**6**	**76**

In 2015, California was in the middle of one of its worst droughts on record. In April 2015, the governor instituted the first-ever mandatory statewide reduction in water usage.[21] However, at the point when the strongest price signals were needed to achieve the governor's mandatory twenty-five percent reduction in consumption, the automatic functioning of the SRM pilot produced the exact opposite — rate reductions in six of Cal Water's ratemaking areas. These were the only customer rate reductions produced by the SRM pilot during the past five years and illustrate the illogical results of the SRM's automatic and indiscriminate operation.

2. The SRM unfairly shifts responsibility for forecast accuracy from the utility to the ratepayer.

The SRM protects Cal Water from forecasting risk by adjusting customer rates anytime there is a variance of more than five percent from forecasted sales. The WRAM, and by extension the SRM, insulate the utility from the risk associated with forecasting

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[19] See Chart A summarizing data from Additional Testimony, Page 27-28.

[20] Summary of data in Additional Testimony, Page 27-28.

[21] Governor Brown Directs First Ever Statewide Mandatory Water Reductions, Press Release Apr 01, 2015. https://www.ca.gov/archive/gov39/2015/04/01/news18913/index.html

and in so doing creates a disincentive for the utility to improve the accuracy of its forecasting. The SRM functions in conjunction with the WRAM, and contributes to the deleterious effect of the WRAM, which the Commission finds "transfers risk for utility operations from shareholders to ratepayers, eliminates the incentives to efficiently manage water production expenses, and eliminates the incentive to accurately forecast sales in a GRC."[22]

Utilities should follow the Commission's 2020 guidance to improve the accuracy of their sales forecasts.[23] In any case, business forecasting is a business risk that is borne by a business operating in a competitive market. The Commission should assert its role as "a substitute for competition"[24] by eliminating the SRM pilot and making Cal Water – not ratepayers – responsible for the general business risk related to forecasting.

3. The SRM is unnecessary with the elimination of the WRAM decoupling mechanism.

Because the SRM is specifically intended to address high WRAM balances, the Commission should discontinue the SRM pilot now that WRAM is being eliminated. The SRM pilot was authorized by the Commission in 2014 specifically, "as a means to mitigate against a high WRAM balance."[25] However, in 2020, the Commission ruled that the WRAM failed to encourage conservation and only served as a mechanism for utilities to avoid the general business risk of forecasting.[26]

Decision (D) 20-08-047 ordered utilities with a WRAM to discontinue its use in their next and subsequent GRCs and gave these utilities the option to replace it with the

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[22] D.20-08-047, Page 53.

[23] In Decision 20-08-047, Section 5.1. Requiring Specific Factors in Future Sales Forecasts, the Commission provides guidance on factors that utilities should include to improve sales forecasts.

[24] "Our objective through regulation is to act as a substitute for competition." D.96-04-050 citing D.86-08-083.

[25] D.14-08-011, Page 19.

[26] D.20-08-047, Page 42.

Monterey-style WRAM (M-WRAM). In this GRC, Cal Water proposed to replace the WRAM with the M-WRAM. Utilities that already employ the M-WRAM do so without the SRM. The SRM is unnecessary, and the Commission should deny Cal Water's request to employ the SRM with the M-WRAM.

The SRM exists only because of Cal Water's WRAM, which it proposes to replace with a Monterey-style WRAM (M-WRAM) in this GRC, therefore the SRM is unnecessary.[27]

4. SRMs are unfair, untransparent ratemaking.

SRMs unfairly set rates outside the GRC process. Ratemaking mechanisms, such as SRMs, that allow rate increases outside of the GRC process reduce transparency and distort bill impacts for the Commission and the customer. Water rates should be set in the utility's GRC where customer bill impacts are transparent.

IV. CONCLUSION

The Cal Water SRM serves no fair or reasonable purpose for ratepayers and should be eliminated. The Cal Water SRM shifts the risk of inaccurate sales forecasting from the utility to ratepayers and results in more frequent rate changes with little or no benefit to the ratepayer. The SRM was authorized as a pilot program in 2014 to work in conjunction with the WRAM. With the elimination of WRAM in the current GRC, the pilot SRM should also end.

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[27] The M-WRAM tracks differences between the revenue the utility would have earned with a Single Quantity Rate ("SQR") and the revenue the utility did earn under a tiered block rate design. A SQR is the rate a utility would charge if it hypothetically recovered all its revenue from one rate instead of tiered rates.

CHAPTER 3 Special Request #14: Deny Redefinition of "In Service" Capital Projects for Earnings Test

I. INTRODUCTION

In SR 14 Cal Water requests that the Commission change the accounting methodology for the *pro forma* earnings test for escalation year rate increases to allow the utility to reclassify as "closed" capital projects that are "in service" but not closed due to accounting delays.

II. RECOMMENDATIONS

The Commission should reject the change in accounting methodology requested by Cal Water in SR 14. Reclassifying capital projects that are not closed for accounting purposes as "closed" will increase ratebase and decrease the calculated rate of return that is shown for that district. The lower rate of return increases the likelihood of passing the earnings test, unfairly skewing earnings test results and further removing the calculation of the earnings test from transparent, verifiable, auditable accounting methodologies.

The Commission should reexamine the *pro forma* earnings test methodology and require the utilities to stop using Rate of Return and Rate Base – regulatory constructs useful for forecasting only – and instead calculate earnings tests based on Return on Equity and Invested Capital – financial accounting measures that are actual recorded amounts, reported to shareholders and therefore verifiable in real terms.

III. ANALYSIS

1. Relying on Verifiable Accounting for Calculation of the *Pro Forma* Earnings Test

In SR 14 Cal Water requests that the Commission change the accounting methodology for the *pro forma* earnings test for escalation year rate increases to allow the utility to reclassify to "closed" capital projects that are in service but not closed because of accounting delays. Delays in closing a newly completed and in service capital project for accounting purposes can be caused by, for example, slow contractor invoicing or

delayed completion of aspects of the project that do not delay the functioning of the asset, such as landscaping at the site of a new pump.[28] Cal Water's Special Request (SR) 14 states:

> For the earnings test required for escalation increases authorized in its GRC decisions, Cal Water requests approval to include in utility plant all used and useful capital additions, regardless of their accounting definition.[29]

The Commission should deny SR 14 because using unverifiable accounting measures and methods to determine rate changes is unfair to ratepayers. Fairness and transparency require that rates are set using actual recorded and reported accounting measures of investments and earnings.

Cal Water is required to use an earnings test in the escalation filings that are submitted as an advice letter:

> All advice letters seeking such attrition year increases shall follow the attrition requirements, including earnings test and amount of increase, set in the last GRC for that district.[30]

> The advice letter filing shall include all calculations and documentation necessary to support the requested rate change. The requested rate increase shall be subject to the *pro forma* earnings test, as specified in D.04-06-018.[31]

Cal Water submitted its most recent escalation request, including earnings test, in November 2021.[32]

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[28] Exhibit H, Cost of Capital Direct Testimony of Greg Milleman -- Page 22, line 10-16

[29] Cal Water GRC 2021 Application, Page 14

[30] Decision 04-06-018, Page 26.

[31] D.07-05-062 [VII. Escalation and Attrition Advice Letter Procedure], Page 18-19

[32] Advice Letter CWS 2433

As noted in Exhibit H, Cost of Capital Direct Testimony of Greg Milleman[33],

> When a capital project is initiated, it is designated as construction work in progress ("CWIP"). Upon completion, the project is closed, and dollars are transferred to the appropriate fixed asset accounts as utility plant in service ("UPIS"). This is done only after all invoices are submitted and paid for in compliance with internal accounting controls along with various other record keeping and administrative processes.

The change in methodology requested by Cal Water in SR 14 would short circuit the noted "internal accounting controls" and "record keeping and administrative processes" by instituting an arbitrary close date.

2. The Requested Change in Accounting Methodology Unfairly Skews *Pro Forma* Earnings Test Results[34]

Cal Water's proposed changes to its earnings test methodology subtly but consistently increase the likelihood that districts will pass the earnings test. Cal Water provided Cal Advocates an example calculation of the change proposed in SR 14 by recalculating Cal Water's most recent 2022 Escalation Increase in their advice letter filing.[35] The calculated rate of return fell in 21 out of 22 districts as a result of the new calculation.[36] On average, the rate of return fell by 0.3%, but some districts fell by as much as 2.4%.[37] This change in rate of return across the board increases the likelihood

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[33] Exhibit H, Cost of Capital Direct Testimony of Greg Milleman, Page 21, lines 9-13.

[34] Niamh Murphy is the author of Section 2: The Requested Change in Accounting Methodology Unfairly Skews Pro Forma Earnings Test Results.

[35] Advice Letter No. 2433 "2022 Escalation Increases and Sales Reconciliation Mechanism (SRM) Adjustments"; Cal Water Response to DR EDW-003.

[36] The Palos Verdes Pipeline Project district, which remained the same, is a special district that is used to track the associated costs of the Palos Verdes Pipeline Project.

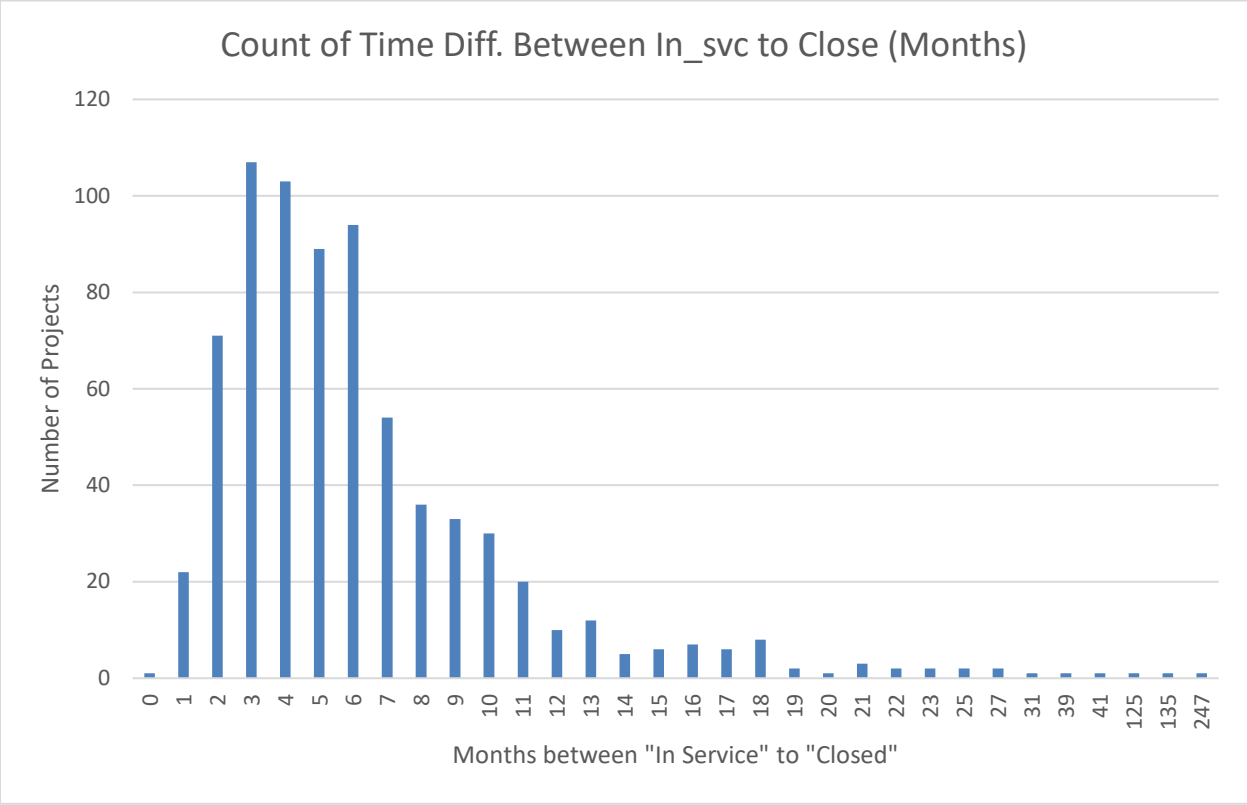
[37] Calculated from Cal Water Response to DR EDW-003, Attachment #2 – Comparison Summary for Earning Test (AL2433 SR #14) v1. Travis district's rate of return fell by 2.4%.

that districts will pass the earnings test, because it moves the goalposts of which projects qualify to be included in ratebase.

Reclassifying a project to closed will increase ratebase and decrease the calculated rate of return that is shown for that district. The lower rate of return increases the likelihood of passing the earnings test.

Of the projects that are now included in the new earnings test methodology and marked Closed, more than 90% were marked closed within 12 months.[38] Figure 1-1 below shows the frequency of the length of time it takes for a project to be moved from "In Service" to "Closed".

Figure 1-1



It is most common for projects to be moved from "In Service" to "Closed" within three months. For projects that are currently not marked "Closed", more than half have

[38] Calculated from Cal Water Response to DR EDW-003, Attachment #4 Projects_In Service to Close Time Diff Summary. 670 / 734 = 91.3%.

been marked as "In Service" for less than eight months.[39]

Most projects that Cal Water proposes to include in its new earnings test methodology are projects that would already be included in the next year's escalation or GRC filing. The proposed change is unnecessary because most changes to rate base would be accurately captured in the next yearly filing using the current methodology.

3. The Commission Should Reevaluate Calculation Methodology for the *Pro Forma* Earnings Tests

The Commission should require that the *pro forma* earnings test for escalation be measured using accounting methods that are reported to investors and financial regulators and verifiable in the company's books. These actual recorded and reported accounting measures include Return on Equity and Invested Capital.

The *pro forma* earnings test, as currently implemented by Cal Water and other Class A utilities, relies on accounting measures that are not recorded amounts and cannot be verified or corroborated through accounting measures. The earnings test currently utilized by the Commission is fundamentally flawed because it is based on Rate Base and Rate of Return. These are regulatory constructs authorized by the Commission for forecasting. Rate Base is a proxy for invested capital, just as Rate of Return is a proxy for profit. There is simply no actual or recorded Rate of Return or Rate Base, and both are reported only to the Commission. Relying on these unverifiable measures potentially allows companies to adjust inputs to manipulate the result of the earning test.

IV. CONCLUSION

The Commission should reject Cal Water's requested change to accounting methodology in Special Request 14. Any solution to the problem of accounting delays for new capital projects should not make rate making even more unfair and unverifiable. In addition, any reexamination by the Commission of the current *pro forma* earnings test

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[39] Calculated from Cal Water Response to DR EDW-003, Attachment #4 Projects_In Service to Close Time Diff Summary. 90 / 171 = 52.6%.

1 procedure should include a reexamination of the validity of the current methodology.
2 Earnings tests should be based on actual recorded and reported accounting measures,
3 such as Return on Equity and Invested Capital, not Rate of Return and Rate Base, which
4 are forecasting measures reported only to the Commission.

APPENDIX 1: STATEMENT OF QUALIFICATIONS

Witness Statement of Qualifications

Edward Scher, Senior Public Utilities Regulatory Analyst

Q1. Please state your name, business address, and position with the California Public Utilities Commission ("Commission").

A1. My name is Edward Scher, and my business address is 505 Van Ness Ave, San Francisco, CA 94102. I am a Senior Public Utility Regulatory Analyst in the Water Branch of the Public Advocates Office.

Q2. Please summarize your education background and professional experience.

A2. I received a Bachelor of Science Degree in Environmental Science from the George Washington University in 1991. I also earned a Master of City Planning Degree from the Massachusetts Institute of Technology in 1997.

I have been with the Public Advocates Office – Water Branch since October 2019. Prior to joining the Public Advocates Office, I worked in the field of public interest health and environmental advocacy for more than 25 years.

Q3. What is your responsibility in this proceeding Cal Water GRC A.21-01-002?

A3. I am responsible for the preparation of this report on Special Requests #3, SR #4, and SR #14.

Q4. Does this conclude your prepared direct testimony?

A4. Yes, it does

Witness Statement of Qualifications

Niamh Murphy, for Chapter 3, Section C.2.

Q.1 Please state your name and address.

A.1 My name is Niamh Murphy, and my business address is 505 Van Ness Ave, San Francisco, CA 94102.

Q.2 By whom are you employed and what is your job title?

A.2 I am employed by the Commission as a Utilities Engineer in the Water Branch of the Public Advocates Office.

Q.3 Please describe your educational and professional experience.

A.3 I graduated from University of Washington with a Master's degree in Civil Engineering in 2019. In 2016, I graduated from UC Berkeley with a B.S. in Environmental Science and a minor in Energy Resources. I joined the Public Advocates Office Water Branch in 2020. I prepared and submitted testimony in A.21-01-003, SJWC's 2021 GRC Application and A.21-07-001, Great Oaks Water Company's 2021 GRC Application.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am reviewing plant additions for the Chico, Marysville, Oroville, Willows and Dixon Districts and the following common plant issues; pump and motor replacement, cathodic protection systems, control valve overhaul and replacement, water quality analyzers, SB 1398 service line replacements, water quality sample sites and Special Request #14.

Q.5 Does that complete your prepared testimony?

A.5 Yes.

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Exhibit Number	:	Cal Adv - #
Commissioner	:	Darcie L. Houck
Administrative Law Judge	:	Charles Ferguson
Public Advocates Office	:	Sari Ibrahim
Witness(es)	:	

PUBLIC ADVOCATES OFFICE

CALIFORNIA PUBLIC UTILITIES COMMISSION

REPORT ON PLANT

FOR LIVERMORE AND STOCKTON DISTRICTS

California Water Service Company

Test Year 2023 General Rate Case

A.21-07-002

San Francisco, California
February 2022

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MEMORANDUM

The Public Advocates Office at the California Public Utilities Commission ("Cal Advocates") examined application material, data request responses, and other information presented by California Water Service Company ("CWS") in Application A.21-07-002 to provide the California Public Utilities Commission ("Commission" or "CPUC") with recommendations in the interests of ratepayers for safe and reliable service at the lowest cost. Mr. Brian Yu is Cal Advocates' project lead for this proceeding. Ms. Syreeta Gibbs is the oversight supervisor, Richard Rauschmeier is the Program Manager, and Marybelle Ang and Caryn Mandelbaum are legal counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any issue connotes neither agreement nor disagreement with the underlying request, methodology, or policy position related to that issue.

CHAPTER 1 EXECUTIVE SUMMARY

I. INTRODUCTION

This report presents analysis and recommendations on specific Capital Projects in the Livermore and Stockton districts in General Rate Case Application (A.) 21-07-002 filed by California Water Service Company (Cal Water or CWS).

CHAPTER 2 Livermore District

I. INTRODUCTION

This chapter presents analyses and recommendations for the Livermore District.

II. SUMMARY OF RECOMMENDATIONS

- The Commission should deny blanket contingency factors.
- The Commission should deny the New Well and New Well Land Purchase projects.
- The Commission should deny the design of the Station 8 booster pump project.
- The Commission Should deny the new transmission main on S. Livermore & Concannon Blvd project.

Table 2-1 summarizes recommended Livermore District Capital expenditure budget versus CWS' request.

Table 2-1 Specific Livermore District Projects

Year	CWS' Request	Cal Advocates Recommendation	CWS> Cal Advocates	Cal Advocates as % of CWS
2022	$1,468,009	$269,455	$1,198,554	18%
2023	$3,394,881	$1,152,435	$2,242,446	34%
2024	$700,078	$372,850	$327,228	53%

III. ANALYSIS

A. Water Supply & Facilities Master Plan

CWS requests to add $323,208 in direct costs into rate base in 2023 for consultant costs for developing a Water Supply and Facility Master Plan ("WSFMP"). The WSFMP

will provide an "assessment of the District's existing infrastructure and general direction on potential mid- and long-term infrastructure needs to assist Cal Water with maintaining and improving long-term operational reliability."[1]

In the WSFMP, CWS includes a 10% contingency costs line item.[2] The Commission should not include unjustified contingency costs in the CWS' capital forecast budgets. For further testimony on Cal Advocates' position regarding contingency, please refer to witness Suliman Ibrahim's testimony in Cal Advocates Report on Common Plant Issues, Contingency, and Construction Management and Special Inspection chapters.

The Commission should not include the direct costs related to estimated contingency for the WSFMP.

B. New Well and Land Purchase for New Well

CWS forecasts $1,146,665 in 2023 for the purchase of land for a new well, [3] and $3,632,815 in 2026 to install the new well.[4] CWS relies on purchased water from the Zone 7 Water Agency to meet the District's needs as a result of the loss of existing wells due to age and water quality issues.[5] According to Cal Water, the cost of purchasing water from the Zone 7 Water Agency is four times higher than the cost for well water.[6]

CWS has not completed the assessments of the wells to determine whether they can be reconditioned at a more reasonable cost compared to the construction of a new

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[1] LIV_2021_GRC_Justification_Book_FINAL LIV PJ – 82.

[2] LIV_2021_GRC_Justification_Book_FINAL LIV PJ – 85.

[3] LIV_2021_GRC_Justification_Book_FINAL LIV PJ – 45.

[4] LIV_2021_GRC_Justification_Book_FINAL LIV PJ – 72.

[5] LIV_2021_GRC_Justification_Book_FINAL LIV PJ – 65.

[6] LIV_2021_GRC_Justification_Book_FINAL LIV PJ – 65.

well. In fact, CWS is in the process of developing a Water Supply Reliability Study ("Reliability Study") along with the WSFMP.

The Reliability Study for the Livermore District will be completed in 2023.[7] The Reliability Study will provide "a comprehensive form of resource process that will create, or utilize existing, statistical models to support scenario planning and the development of a portfolio of options for water reliability."[8] The second phase of CWS Livermore District's Climate Change Water Resource Monitoring and Adaptation Plan, which is in process, will undertake a vulnerability assessment of CWS' facilities and identify asset vulnerabilities.[9] The Climate Change Water Resource Monitoring and Adaptation Plan Phase 2 is anticipated in December 2021.[10]

CWS' current Livermore Urban Water Management Plan states:

> Because of the demonstrated ability of the District to meet historical demands with the purchased water and groundwater supplies, and the fact that Zone 7 is obligated per its Contract with Cal Water to maintain adequate supplies to meet Cal Water's needs, the available supplies are considered to be equal to District demands under all conditions (i.e., current and projected, and for normal, single dry, and multiple dry years including a five-year drought period).

CWS has a significant amount of upcoming water reliability related projects planned for the Livermore District. CWS' current analysis shows that it is meeting demand conditions and that more cost-effective options possibly exist. CWS should not purchase land and install a new well if it has not shown that that is the most cost-effective solution for ratepayers.

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[7] 2020 Urban Water Management Plan Livermore District Page 79.

[8] 2020 Urban Water Management Plan Livermore District Page 77.

[9] Climate Change-Water Resource Monitoring and Adaptation Plan –Phase 1 Page 1.

[10] 2020 Urban Water Management Plan Livermore District Page 68.

The Commission should deny CWS' request to include the land purchase and new well project in the Livermore District capital expenditure forecast.

C. Station 8 New Booster Pump Station

CWS forecasts $277,381 in 2024 for capital expenditures related to survey, design, and permitting of a new booster pump station. [11] The Commission should not allow CWS to split the design costs and construction costs of projects between different GRCs. The Commission needs to review the reasonableness of projects as a whole. For further discussion on why the Commission should not allow splitting the design and construction costs of capital projects refer to witness Justin Menda's testimony in Cal Advocates Report on Common Plant Issues, Chapters regarding Special Request #5 and the Design and Permitting only Projects.

The Commission should not include the $277,381.37 related to the design of Station 8 booster pump project in the Livermore Capital Expenditure forecast.

D. New Transmission Main S. Livermore & Concannon Blvd

CWS forecasts $2,111,695 in direct capital costs related to the construction of a new Transmission Main along S. Livermore & Concannon Blvd.[12] The new transmission main would serve as a secondary transmission main connecting the southern and northern sections of zone 690. CWS states that without the new transmission main it would not be providing the required level of service described in GO 103-A II.1.A and VII.6.A.[13]

GO 103-A II.1.A states that each utility shall operate its system to deliver reliable, high-quality service to its customers at reasonable cost.[14] As stated earlier, CWS'

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[11] LIV_2021_GRC_Justification_Book_FINAL LIV PJ – 79.

[12] LIV_2021_GRC_Justification_Book_FINAL LIV PJ – 103.

[13] LIV_2021_GRC_Justification_Book_FINAL LIV PJ – 98.

[14] PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA GENERAL ORDER 103-A

Livermore Urban Water Management Plan shows that CWS is meeting all water demands of its customers. GO 103-A VII.6.A dictates that the minimum operating pressure at each service connection should not be less than 40 pounds per square inch ("psi").[15] CWS' Livermore system is currently meeting these requirements with the single transmission line.

As discussed earlier, CWS is currently developing several plans related to the water reliability of its Livermore District. As it stands, the single pipeline does an effective job of meeting the district's needs. CWS has a pipeline asset management program to manage the health of its transmission lines. The importance of the current transmission line should be reflected in the asset management program. The Commission should not include $2,111,695 associated with the new S. Livermore & Concannon Blvd in the CWS' Livermore capital forecast.

E. Projects Below the District Threshold

CWS does not provide a specific or programmatic justification for projects below the district threshold of $300,000 in direct cost.[16] Table 2-2 below summarizes recommendations for projects that do not have project justifications. The recommended budgets reflect removing any blanket contingency factors or special inspection factors. For further discussion on Cal Advocates recommendation regarding these blanket factors, please refer to witness Suliman Ibrahim's testimony found in Cal Advocates Report on Common Plant Issues, Contingency, and Construction Management and Special Inspection Chapters.

Page 9.

[15] PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA GENERAL ORDER 103-A Page 30.

[16] LIV_2021_GRC_Justification_Book_FINAL LIV PJ – v.

1 **Table 2-2 Recommendation for Projects Below the District Threshold**

End Year	Project ID	Description	CWS Request	Cal Advocates Recommendation
2022	124018	LIV Customer Meter Vault Lids	$14,446	$13,066
2022	123505	LIV Wildfire PBC 690/760 Zone	$40,582	$36,706
2022	123503	LIV 34 New 2,000 gal. Press. Tank	$266,316	$219,683
2023	124020	LIV 2023 Customer Meter Vault Lids	$14,807	$13,357
2023	123999	LIV Turnout 5 RTU Install	$143,671	$122,533
2023	124351	Livermore Reliability Study	$216,793	$195,569
2023	125034	LIV Sta. 34 Chloramination Trailer	$278,210	$252,918
2024	124021	LIV 2024 Customer Meter Vault Lids	$15,177	$13,654
2024	124033	LIV Turnout 6 RTU Install	$147,263	$125,055
2024	124076	LIV Crane Ridge 001 New Generator	$260,257	$234,141

2 **F. Programmatic Capital Projects**

3 **1. Pipeline Replacement Program**

4 For further information regarding Cal Advocates' position on the pipeline
5 replacement program please refer to witness Suliman Ibrahim's testimony on Pipeline
6 Replacements Chapter of Cal Advocates Report on Allocations and Plant for
7 CSS&RDOM District, Pipeline Replacement, and Physical Security.

2. Meter Replacement Program

For information regarding Cal Advocates' position on the meter replacement program please refer to witness Justin Menda's testimony on Meter Replacements in Cal Advocates Report on Common Plant Issues.

3. Flowmeter Replacements

For information regarding Cal Advocates' position on the meter replacement program please refer to witness Justin Menda's Chapter on Meter Replacements in Cal Advocates Report on Common Plant Issues.

4. Pressure Vessel Replacements

For information regarding Cal Advocates' position on the meter replacement program please refer to witness Zaved Sarkar's Chapter on Pressure Vessel Replacement in Cal Advocates Report on Common Plant Issues.

IV. CONCLUSION

The Commission should not approve CWS' blanket unjustified costs such as contingency or special inspection factors.

The Commission should not approve CWS' water reliability related projects without the proper cost analysis. The Commission should not approve CWS' water reliability related projects before the associated planning is complete.

Attachment 2-1: Livermore District Capital Budget Summaries

Table 2-A Capital Budget Summary - Livermore District

Livermore	2022	2023	2024	Annual Average
Cal Advocates	$ 6,348,193	$ 5,153,808	$ 4,722,568	$ 4,056,142
CWS	$ 13,875,116	$ 11,956,857	$ 13,291,466	$ 11,121,728
CWS > Cal Advocates	$ 7,526,924	$ 6,803,049	$ 8,568,899	$ 7,065,586
Cal Advocates as % CWS	45.75%	43.10%	35.53%	36.47%

Table 2-B Capital Budget Details - Livermore District

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00123500	LIV Land Purchase for New Well	$ -	$ 1,146,665	$ 1,146,665	0.00%
2022	00123503	LIV 34 New 2,000 gal. Press. Tank	$ 266,316	$ 266,316	$ -	100.00%
2022	00124690	LIV 2022 Physical Security Upgrades	$ 71,223	$ 388,701	$ 317,478	18.32%
2022	00124293	LIV 020-01: Well Renewal	$ 242,641	$ 248,287	$ 5,647	97.73%
2022	00123330	LIV 018-T2 - Tank Retrofits	$ 21,065	$ 23,289	$ 2,224	90.45%
2022	00123339	LIV 029-T1 - CP Upgrade	$ 5,519	$ 14,119	$ 8,600	39.09%
2022	00123400	LIV Tank Exterior Ladder Lifelines	$ 52,732	$ 58,299	$ 5,568	90.45%
2022	00123478	LIV 2022 Control Valve Replacement	$ 46,176	$ 162,781	$ 116,605	28.37%
2022	00123490	LIV 2022 Control Valve Overhaul	$ 9,494	$ 16,072	$ 6,578	59.07%
2022	00124072	LIV 016-A Replace Pump & Motor	$ 33,568	$ 47,339	$ 13,771	70.91%
2022	00124142	LIV 2022 Flowmeter Replacement	$ 246,914	$ 310,933	$ 64,019	79.41%
2022	00124440	LIV Pressure Vessels Ladder/Plat	$ 45,699	$ 50,525	$ 4,826	90.45%
2022	00125126	LIV 19-01 Replace Pump & Motor	$ 52,933	$ 74,649	$ 21,716	70.91%
2022	00125077	LIV 2022 Analyzer Replacment	$ 27,203	$ 29,923	$ 2,720	90.91%
2022	00125141	LIV 2022 Sample Site	$ 5,456	$ 7,888	$ 2,432	69.17%
2022	00125014	LIV 2022 SB1398 Service Replacement	$ 69,018	$ 75,919	$ 6,902	90.91%
2022	00124018	LIV Customer Meter Vault Lids	$ 13,066	$ 14,446	$ 1,380	90.45%
2022	00123505	LIV Wildfire PBC 690/760 Zone	$ 36,706	$ 40,582	$ 3,876	90.45%
2022	110MRP22	LIV 2022 Main Replacement Program	$ 4,727,705	$ 5,303,290	$ 575,585	89.15%
2022	LIV0900	Meter Replacement Program	$ 147,994	$ 147,994	$ -	100.00%
2022	110UNSCH	Unscheduled Replacements	$ -	$ 942,506	$ 942,506	0.00%
2022		**Specific Total**	$ 6,121,427	$ 9,370,523	$ 3,249,096	65.33%
2022	110-NON-SP	**Non-specific Total**	$ 226,766	$ 283,457	$ 56,691	80.00%
2022		**Carry-Over Total**	$ -	$ 4,221,137	$ 4,221,137	0.00%
		TOTAL 2022	$ 6,348,193	$ 13,875,116	$ 7,526,924	45.75%

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00125632	LIV New Main Livermore & Concannon	$ -	$ 2,111,695	$ 2,111,695	0.00%
2023	00123695	LIV028-PT2 Pressure Vessel Rplcmt	$ -	$ 306,497	$ 306,497	0.00%
2023	00123999	LIV Turnout 5 RTU Install	$ 122,533	$ 143,671	$ 21,138	85.29%
2023	00124725	LIV 2023 Physical Security Upgrades	$ 83,433	$ 442,829	$ 359,396	18.84%
2023	00123467	LIV 022-T2 - Tank Retrofits	$ 23,525	$ 26,078	$ 2,553	90.21%
2023	00123468	LIV 022-T1 - Tank Retrofits	$ 22,006	$ 24,395	$ 2,389	90.21%
2023	00123479	LIV 2023 Control Valve Replacement	$ 28,259	$ 98,110	$ 69,851	28.80%
2023	00123492	LIV 2023 Control Valve Overhaul	$ 13,180	$ 21,477	$ 8,297	61.37%
2023	00124084	LIV 026-B - Replace Pump & Motor	$ 32,752	$ 36,027	$ 3,275	90.91%
2023	00124146	LIV 2023 Flowmeter Replacement	$ 236,933	$ 288,377	$ 51,443	82.16%
2023	00125124	LIV 13-E Replace Pump & Motor	$ 36,182	$ 51,025	$ 14,844	70.91%
2023	00125034	LIV Sta. 34 Chloramination Trailer	$ 252,918	$ 278,210	$ 25,292	90.91%
2023	00125080	LIV 2023 Analyzer Replacements	$ 65,832	$ 72,415	$ 6,583	90.91%
2023	00125015	LIV 2023 SB1398 Service Replacement	$ 81,626	$ 89,788	$ 8,162	90.91%
2023	00124020	LIV 2023 Customer Meter Vault Lids	$ 13,357	$ 14,807	$ 1,450	90.21%
2023	00123749	LIV 2023 Vehicle Replacemnt Program	$ 43,731	$ 48,104	$ 4,373	90.91%
2023	00124261	Livermore WSFMP	$ 291,566	$ 323,208	$ 31,642	90.21%
2023	00124351	Livermore Reliability Study	$ 195,569	$ 216,793	$ 21,224	90.21%
2023	110MRP23	LIV 2023 Main Replacement Program	$ 3,226,274	$ 5,435,872	$ 2,209,598	59.35%
2023	LIV0900	Meter Replacement Program	$ 151,694	$ 151,694	$ -	100.00%
2023	110UNSCH	Unscheduled Replacements	$ -	$ 966,068	$ 966,068	0.00%
2023		**Specific Total**	$ 4,921,370	$ 11,147,140	$ 6,225,770	44.15%
2023	110-NON-SP	**Non-specific Total**	$ 232,438	$ 290,548	$ 58,110	80.00%
2023		**Carry-Over Total**	$ -	$ 519,169	$ 519,169	0.00%
		TOTAL 2023	$ 5,153,808	$ 11,956,857	$ 6,803,049	43.10%

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00123506	LIV Sta 8 New Booster Sta - Design	$ 25,307	$ 277,381	$ 252,075	9.12%
2024	00124033	LIV Turnout 6 RTU Install	$ 125,054	$ 147,263	$ 22,208	84.92%
2024	00124076	LIV Crane Ridge 001 New Generator	$ 234,141	$ 260,257	$ 26,116	89.97%
2024	00124768	LIV 2024 Physical Security Upgrades	$ 81,631	$ 343,200	$ 261,569	23.79%
2024	00123204	LIV 013-T2 - Tank Retrofits	$ 4,932	$ 5,483	$ 550	89.97%
2024	00123481	LIV 2024 Control Valve Replacement	$ 37,368	$ 129,689	$ 92,321	28.81%
2024	00123496	LIV 2024 Control Valve Overhaul	$ 11,035	$ 21,588	$ 10,553	51.12%
2024	00123663	LIV 025-T3 - Tank Retrofit	$ 11,279	$ 13,029	$ 1,750	86.57%
2024	00123857	LIV 009-T4 - Tank Retrofits	$ 69,118	$ 76,828	$ 7,709	89.97%
2024	00124074	LIV 023-G Replace Pump & Motor	$ 35,267	$ 49,735	$ 14,468	70.91%
2024	00124078	LIV 025-B - Replace Pump & Motor	$ 45,214	$ 49,735	$ 4,521	90.91%
2024	00124154	LIV 2024 Flowmeter Replacement	$ 257,375	$ 296,733	$ 39,358	86.74%
2024	00124885	LIV 028-A Replace Pump & Motor	$ 35,267	$ 50,207	$ 14,940	70.24%
2024	00124887	LIV 028-B Replace Pump & Motor	$ 35,267	$ 50,207	$ 14,940	70.24%
2024	00124021	LIV 2024 Customer Meter Vault Lids	$ 13,654	$ 15,177	$ 1,523	89.96%
2024	110MRP24	LIV 2024 Main Replacement Program	$ 3,306,931	$ 5,571,769	$ 2,264,838	59.35%
2024	LIV0900	Meter Replacement Program	$ 155,487	$ 155,487	$ -	100.00%
2024	110UNSCH	Unscheduled Replacements	$ -	$ 990,220	$ 990,220	0.00%
2024		**Specific Total**	$ 4,484,327	$ 8,503,988	$ 4,019,661	52.73%
2024	110-NON-SP	**Non-specific Total**	$ 238,241	$ 297,801	$ 59,560	80.00%
2024		**Carry-Over Total**	$ -	$ 4,489,678	$ 4,489,678	0.00%
		TOTAL 2024	$ 4,722,568	$ 13,291,466	$ 8,568,899	35.53%

Table 2-C **Capital Budget vs. Recorded Expenditure - Livermore District**

Livermore	2021	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	--	$ 7,345,660	100%
Cal Advocates	$ -	$ 6,348,193	$ 5,153,808	$ 4,722,568	$ 4,056,142	55%
CWS	$ 5,363,473	$ 13,875,116	$ 11,956,857	$ 13,291,466	$ 11,121,728	151%

CHAPTER 3 Stockton District

I. INTRODUCTION

This chapter presents analyses and recommendations for the Stockton District.

II. SUMMARY OF RECOMMENDATIONS

- The Commission should remove blanket factors from capital budgets.
- The Commission should not include the Main on Cherokee Rd project in the capital forecast for the Stockton District.
- The Commission should not include the Main Tie-ins at Army Court & W Charter Way project in the capital forecast for the Stockton District.

Table 3-1 Cal Advocates' Recommendation versus CWS' Request for Specific Livermore District Projects

Year	CWS' Request	Cal Advocates Recommendation	CWS> Cal Advocates	Cal Advocates as % of CWS
2022	$57,784	$52,265	$5,519	90%
2023	$1,747,964	$1,064,978	$682,986	61%
2024	$4,356,678	$1,253,914	$3,102,764	29%

III. ANALYSIS

A. Water Supply Reliability Study

CWS forecasts $303,177 in 2023 for direct costs related to a Water Supply Reliability Study ("Reliability Study"). [17]

CWS includes a 10% contingency factor in the forecast project budget. The Commission should not allow CWS to include blanket percentage factors in its capital forecasts. For further discussion regarding Cal Advocates position on blanket factors please refer to witness Suliman Ibrahim's testimony in Cal Advocates Report on

[17] STK_2021_GRC_Justification_Book_FINAL STK PJ – 114.

Common Plant Issues, Contingency, and Construction Management and Special Inspection chapters..

The Commission should exclude the $29,681 related to contingency from the Reliability Study project budget forecast.

B. Main on Cherokee Rd

CWS seeks $1,702,528 in 2024 for a new transmission main along Cherokee Road.[18] The new transmission main would serve to reduce pressure fluctuations in the northeastern edge of the Stockton District.

CWS forecast the construction of the Cherokee Rd transmission main in its 2018 GRC.[19] Cal Advocates opposed the project as the pressure fluctuations experienced in the zone could be solved by installing a much cheaper variable frequency drive ("VFD") to control the pump output.[20] In the previous GRC, CWS agreed that installing the VFD would solve the existing pressure problems.[21]

In settlement, parties agreed to limit the scope of the project to $100,000 in direct costs to pursue an easement opportunity that would potentially expire before the next (current) GRC.[22] The settlement acknowledged that agreement on the easement does not constitute pre-approval for the construction of the pipeline in a future GRC. CWS has not yet obtained the easement.[23]

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[18] STK_2021_GRC_Justification_Book_FINAL STK PJ – 69.

[19] A.18-07-001 Project ID 115212.

[20] A.18-07-001 Cal Advocates Report on Plant For Dixon, King City, Livermore, Salinas, And Stockton Districts page 96 lines 7-10.

[21] Cal Water's Response to Public Advocates Office Data Request KGF-019, Q. 1.e.

[22] 2018 General Rate Case A.18-07-001 Settlement Agreement of California Water Service Company and the Public Advocates Office Page 160 lines 7-10.

[23] STK_2021_GRC_Justification_Book_FINAL STK PJ – 65.

As discussed earlier, the proposed Water Supply Reliability Study will rely on outside technical expertise, that CWS lacks,[24] to develop a long-term water supply reliability strategy. Phase 2 of the climate change study includes a district level vulnerability assessment of Cal Water's facilities.[25] CWS should complete its planning studies and develop all possible solutions before implementing any water reliability projects.

The Commission should not include $1,702,528 related to the Cherokee Rd main in the Stockton District capital forecast.

C. Main Tie-ins at Army Court & W Charter Way

CWS forecasts $1,240,915 in 2024 for the main tie-in at Army Court & W Charter Way project.[26] CWS states that the project is necessary to improve the distribution capacity of the system and improve water quality in the area.[27] These improvements are speculated to be possibly necessary by a possible increase in demand caused by a possible capacity increase of the City of Stockton Wastewater Treatment Plant.[28]

The possible increase in demand and possible solutions to meet the demand are the scenarios covered by the Water Supply Reliability Study. CWS states that they lack the in-house technical expertise to perform the analysis for determining the best solutions to meet water reliability demands. CWS should not implement proposed water supply reliability projects until after the consultant-assisted planning.

The Commission should not include the $1,240,915 related to the tie-in project in the Stockton District capital forecast.

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[24] STK_2021_GRC_Justification_Book_FINAL STK PJ – 110.

[25] 2020 Urban Water Management Plan Stockton District Page 71.

[26] STK_2021_GRC_Justification_Book_FINAL STK PJ – 83.

[27] STK_2021_GRC_Justification_Book_FINAL STK PJ – 79.

[28] STK_2021_GRC_Justification_Book_FINAL STK PJ – 79.

D. Mainline Flushing

CWS includes $317,208 in 2024 for mainline flushing in its Stockton District capital forecast.[29] CWS also includes a 10% contingency in the cost estimate for the project.[30] The Commission should not allow CWS to include a blanket contingency factor. For further discussion on why the Commission should disallow blanket factors please refer to witness Suliman Ibrahim's testimony in Cal Advocates Report on Common Plant Issues, Contingency, and Construction Management and Special Inspection chapters..

The Commission should reduce the mainline flushing budget by $44,249 to remove the contingency and special inspection blanket factors.

E. Station 66-02 Panelboard Replacement

CWS includes $383,903 in 2024 for the Station 66-02 Panelboard Replacement in its Stockton District capital forecast. [31] CWS also includes a 10% contingency in the cost estimate for the project.[32] The Commission should not allow CWS to include a blanket contingency factor. For further discussion on why the Commission should disallow blanket factors please refer to witness Suliman Ibrahim's testimony in Cal Advocates Report on Common Plant Issues, Contingency, and Construction Management and Special Inspection chapters..

The Commission should reduce the Station 66-02 Panelboard Replacement budget to remove the contingency and special inspection blanket factors.

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[29] STK_2021_GRC_Justification_Book_FINAL STK PJ – 97.

[30] STK_2021_GRC_Justification_Book_FINAL STK PJ – 97.

[31] STK_2021_GRC_Justification_Book_FINAL STK PJ – 102.

[32] STK_2021_GRC_Justification_Book_FINAL STK PJ – 102.

F. Station 71 Panelboard Replacement and New Generator

CWS includes $408,721 in 2024 for the Station 71 Panelboard Replacement and New Generator in its Stockton District capital forecast.[33] CWS also includes a 10% contingency in the cost estimate for the project.[34] The Commission should not allow CWS to include a blanket contingency factor. For further discussion on why the Commission should disallow blanket factors please refer to witness Suliman Ibrahim's testimony in Cal Advocates Report on Common Plant Issues, Contingency, and Construction Management and Special Inspection chapters..

The Commission should reduce the Station 66-02 Panelboard Replacement budget to remove the contingency and special inspection blanket factors.

G. Well 85-01 Arsenic Treatment

CWS includes $570,465 in 2023 for the Well 85-01 Arsenic Treatment system design in its Stockton District capital forecast. [35] The Commission should not allow CWS to split the design costs and construction costs of projects between different GRCs. The Commission needs to review the reasonableness of projects as a whole. For further discussion on why the Commission should not allow splitting the design and construction costs of capital projects refer to witness Justin Menda's Chapters on Special Request #5, and Permitting Only Projects in Cal Advocates Report on Common Plant Issues.

The Commission should not include the $570,465 related to the design of the Well 85-01 Arsenic Treatment system in the Stockton District capital expenditure forecast.

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[33] STK_2021_GRC_Justification_Book_FINAL STK PJ – 109.

[34] STK_2021_GRC_Justification_Book_FINAL STK PJ – 109.

[35] STK_2021_GRC_Justification_Book_FINAL STK PJ – 133.

H. Projects Below the District Threshold

CWS does not provide a specific or programmatic justification for projects below the district threshold of $300,000 in direct cost.[36] Table 3-2 below summarizes recommendations for projects that do not have project justifications. The recommended budgets reflect removing any blanket contingency factors or special inspection factors. For further discussion on Cal Advocates recommendation regarding blanket factors please refer to witness Suliman Ibrahim's Chapters on Contingency, and Construction Management and Special Inspections found in Cal Advocates Report on Common Plant Issues.

Table 3-2 Cal Advocates' Recommendation for Projects Below the District Threshold

End Year	Project ID	Description	CWS Request	Cal Advocates Recommendation
2022	123911	STK 2022 Customer Meter Vault Lids	$57,784	$52,265
2023	124200	STK STA 79 Motor Control Upgrade	$17,362	$14,157
2023	124206	STK STA 21-01 Well Study	$51,644	$46,449
2023	124188	STK 016 ATS Panel Installation	$53,340	$50,353
2023	124196	STK STA 076 ATS Panel Installation	$58,599	$54,999
2023	123940	STK 2023 Customer Meter Vault Lids	$59,229	$53,431
2023	124751	STK STA 75 GAC Media Replacement	$147,442	$133,036

[36] STK_2021_GRC_Justification_Book_FINAL STK PJ – v.

2023	124267	Stockton WSFMP	$237,751	$214,475
2023	124923	STK Outfit Hydrant Foreman Equip.	$248,955	$224,583
2024	125108	STK 2024 Analyzer Replacement	$11,349	$10,210
2024	123942	STK 2024 Customer Meter Vault Lids	$60,710	$54,618
2024	124209	STK DIST OFC Genset Installation	$231,343	$208,367

I. Programmatic Capital Projects

1. Pipeline Replacement Program

For information regarding Cal Advocates' position on the pipeline replacement program please refer to witness Suliman Ibrahim's Chapter on Pipeline Replacement in Cal Advocates Report on Allocations and Plant for CSS&RDOM, Pipeline Replacement, and Physical Security.

2. Meter Replacement Program

For further information regarding Cal Advocates' position on the meter replacement program please refer to witness Justin Menda's chapter on Meter Replacements in Cal Advocates Report on Common Plant Issues.

3. Vehicle Replacement Program

For information regarding Cal Advocates' position on the vehicle replacement program please refer to witness Susana Nasserie's chapter on Vehicle Replacement in Cal Advocates Report on Common Plant Issues.

IV. CONCLUSION

The Commission should not allow unjustified blanket contingency or management and inspection factors.

The Commission should not include water reliability projects in CWS capital budget forecast until CWS has completed the related planning programs.

Attachment 3-1: Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY

OF

Sari Ibrahim

Q.1 Please state your name and address.

A.1 My name is Sari Ibrahim and my business address is 320 West 4th Street, Suite 500, Los Angeles, California 90013.

Q.2 By whom are you employed and what is your job title?

A.2 I am a Utilities Engineer in the Water Branch of the Public Advocates Office.

Q.3 Please describe your educational and professional experience.

A.3 I received a Bachelor of Science Degree in Civil Engineering from the Illinois Institute of Technology in 2013. I also earned a Master of Science Degree in Civil Engineering from California State University, Fullerton in 2019.

I have been with the Public Advocates Office – Water Branch since September 2019. I have served as an expert witness in multiple GRCs. Prior to joining the Public Advocates Office, I worked as an engineer primarily in the environmental remediation field for over six years.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am responsible for the Plant Report for the Livermore and Stockton districts.

Q.5 Does that complete your prepared testimony?

A.5 Yes

Attachment 3-2: Stockton District Capital Budget Summaries

Table 3-A Capital Budget Summary – Stockton District

Stockton	2022	2023	2024	Annual Average
Cal Advocates	$ 14,933,244	$ 16,499,021	$ 16,572,898	$ 12,001,291
CWS	$ 30,105,993	$ 27,529,355	$ 30,717,853	$ 29,231,382
CWS > Cal Advocates	$ 15,172,749	$ 11,030,334	$ 14,144,955	$ 17,230,092
Cal Advocates as % CWS	49.60%	59.93%	53.95%	41.06%

Table 3-B Capital Budget Details – Stockton District

2022	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2022	00125495	STK 2022 Physical Security Upgrades	$ 71,223	$ 591,993	$ 520,770	12.03%
2022	00123428	STK Tank Exterior Ladder Lifelines	$ 33,072	$ 36,564	$ 3,492	90.45%
2022	00124639	STK 082-T7 - Seismic/Geotech Study	$ 56,375	$ 56,375	$ (0)	100.00%
2022	00124121	STK 2022 Flowmeter Replacement	$ 130,672	$ 143,739	$ 13,067	90.91%
2022	00124191	STK 60-01 - Replace Pump & Motor	$ 106,456	$ 117,102	$ 10,646	90.91%
2022	00125106	STK 2022 Analyzer Replacement	$ 27,203	$ 29,923	$ 2,720	90.91%
2022	00125020	STK 2022 SB1398 Service Replacement	$ 238,907	$ 262,798	$ 23,891	90.91%
2022	00123911	STK 2022 Customer Meter Vault Lids	$ 52,265	$ 57,784	$ 5,519	90.45%
2022	00123879	STK 2022 CARB Vehicle Replacement	$ 215,910	$ 237,501	$ 21,591	90.91%
2022	119MRP22	STK 2022 Main Replacement Program	$ 13,136,688	$ 20,656,244	$ 7,519,556	63.60%
2022	STK0900	Meter Replacement Program	$ 243,118	$ 243,118	$ -	100.00%
2022	119UNSCH	Unscheduled Replacements	$ -	$ 2,067,654	$ 2,067,654	0.00%
2022		**Specific Total**	$ 14,311,888	$ 24,500,795	$ 10,188,907	58.41%
2022	119-NON-SP	**Non-specific Total**	$ 621,356	$ 776,695	$ 155,339	80.00%
2022		**Carry-Over Total**	$ -	$ 4,828,504	$ 4,828,504	0.00%
		TOTAL 2022	$ 14,933,244	$ 30,105,993	$ 15,172,749	49.60%

2023	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2023	00123259	STK STA 76 Roof Replacement	$ 139,637	$ 139,637	$ -	100.00%
2023	00124896	STK Sta 85 Treatment Design	$ -	$ 570,465	$ 570,465	0.00%
2023	00125496	STK 2023 Physical Security Upgrades	$ 83,433	$ 105,523	$ 22,090	79.07%
2023	00124206	STK STA 21-01 Well Study	$ 46,449	$ 51,644	$ 5,195	89.94%
2023	00123448	STK 080-T1 - CP Upgrade	$ 5,657	$ 14,472	$ 8,815	39.09%
2023	00123860	STK 065-T1&T2 - Tank Retrofits	$ 49,374	$ 54,732	$ 5,358	90.21%
2023	00124642	STK 065-T1&T2 - Seismic Retrofits	$ 115,248	$ 127,755	$ 12,507	90.21%
2023	00123751	STK 069-02 Replace Pump & Motor	$ 85,112	$ 120,030	$ 34,918	70.91%
2023	00124123	STK 2023 Flowmeter Replacements	$ 134,432	$ 147,875	$ 13,443	90.91%
2023	00124188	STK 016 ATS Panel Installation	$ 50,353	$ 53,340	$ 2,987	94.40%
2023	00124189	STK 018-01 - Replace Pump & Motor	$ 58,248	$ 64,072	$ 5,825	90.91%
2023	00124196	STK STA 076 ATS Panel Installation	$ 54,999	$ 58,599	$ 3,600	93.86%
2023	00124200	STK STA 79 Motor Control Upgrade	$ 14,157	$ 17,362	$ 3,205	81.54%
2023	00124751	STK STA 75 GAC Media Replacment	$ 133,036	$ 147,442	$ 14,406	90.23%
2023	00125107	STK 2023 Analyzer Replacement	$ 27,883	$ 30,672	$ 2,788	90.91%
2023	00125022	STK 2023 SB1398 Service Replacement	$ 244,879	$ 269,367	$ 24,488	90.91%
2023	00123940	STK 2023 Customer Meter Vault Lids	$ 53,431	$ 59,229	$ 5,798	90.21%
2023	00123781	STK 2023 Vehicle Replacement Progrm	$ 154,875	$ 389,860	$ 234,985	39.73%
2023	00124923	STK Outfitt Hydrant Foreman Equip.	$ 224,583	$ 248,955	$ 24,372	90.21%
2023	00124267	Stockton WSFMP	$ 214,475	$ 237,751	$ 23,276	90.21%
2023	00124356	Stockton Reliability Study	$ 273,496	$ 303,177	$ 29,681	90.21%
2023	119MRP23	STK 2023 Main Replacement Program	$ 13,465,105	$ 21,172,650	$ 7,707,545	63.60%
2023	STK0900	Meter Replacement Program	$ 249,196	$ 249,196	$ -	100.00%
2023	119UNSCH	Unscheduled Replacements	$ -	$ 2,119,345	$ 2,119,345	0.00%
2023		**Specific Total**	$ 15,878,056	$ 26,753,149	$ 10,875,093	59.35%
2023	119-NON-SP	**Non-specific Total**	$ 620,965	$ 776,206	$ 155,241	80.00%
2023		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2023	$ 16,499,021	$ 27,529,355	$ 11,030,334	59.93%

2024	Work Order #	Project Description	Cal Advocates	CWS	CWS > Cal Advocates	Cal Advocates / CWS
2024	00123260	STK STA 66-02 Roof Replacement	$ 143,127	$ 143,127	$ -	100.00%
2024	00124311	STK STA 71 Panel and Genset Install	$ 392,260	$ 408,721	$ 16,461	95.97%
2024	00125497	STK 2024 Physical Security Upgrades	$ 81,631	$ 755,473	$ 673,842	10.81%
2024	00123736	STK 007-02 Replace Pump & Motor	$ 61,406	$ 86,598	$ 25,192	70.91%
2024	00124127	STK 2024 Flowmeter Replacements	$ 126,788	$ 152,145	$ 25,358	83.33%
2024	00124209	STK DIST OFC Genset Installation	$ 208,367	$ 231,343	$ 22,976	90.07%
2024	00124292	STK STA 66-02 Panelboard Replacemen	$ 340,149	$ 383,904	$ 43,755	88.60%
2024	00125108	STK 2024 Analyzer Replacement	$ 10,317	$ 11,349	$ 1,032	90.91%
2024	00123265	STK 12" Cherokee Rd Pipeline	$ -	$ 1,702,528	$ 1,702,528	0.00%
2024	00123266	STK Main Tie-ins at Army & Charte	$ -	$ 1,240,915	$ 1,240,915	0.00%
2024	00123942	STK 2024 Customer Meter Vault Lids	$ 60,710	$ 60,710	$ (0)	100.00%
2024	00123268	STK Mainline Flushing	$ 272,959	$ 317,208	$ 44,249	86.05%
2024	00123783	STK 2024 Vehicle Replacement Progrm	$ 179,847	$ 296,389	$ 116,542	60.68%
2024	119MRP24	STK 2024 Main Replacement Program	$ 13,801,732	$ 21,701,966	$ 7,900,234	63.60%
2024	STK0900	Meter Replacement Program	$ 255,426	$ 255,426	$ -	100.00%
2024	119UNSCH	Unscheduled Replacements	$ -	$ 2,172,329	$ 2,172,329	0.00%
2024		**Specific Total**	$ 15,934,720	$ 29,920,131	$ 13,985,411	53.26%
2024	119-NON-SP	**Non-specific Total**	$ 638,178	$ 797,722	$ 159,544	80.00%
2024		**Carry-Over Total**	$ -	$ -	$ -	0.00%
		TOTAL 2024	$ 16,572,898	$ 30,717,853	$ 14,144,955	53.95%

Table 3-C Capital Budget vs. Recorded Expenditure – Stockton District

Stockton	2021	2022	2023	2024	Annual Average	% of Recorded
2015-2020 Recorded	--	--	--	--	$ 20,067,085	100%
Cal Advocates	$ -	$ 14,933,244	$ 16,499,021	$ 16,572,898	$ 12,001,291	60%
CWS	$ 28,572,329	$ 30,105,993	$ 27,529,355	$ 30,717,853	$ 29,231,382	146%