Docket		A.24-07-003
Exhibit Number	:	Cal Adv - #
Commissioner	:	Matthew Baker
Administrative Law Judge	:	Alberto T. Rosas
Public Advocates Office Witness(es)		Justin Menda

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

REPORT ON PLANT FOR BAYSHORE, BEAR GULCH, LOS ALTOS, REDWOOD VALLEY DISTRICTS, & MULTIPLE COMMON PLANT ISSUES

CALIFORNIA WATER SERVICE COMPANY
TEST YEAR 2026 GENERAL RATE CASE

Application 24-07-003

PUBLIC VERSION

San Francisco, California
January 28, 2025

555896389

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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.") 24-07-003 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. Edward Scher is Cal Advocates project lead for this proceeding. Ms. Syreeta Gibbs is the oversight supervisor, and Ms. Emily Fisher and Ms. Megan Delaporta 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 BAYSHORE DISTRICT PLANT

I. INTRODUCTION

In this GRC period (2025 to 2027), CWS requests an average of $55.9 million in annual plant additions for the Bayshore District.[1] This amount is approximately 112% higher than CWS's annual average plant additions from 2018-2023 in the same district.[2] CWS's request for projects that were funded and included in rates in previous GRCs but are not yet in service for 2025-2027 represents approximately 22.3%, 19.7%, and 4.7%, respectively of CWS's annual proposed plant additions in the Bayshore District. This indicates that CWS's request exceeds what CWS has historically been able to complete. CWS's request is inflated with previously funded projects that are not yet completed. These projects were already funded and included in rates in prior GRCs under the presumption that CWS would complete these projects as scheduled.

II. SUMMARY OF RECOMMENDATIONS

For Bayshore District, the Commission should adopt direct project costs of $15,739,286 in 2025, $16,715,593 in 2026, and $33,014,807 in 2027 for plant additions. Table 1-1, below, summarizes Cal Advocates' recommended capital project additions. The Commission should exclude from rates in this GRC period funding for the studies CWS proposes in the Bayshore District because the benefits related to these studies are speculative.[3] The Commission should exclude from rates in this GRC CWS's request of $149,855 in 2026 for the Vehicle for New Complements (PID 134769) project, consistent with Cal Advocates' witness, Roy Keowen's recommendation regarding new

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[1] The Bayshore District includes the Mid-Peninsula (MPS) (San Mateo and San Carlos) and South San Francisco (SSF) subareas.

[2] Attachment 1-3 (Bayshore District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

[3] The proposed studies in the Bayshore District include: Bay Area Water Transfer (PID 134794), SSF 001 Cr-As Treatment Pilot Study (PID 132988), BAY Grid Strengthening (PID 132992), BAY Grid Strengthening (PID 134125) MPS Brackish Aquifer Conductivity (PID 134300), and SSF Brackish Aquifer Conductivity (PID 134303).

employees.[4] The Commission should reduce the proposed direct project cost for the San Carlos (SC) 117 Station Rebuild Construction (PID 132985) project from $1,940,520 to $1,442,733 in 2027[5] due to revising the escalation costs, removing the project contingency and CM/SI.

Cal Advocates' recommendations for plant additions for the Bayshore District also reflect several Common Plant issues.[6] The Commission should exclude from rates in this GRC the costs associated with project contingency, construction management and special inspection (CM/SI), design and permitting only projects, multi-GRC projects not included in revenue requirement in this rate case, Flowmeter Replacement Program, generator projects, non-specific budget, unscheduled budget, and previously funded but not in service projects. The Commission should adopt Cal Advocates' recommended budgets related to the Main Replacement Program, Physical Security Program, Vehicle Replacement Program, Tank Improvement Program, Motor Control Centers (MCC)/Panelboard Replacement Program, instrumentation, control valve overhaul projects, pump replacement projects, and advanced metering infrastructure (AMI). Attachment 1-2 of this Report presents Cal Advocates' project-specific adjustments.[7]

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[4] See Report on California Water Service Company's Administrative & General Expenses and Special Requests #7.

[5] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." CWS's RO model and capital project cost estimate show the incorrect direct project cost for PID 132985. CWS states that $1,940,520 is the correct direct project cost for PID 132985.

[6] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District; Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues; Report on Common Plant Well Renewal Program and Tank Improvement Program; and Chapters 6, 7, 8, and 10 of this Report regarding these Common Plant issues.

[7] Attachment 1-2 (Capital Budget Details – Bayshore District).

Table 1-1: Capital Budget Summary – Bayshore District

Bayshore ($000)	2025	2026	2027	Annual Average
Cal Advocates' Recommendation	$ 15,739.29	$ 16,715.59	$ 33,014.81	$ 21,823.23
CWS's Proposed	$ 44,636.10	$ 56,057.90	$ 67,141.60	$ 55,945.20
CWS> Cal Advocates	$ 28,896.81	$ 39,342.31	$ 34,126.79	$ 34,121.97
Cal Advocates as % of CWS	35%	30%	49%	39%

III. ANALYSIS

The Bayshore District recorded an average annual gross plant addition of $26.38 million in the last six years (2018 to 2023).[8] Attachment 1-3 compares CWS's and Cal Advocates' estimates for the test years with the recorded annual average gross plant additions.[9]

A. Proposed District-Specific Projects

1. Study Projects

CWS seeks to include in rates the direct costs for several studies that may or may not ever result in the construction of projects. Table 1-2 below lists these study projects.[10] The benefits related to these studies are speculative since the results of these studies are unknown until completed. CWS's request is not reasonable because

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[8] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2." Gross plant additions include company funded plant additions, contributions, and advance deposits for specific plants.

[9] Attachment 1-3 (Bayshore District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

[10] PID 134794 is to determine the hydraulic, permitting, and cost challenges associated with transferring water to CWS's Bayshore and Bear Gulch districts. The cost of the Bay Area Water Transfer study is distributed among CWS's Bayshore and Bear Gulch districts. PID 132988 is a study to determine the best treatment option to address arsenic and chromium-6 at SSF Station 1. PID 132992 is a pilot program to address dead end pipelines where there is insufficient circulation. PID134125 is to address dead end pipeline by locating existing pipeline networks with gaps within 500 feet of one another. CWS intends on connecting these pipelines. PID 134300 and PID 134303 are a study for a potential brackish water desalination plant to serve the Bayshore and Bear Gulch districts. CWS distributed the study costs among the Mid-Peninsula (PID 134300) and South San Francisco (PID 134303) service areas and Bear Gulch District (PID 133013).

ratepayers would be paying for the cost of these studies even if the studies do not result in actual constructed projects. Ratepayers should only pay for used and useful projects that provide them with tangible benefits. CWS can exercise its management discretion to pursue these studies and seek cost recovery in a future GRC where the studies result in actual projects that are used, useful and beneficial for ratepayers. Therefore, the Commission should deny CWS's request for advance ratepayer funding of the proposed studies.

Table 1-2: Study Projects – Bayshore District[11]

PID	Project Description	Year	Direct Cost
134794	Bay Area Water Transfer	2026	$ 134,794.00
132988	SSF 001 Cr-As Treatment Pilot Study	2026	$ 72,492.67
132992	BAY Grid Strengthening	2026	$ 545,775.12
134125	BAY Grid Strengthening	2026	$ 252,902.88
134300	MPS Brackish Aquifer Conductivity	2026	$ 1,143,105.17
134303	SSF Brackish Aquifer Conductivity	2026	$ 571,553.11
Direct Total			**$ 2,720,622.95**

2. Vehicle for New Complements (PID 134769)

The Commission should reject CWS's request of $149,855 in 2026, consistent with Cal Advocates' witness, Roy Keowen's recommendation regarding new employees.[12]

3. SC 117 Station Rebuild Construction (PID 132985)

The Commission should reduce the proposed direct project cost from $1,940,520 to $1,442,733 in 2027[13] due to revising the escalation costs, removing the project contingency and CM/SI.

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

[12] See Report on California Water Service Company's Administrative & General Expenses and Special Requests #7.

[13] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." CWS's RO model and capital project cost estimate show the incorrect direct project cost for PID 132985. CWS states

CWS states that the direct project cost is calculated by escalating the subtotal project cost by 2.5% inflation rate per year.[14] CWS states that the subtotal project cost is from a base year of 2023.[15] Based on CWS's escalation methodology, the project cost from 2023 to 2027 should result in a 10.38% escalation.[16] However, CWS's cost estimate shows a subtotal project cost and direct project cost of $1,560,985 and $1,940,520, respectively,[17] resulting in a 24.31% escalation.[18] The Commission should use a 10.38% escalation, consistent with CWS's methodology for escalating capital project costs.

The Commission should exclude funding for project contingency and CM/SI from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding contingency and cost add-ons.[19]

Based on the above adjustments, the Commission should allow a direct cost estimate of $1,442,733 for PID 132985.[20]

B. Common Plant Issues

The Commission should adopt the Common Plant recommendations summarized below.

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that $1,940,520 is the correct direct project cost for PID 132985.

[14] CWS Bay Area Region 2024 GRC Capital Project Justification (PJ) Book at 76.

[15] CWS Bay Area Region 2024 GRC PJ Book at 76.

[16] (((1+2.5%) ^ (2027-2023)) -1) × 100% =10.38%.

[17] CWS Response to Public Advocates Office Data Request JMI-016 (RO Model 2).

[18] ((direct cost ÷ subtotal cost) -1)× 100% = (($1,940,520.29 ÷ $1,560,984.52)-1) × 100% = 24.31%.

[19] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[20] Attachment 1-4 (PID 132985 Direct Cost Estimate).

1. Project Contingency

The Commission should remove project contingency from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding contingency[21]

2. CM/SI

The Commission should exclude CM/SI from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding cost add-ons.[22]

3. Design and Permitting Only Projects

Table 1-3 shows the Bayshore District projects for which CWS requests funding only for design and permitting costs. The Commission should exclude in rates in this GRC funding for only design and permitting costs. CWS can exercise its management discretion to pursue the design and permitting for these projects and seek funding in a future GRC when they result in actual projects with a defined scope, plan, schedule, and cost estimate. This recommendation is discussed further in Chapter 10 of this Report.

[21] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[22] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

Table 1-3: Design and Permitting-Only Projects – Bayshore District[23]

PID	Project Description	Year	Direct Project Cost in 2024 Rate Case
132983	Preliminary Design for SSF 008 Tank	2026	$ 830,666.96
133798	MPS 006 Design Only	2026	$ 277,271.91
Direct Total			**$ 1,107,938.87**

4. Multi-GRC Projects (Not Included in Revenue Requirement in this GRC)

CWS seeks preapproval to replace two panelboards under PID 132507 in this GRC that CWS expects to take multiple rate case cycles to complete.[24] CWS plans to start this project during this GRC and add them to the revenue requirement of the GRC in which they are completed.[25] The Commission should not preapprove this project. CWS can exercise its management discretion to pursue the project and then seek recovery of reasonable and prudently-incurred costs when the project is complete, in service, and beneficial to ratepayers. This recommendation is discussed further in Chapter 10 of this Report.

5. Flowmeter Replacement Program (PID 131990)

The Commission should reject CWS's request for $622,193 in 2026 for CWS's Flowmeter Replacement Program budget as discussed further in Chapter 6 of this Report regarding CWS's Flowmeter Replacement Program.

6. Main Replacement Program (PIDs 152MRP25, 152MRP26, and 152MRP27)

The Commission should adopt a budget of $12,508,655 in 2025, $12,821,371 in 2026 and $13,141,593 in 2027 for CWS's Main Replacement Program budget as

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

[24] CWS plans to replace the panelboards at SSF Stations 1 and 7 under PID 132507.

[25] CWS Bay Area Region 2024 GRC PJ Book at 10.

discussed further in Chapter 8 of this Report regarding CWS's Main Replacement Program.

7. Generator Projects

The Commission should deny funding for the SC 109 New Generator and Automatic Transfer Switch (ATS) (PID 132991) project, consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding generator projects.[26]

8. Physical Security Program

The Commission should adopt a budget of $300,554 in 2025, $249,267 in 2026, and $182,459 in 2027 for CWS's Physical Security Program in Mid-Peninsula. The Commission should adopt a budget of $280,720 in 2025, $313,133 in 2026, and $271,151 in 2027 for CWS's Physical Security Program in South San Francisco. These recommendations are consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding CWS's Physical Security Program.[27]

9. Vehicle Replacement Program

The Commission should adopt a budget of $87,827 in 2025, $106,370 in 2026, and $328,844 in 2027 for CWS's Vehicle Replacement Program, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding CWS's Vehicle Replacement Program.[28]

10. Tank Improvement Program

The Commission should adopt a budget of $210,163 in 202629 and $84,795 in 2027 for CWS's Tank Improvement Program in Mid-Peninsula. The Commission should

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[26] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues.

[27] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[28] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[29] The Commission should adopt a budget of $118,821 for the MPS 2025 Tank Improvements project

adopt a budget of $114,952 in 2026[30] and $4,936 in 2027 for CWS's Tank Improvement Program in South San Francisco. These recommendations are consistent with Cal Advocates' witness, Cortney Sorensen's recommendation regarding CWS's Tank Improvement Program.[31]

11. MCC/Panelboard Replacement Program

The Commission should adopt a budget of $1,550,723 in 2027 for CWS's MCC/Panelboard Replacement Program, consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding CWS's MCC/Panelboard Replacement Program.[32]

12. Instrumentation Replacement

The Commission should adopt a budget of $808 in 2025 for the BAY 2025 Instrumentation Replacement (PID 133790) project, consistent with Cal Advocates' witness, Cortney Sorensen's recommendation regarding instrumentation projects.[33]

13. Control Valve Overhaul

The Commission should adopt a budget of $196,469 in 2025, $209,920 in 2026, and $207,353 in 2027 for the control valve overhaul projects in Mid-Peninsula. The Commission should adopt a budget of $47,153 in 2025, $40,369 in 2026, and $41,470 in 2027 for the control valve overhaul projects in South San Francisco. These recommendations are consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding control valve overhaul projects.[34]

(PID 132999) and $91,341 for the MPS 2026 Tank Improvements project (PID 133001).

[30] The Commission should adopt a budget of $55,152 for the SSF 2025 Tank Improvements project (PID 133000) and $59,800 for the SSF 2026 Tank Improvements project (PID 133002).

[31] See Report on Common Plant Well Renewal Program and Tank Improvement Program.

[32] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues.

[33] See Report on Common Plant Well Renewal Program and Tank Improvement Program.

[34] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues.

14. Pump Replacement

The Commission should adopt the budgets for the pump replacement projects shown in Table 1-4 below, consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding pump replacement projects.[35]

Table 1-4: Pump Replacement Projects – Bayshore District36

		Recommended Direct Cost	
PID	**Project Description**	**CWS**	**Cal Advocates**
132116	SC 118-A Pump Replacement	$ 111,638.85	$ 75,464.39
132105	SSF 002-C Pump Replacement	$ 83,493.54	$ 56,439.03
132106	SSF 005-A Pump Replacement	$ 85,580.93	$ 57,983.66
132108	SM 006-D Pump Replacement	$ 83,493.54	$ 56,439.03
132115	SSF 101-A Pump Replacement	$ 83,493.54	$ 56,439.03
132111	MPS 012-E Pump Replacement	$ 74,329.75	$ 50,473.83
132112	MPS 114-B Pump Replacement	$ 33,767.60	$ 22,929.98
132117	MPS-120-B Pump Replacement	$ 74,329.75	$ 50,473.83
Direct Cost Total		**$ 630,127.50**	**$ 426,642.78**

15. AMI

The Commission should only allow $476,677 in 2026 for the Bayshore (BSH)-AMI Initiative-Vehicles/Equipment (PID133599) project.[37] In addition, the Commission

[35] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues.

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

[37] The PIDs for the Bayshore AMI projects shown in CWS's Common Plant Issues (Common Plant) 2024 GRC PJ Book, Attachment B differs from the PIDs shown in CWS's RO model (CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1"). CWS confirmed that PID 133599 is the correct PID for the BSH-AMI Initiative-Vehicles/Equipment project in response to data request A2407003 Cal Advocates DR JMI-014 (AMI 2). CWS also states that the project year for PID 133599 is 2026 instead of 2025 in their response to data request A2407003 Cal Advocates DR JMI-014 (AMI 2).

should only allow $4,819,073 in 2027 for the MPS 2027 AMI Initiative-Meters (PID 133627) project and $2,259,615 in 2027 for the SSF 2027 AMI Initiative-Meters (PID 133634) project.[38] These recommendations are discussed further in Chapter 7 of this Report.

C. Non-Specific and Unscheduled Budgets

The Commission should reject funding for CWS's non-specific budget and unscheduled budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendations regarding non-specific and unscheduled budgets.[39]

D. Previously Funded but Not in Service Projects

It is not reasonable to impose an additional cost burden on ratepayers when they do not receive a corresponding benefit. The Commission should reduce CWS's proposed budget for uncompleted projects that were funded and included in rates in prior GRCs by $9,497,157 in 2025, $10,790,091 in 2026, and $3,144,369 in 2027.[40] CWS can exercise its management discretion to proceed with these projects and seek recovery of all reasonable and prudent costs in a future GRC when the projects are completed, placed in service and providing a benefit to ratepayers. This recommendation is consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding previously funded but

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[38] The PIDs for the Bayshore AMI projects shown in CWS's Common Plant 2024 GRC PJ Book, Attachment B differs from the PIDs shown in CWS's RO model (CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1"). CWS confirmed that the correct PIDs for the MPS 2027 AMI Initiative-Meters and SSF 2027 AMI Initiative-Meters projects are PID 133627 and PID 133634, respectively in response to data request A2407003 Cal Advocates DR JMI-014 (AMI 2).

[39] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

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

not in service projects.[41] Attachment 1-5 of this Report lists these previously funded projects.[42]

IV. CONCLUSION

The Commission should reject CWS's request to fund the studies proposed in the Bayshore District because ratepayers will not benefit from the studies unless or until the studies result in construction of useful projects.[43] The Commission should reject CWS's request of $149,855 in 2026 for the Vehicle for New Complements (PID 134769), consistent with Cal Advocates' witness, Roy Keowen's recommendation regarding new employees.[44] The Commission should reduce the proposed direct project cost for the SC 117 Station Rebuild Construction (PID 132985) project from $1,940,520 to $1,442,733 in 2027[45] due to revising the escalation costs, removing the project contingency and CM/SI.

Further, the Commission should adopt Cal Advocates' recommended direct cost amounts of $15,739,286 in 2025, $16,715,593 in 2026, and $33,014,807 in 2027 for plant additions.[46]

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[41] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[42] Attachment 1-5 (Previously Funded but Not Complete Projects – Bayshore District).

[43] The proposed studies in the Bayshore District include: Bay Area Water Transfer (PID 134794), SSF 001 Cr-As Treatment Pilot Study (PID 132988), BAY Grid Strengthening (PID 132992), BAY Grid Strengthening (PID 134125) MPS Brackish Aquifer Conductivity (PID 134300), and SSF Brackish Aquifer Conductivity (PID 134303).

[44] See Report on California Water Service Company's Administrative & General Expenses and Special Requests #7.

[45] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." CWS's RO model and capital project cost estimate show the incorrect direct project cost for PID 132985. CWS states that $1,940,520 is the correct direct project cost for PID 132985.

[46] These amounts include the Common Plant Issues recommendations.

LIST OF ATTACHMENTS FOR CHAPTER 1

	Attachment #	Description
1	Attachment 1-1	Qualifications of Witness
2	Attachment 1-2	Capital Budget Details – Bayshore District
3	Attachment 1-3	Bayshore District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures
4	Attachment 1-4	PID 132985 Direct Cost Estimate
5	Attachment 1-5	Previously Funded but Not in Service Projects – Bayshore District

CHAPTER 2 BEAR GULCH DISTRICT PLANT

I. INTRODUCTION

In this GRC period (2025 to 2027), CWS requests an average of $36 million in annual plant additions for the Bear Gulch District.[47] This amount is approximately 62% higher than CWS's annual average plant additions from 2018-2023 in the same district.[48] CWS's request for projects that were funded and included in rates in previous GRCs but are not yet in service for 2025-2027 represents approximately 35.8%, 34.2%, and 6.7%, respectively of CWS's annual proposed plant additions in the Bear Gulch District. This indicates that CWS's request exceeds what CWS has historically been able to complete. CWS's request is inflated with previously funded projects that are no yet completed. These projects were already funded and included in rates in prior GRCs under the presumption that CWS would complete these projects as scheduled.

The Bear Gulch District includes the Skylonda and Kings Mountain systems. CWS acquired the Skylonda Mutual Water Company (Skylonda) system in August 2023.[49] CWS also acquired the Kings Mountain Park Mutual Water Company (Kings Mountain) system in 2024.[50]

II. SUMMARY OF RECOMMENDATIONS

For the Bear Gulch District, the Commission should adopt direct project costs of $10,889,855 in 2025, $11,639,982 in 2026, and $17,585,580 in 2027 for plant additions. Table 2-1, below, summarizes Cal Advocates' recommended capital project additions. The Commission should exclude from rates in this GRC period funding for the studies

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[47] The Bear Gulch District provides service throughout Atherton, Menlo Park, Portola Valley, Woodside, portions of Redwood City, and unincorporated portions of San Mateo County.

[48] Attachment 2-2 (Bear Gulch District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

[49] CWS Bear Gulch 2024 GRC PJ Book at 52 and 57. CWS filed Advice Letter (AL) 2444 to acquire the Skylonda system.

[50] CWS Bear Gulch 2024 GRC PJ Book at 47. CWS filed AL 2463 to acquire the Kings Mountain system.

CWS proposes in the Bear Gulch District because the benefits related to these studies are speculative.[51] The Commission should exclude from rates in this GRC CWS's request of $164,233 in 2026 for the Vehicle for New Complements (PID 134775) project, consistent with Cal Advocates' witness, Roy Keowen's recommendation regarding new employees.[52]

Cal Advocates' recommendations for plant additions for the Bear Gulch District also reflect several Common Plant issues.[53] The Commission should exclude from rates in this GRC the costs associated with project contingency, CM/SI, design and permitting only projects, multi-GRC projects not included in revenue requirement in this rate case, generator projects, non-specific budget, unscheduled budget, and projects previously funded but not in service. The Commission should adopt Cal Advocates' recommended budgets related to the Main Replacement Program, Vehicle Replacement Program, Physical Security Program, Tank Improvement Program, MCC/Panelboard Replacement Program, instrumentation, control valve overhaul projects, and AMI. Attachment 2-1 of this Report presents Cal Advocates' project-specific adjustments.[54]

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[51] The proposed studies in the Bear District include: Water Restoration/Fire Prevention Study (PID 133017), Bay Area Water Transfer (PID 133011), and BG Brackish Aquifer Conductivity (PID 133013).

[52] See Report on California Water Service Company's Administrative & General Expenses and Special Requests #7.

[53] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District; Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues; Report on Common Plant Well Renewal Program and Tank Improvement Program; and Chapters 7, 8, and 10 of this Report regarding these Common Plant issues.

[54] Attachment 2-1 (Capital Budget Details – Bear Gulch District).

Table 2-1: Capital Budget Summary – Bear Gulch District

Bear Gulch ($000)	2025	2026	2027	Annual Average
Cal Advocates' Recommendation	$ 10,889.85	$ 11,639.98	$ 17,585.58	$ 13,371.81
CWS's Proposed	$ 32,531.48	$ 36,725.37	$ 38,878.28	$ 36,045.05
CWS> Cal Advocates	$ 21,641.63	$ 25,085.39	$ 21,292.70	$ 22,673.24
Cal Advocates as % of CWS	33%	32%	45%	37%

III. ANALYSIS

The Bear Gulch District recorded an average annual gross plant addition of $22.27 million in the last six years (2018 to 2023).[55] Attachment 2-2 compares CWS's and Cal Advocates' estimates for the test years with the recorded annual average gross plant additions.[56]

A. Proposed District-Specific Projects

1. Study Projects

CWS requests funding for direct costs for several studies that may or may not ever result in the construction of projects. Table 2-2 below lists these study projects.[57] CWS can exercise its management discretion to proceed with these studies and then seek cost recovery of the cost of these studies in a future rate case if the results lead to actual projects that are beneficial for ratepayers. For the current GRC, however, the

[55] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2." Gross plant additions include company funded plant additions, contributions, and advance deposits for specific plants.

[56] Attachment 2-2 (Bear Gulch District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

[57] PID 133017 studies whether the watershed requires maintenance and its susceptibility to wildfires. PID 133011 is to determine the hydraulic, permitting, and cost challenges associated with transferring water to CWS's Bayshore and Bear Gulch districts. PID 133013 is a study for a potential brackish water desalination plant to serve the Bayshore and Bear Gulch districts. CWS distributed the cost of the study among the Mid-Peninsula (PID 134300) and South San Francisco (PID 134303) service areas and Bear Gulch District (PID 133013).

Commission should deny CWS's request for advance ratepayer funding of the proposed studies as discussed further in Chapter 1 of this Report regarding study projects.[58]

Table 2-2: Study Projects – Bear Gulch District[59]

PID	Project Description	Year	Direct Cost
133017	Water Restoration/ Fire Prevention Study	2025	$ 182,037.69
133011	Bay Area Water Transfer	2026	$ 270,564.55
133013	BG Brackish Aquifer Conductivity	2026	$ 571,553.11
Direct Total			**$ 1,024,155.35**

2. Vehicle for New Complements (PID 134775)

The Commission should reject CWS's request of $164,233 in 2026, consistent with Cal Advocates' witness, Roy Keowen's recommendation regarding new employees.[60]

B. Common Plant Issues

The Commission should adopt the Common Plant recommendations summarized below.

1. Project Contingency

The Commission should exclude project contingency from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding contingency.[61]

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[58] Chapter 1 at Section III.A.1.

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

[60] See Report on California Water Service Company's Administrative & General Expenses and Special Requests #7.

[61] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

2. CM/SI

The Commission should exclude CM/SI from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding cost add-ons.[62]

3. Design and Permitting Only Projects

Table 2-3 shows the Bear Gulch District projects for which CWS requests funding only for design and permitting costs. The Commission should exclude in rates in this GRC funding for only design and permitting costs. CWS can exercise its management discretion to pursue the design and permitting for these projects and seek funding in a future GRC when they result in actual projects with a defined scope, plan, schedule, and cost estimate. This recommendation is discussed further in Chapter 10 of this Report.

Table 2-3: Design and Permitting Only Projects – Bear Gulch District[63]

PID	Project Description	Year	Direct Project Cost in 2024 Rate Case
133009	BG Skylonda to Skyline Main Connection	2027	$ 1,158,427.68
133012	BG 036 New 125K Gal Tank	2027	$ 1,058,510.44
133014	Kings Mountain Tanks Farm Station Rebuild	2027	$ 297,322.25
133016	Station 053 Tank Design and Permitting	2027	$ 318,851.17
133022	Operations Building Design	2027	$ 1,204,500
Direct Total			**$ 4,037,611.54**

[62] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

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

4. Multi GRC Projects (Not Included in Revenue Requirement in this GRC)

CWS seeks preapproval of two station rebuild projects in this GRC that CWS expects to take multiple rate case cycles to complete.[64] CWS plans to start these projects during this GRC period and add them to the revenue requirement of the GRC in which they are completed.[65] The Commission should not preapprove these projects. CWS can exercise its management discretion to pursue the projects and then seek recovery of all reasonable and prudently-incurred costs when the projects are complete, in service and beneficial to ratepayers. This recommendation is discussed further in Chapter 10 of this Report.

5. Main Replacement Program (PIDs 102MRP25, 102MRP26, and 102MRP27)

The Commission should adopt a budget of $9,899,252 in 2025, $10,146,733 in 2026 and $10,400,402 in 2027 for CWS's Main Replacement Program as discussed further in Chapter 8 of this Report regarding CWS's Main Replacement Program.

6. Generator Projects

The Commission should deny funding for the generator projects listed in Table 2-4 below, consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding generator projects.[66]

[64] CWS plans station rebuild projects (referred as station water treatment recommissioning projects) at Stations 52 (PID 133020) and 55 (PID 133021).

[65] CWS Bear Gulch 2024 GRC PJ Book at 7.

[66] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues.

Table 2-4: Generator Projects – Bear Gulch District[67]

PID	Project Description	Year	Direct Project Cost
133005	BG 022 New Generator	2027	$ 228,039.92
133006	BG 043 New Generator	2027	$ 503,664.27
Total Direct Cost			**$ 731,704.19**

7. Vehicle Replacement Program

The Commission should adopt a budget of $401,383in 2025, $57,985 in 2026, and $198,237 in 2027 for CWS's Vehicle Replacement Program, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding CWS's Vehicle Replacement Program.[68]

8. Physical Security Program

The Commission should adopt a budget of $91,897 in 2025, $121,629 in 2026, and $158,250 in 2027 for CWS's Physical Security Program, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding CWS's Physical Security Program.[69]

9. Instrumentation Replacement

The Commission should adopt a budget of $135 in 2025 for the BG 2025 Instrumentation Replacement (PID 134012) project, consistent with Cal Advocates' witness, Cortney Sorensen's recommendation regarding instrumentation projects.[70]

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

[68] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[69] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[70] See Report on Common Plant Well Renewal Program and Tank Improvement Program.

10. Tank Improvement Program

The Commission should adopt a budget of $99,281 in 2026 and $27,619 in 2027 for CWS's tank improvement projects, consistent with Cal Advocates' witness Cortney Sorensen's recommendation regarding CWS's Tank Improvement Program.[71]

11. MCC/Panelboard Replacement Program

The Commission should adopt a budget of $1,758,098 in 2027 for CWS's MCC/Panelboard Replacement Program, consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding CWS's MCC/Panelboard Replacement Program.[72]

12. Control Valve Overhaul

The Commission should adopt a budget of $196,469 in 2025, $201,846 in 2026, and $207,353 in 2027 for the control valve overhaul projects, consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding control valve overhaul projects.[73]

13. AMI

The Commission should only allow $254,526 in 2026 for the Bear Gulch (BG)-AMI Initiative-Vehicles/Equipment (PID 133593) project.[74] In addition, the Commission should only allow $2,712,532 in 2027 for the BG 2027 AMI Initiative-Meters (PID 133622) project. These recommendations are discussed further in Chapter 7 of this Report.

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[71] See Report on Common Plant Well Renewal Program and Tank Improvement Program.

[72] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues.

[73] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues.

[74] CWS states that the project year for PID 133593 is 2026 instead of 2025 in their response to data request A2407003 Cal Advocates DR JMI-014 (AMI 2).

C. Non-Specific and Unscheduled Budgets

The Commission should reject funding for CWS's non-specific budget and unscheduled budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendations regarding non-specific and unscheduled budgets.[75]

D. Previously Funded but Not in Service Projects

It is not reasonable to impose an additional cost burden on ratepayers when they do not receive a corresponding benefit. The Commission should reduce CWS's proposed budget for uncompleted projects that were funded and included in rates in prior GRCs by $11,640,301 in 2025, $12,572,003 in 2026, and $2,616,668 in 2027.[76] CWS can exercise its management discretion to proceed with these projects and seek recovery of all reasonable and prudent costs in a future GRC when the projects are completed, placed in service and providing a benefit to ratepayers. This recommendation is consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding previously funded but not in service projects.[77] Attachment 2-3 of this Report provides a list of these projects.[78]

IV. CONCLUSION

The Commission should reject CWS's request to fund studies proposed in the Bear Gulch District because ratepayers will not benefit from the studies unless or until the studies result in construction of useful projects.[79] The Commission should reject CWS's request of $164,233 in 2026 for the Vehicle for the New Complements (PID 134775)

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[75] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

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

[77] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[78] Attachment 2-3 (Previously Funded but Not Complete Projects – Bear Gulch District).

[79] The proposed studies in the Bear District include: Water Restoration/ Fire Prevention Study (PID 133017), Bay Area Water Transfer (PID 133011), and BG Brackish Aquifer Conductivity (PID 133013).

project, consistent with Cal Advocates' witness, Roy Keowen's recommendation regarding new employees.[80]

Further, the Commission should adopt Cal Advocates' recommended direct cost amounts of $10,889,855 in 2025, $11,639,982 in 2026, and $17,585,580 in 2027 for plant additions.[81]

[80] See Report on California Water Service Company's Administrative & General Expenses and Special Requests #7.

[81] These amounts include the Common Plant Issues recommendations.

LIST OF ATTACHMENTS FOR CHAPTER 2

	Attachment #	Description
1	Attachment 2-1	Capital Budget Details – Bear Gulch District
2	Attachment 2-2	Bear Gulch District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures
3	Attachment 2-3	Previously Funded but Not in Service Projects – Bear Gulch District
4	Attachment 2-4	Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures

CHAPTER 3 LOS ALTOS DISTRICT PLANT

I. INTRODUCTION

In this GRC period (2025 to 2027), CWS requests an average of $41.1 million in annual plant additions for the Los Altos District. This amount is approximately 209% higher than CWS's annual average plant additions from 2018-2023 in the same district.[82] CWS's request for projects that were funded and included in rates in previous GRCs but are not yet in service for 2025-2027 represents approximately 42.7%, 38.5%, and 27.5%, respectively of CWS's annual proposed plant additions in the Los Altos District. This indicates that CWS's request exceeds what CWS has historically been able to complete. CWS's request is inflated with previously funded projects that are not yet completed. These projects were already funded and included in rates in prior GRCs under the presumption that CWS would complete these projects as scheduled.

II. SUMMARY OF RECOMMENDATIONS

For plant additions in the Los Altos District, the Commission should adopt $6,075,100 in 2025, $9,709,515 in 2026, and $20,322,668 in 2027. Table 3-1 below presents a summary of Cal Advocates' recommended capital project additions. The Commission should exclude CWS's request of $919,192 in 2025 for the Los Altos (LAS) Los Altos Hills Stations Supervisory Control and Data Acquisition (SCADA) Upgrade (PID 132757) project because CWS intends to fund this project through their non-specific budget. The Commission should exclude the cost of the LAS New Well Property Purchase (PID 133287) project from rates until the well is in service and providing a benefit to ratepayers. The Commission should exclude from rates in this GRC period CWS's request of $311,441 in 2027 for the LAS Well Hardness Study (PID 133284) since the benefit of this study to ratepayers is speculative. The Commission should exclude from rates in this GRC CWS's request of $163,379 in 2026 for the Vehicle for

[82] Attachment 3-2 (Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

New Complements (PID 134768) project, consistent with Cal Advocates' witness, Roy Keowen's recommendation regarding new employees.[83] The Commission should reduce the proposed direct project cost from $1,503,378 to $1,173,403 in 2027 for the LAS 117 Station Rebuild Construction (PID 133283) project due to removing funding for the generator and project contingency.

Cal Advocates' recommendations for plant additions for the Los Altos District also reflect several Common Plant issues.[84] The Commission should exclude from rates in this GRC the costs associated with project contingency, CM/SI, multi-GRC projects not included in revenue requirement in this rate case, non-specific budget, unscheduled budget, and previously funded but not in service projects. The Commission should adopt Cal Advocates' recommended budgets related to the Main Replacement Program, Tank Improvement Program, Physical Security Program, Vehicle Replacement Program, Well Renewal Program, MCC/Panelboard Replacement Program, control valve overhaul projects, pump replacement projects, and AMI. Attachment 3-1 of this Report presents Cal Advocates' project-specific adjustments.[85]

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[83] See Report on California Water Service Company's Administrative & General Expenses and Special Requests #7.

[84] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District; Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues; Report on Common Plant Well Renewal Program and Tank Improvement Program; and Chapters 7, 8, and 10 of this Report regarding these Common Plant issues.

[85] Attachment 3-1 (Capital Budget Details – Los Altos District).

Table 3-1: Capital Budget Summary – Los Altos District

Los Altos ($000)	2025	2026	2027	Annual Average
Cal Advocates' Recommendation	$ 6,075.10	$ 9,709.51	$20,322.67	$ 12,035.76
CWS's Proposed	$28,292.28	$43,388.06	$51,549.22	$ 41,076.52
CWS> Cal Advocates	$22,217.18	$33,678.55	$31,226.55	$ 29,040.76
Cal Advocates as % of CWS	21%	22%	39%	29%

III. ANALYSIS

The Los Altos District recorded an average annual gross plant addition of $13.30 million in the last six years (2018 to 2023).[86] Attachment 3-2 compares CWS's and Cal Advocates' estimates for the test years with the recorded annual average gross plant additions.[87]

A. Proposed District-Specific Projects

1. LAS Los Altos Hills Stations SCADA Upgrade (PID 132757)

The Commission should exclude CWS's request of $919,192 in 2025 since CWS is funding this project through their non-specific budget. CWS originally requested a direct project cost of $919,192 for the Los Altos Hills Stations SCADA Upgrade (PID 132757).[88] However, CWS states that the project scope was decreased due to other capital priorities and the correct project cost is approximately one-tenth of the requested amount.[89] Due to an urgent need to upgrade the sites in Los Altos, CWS states that it

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[86] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2." Gross plant additions include company funded plant additions, contributions, and advance deposits for specific plants.

[87] Attachment 3-2 (Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

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

[89] Attachment 3-3 (CWS Response to Public Advocates Office Data Request JMI-012 (LAS LA Hills Stations SCADA Upgrade)).

plans to use non-specific funding for PID 132757.[90] Therefore, the Commission should exclude PID 132757 from CWS's plant additions.

2. LAS New Well Property Purchase (PID 133287)

The Commission should exclude the cost of the land in rates until the well is in service and provides a benefit to ratepayers. CWS requests $4,786,474 in 2026 to purchase land for a future well site.[91]

CWS states that a well project can take between six to nine years to complete,[92] equaling two or three rate case cycles. This means that the land purchased would not benefit ratepayers during the present GRC cycle. Ratepayers should only pay for used and useful projects that provide tangible benefits. CWS states it is difficult to purchase suitable land for well sites in the Los Altos District.[93] Three new well projects approved in the 2021 GRC remain open or delayed, two for new well construction and one for purchase of land for one of the new wells.[94] The land purchase (PID 124334) was supposed to have been completed in 2022 but CWS now expects to complete the land purchase project in 2026.[95] CWS's extended timeline for PID 124334 illustrates the uncertainty in acquiring suitable well construction sites. Due to this uncertainty and the likelihood of delay, the Commission should exclude the PID 133287 land purchase budget in CWS's revenue requirement until the property is providing a benefit to ratepayers.[96]

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[90] Attachment 3-3 (CWS Response to Public Advocates Office Data Request JMI-012 (LAS LA Hills Stations SCADA Upgrade)).

[91] CWS Los Altos 2024 GRC PJ Book at 62.

[92] CWS Los Altos 2024 GRC PJ Book at 58. CWS notes that the well construction project "is also slated for inclusion in the 2027 GRC."

[93] CWS Los Altos 2024 GRC PJ Book at 58.

[94] CWS Los Altos 2024 GRC PJ Book at 58.

[95] Los Altos Report on the Results of Operation at 72.

[96] The Commission should be aware of some budget adjustments in CWS's cost estimate for PID 133287. CWS originally requested $30,000 related to coordination of Division of Drinking Water (DDW) control zone requirements and Drinking Water Source Assessment and Protection (DSWAP) investigation

The Commission should exclude the cost of the LAS New Well Property Purchase (PID 133287) project from rates until the well is in service and providing a benefit to ratepayers.

3. LAS Well Hardness Study (PID 133284)

The Commission should deny CWS's funding request of $311,441 in 202797 to conduct a study to address hardness in water. CWS can exercise its management discretion to proceed with these studies and then seek cost recovery in a future rate case if the result leads to actual project that is beneficial for ratepayers. For this GRC, however, the Commission should deny CWS's request for advance ratepayer funding of the proposed study as discussed further in Chapter 1 of this Report regarding study projects.[98]

4. Vehicle for New Complements (PID 134768)

The Commission should reject CWS's request of $163,379 in 2026, consistent with Cal Advocates' witness, Roy Keowen's recommendation regarding new employees.[99]

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findings. CWS has stated in response to Public Advocates Office Data Request JMI-006 that the $30,000 amount is incorrect and should be $7,000. Further, the 5% location factor should be excluded from the capital project cost estimate because location is already factored into CWS's land acquisition line item. CWS has stated in response to Public Advocates Office Data Request JMI-006 that it estimated its land acquisition budget using a listing valued at $238.67 per square foot in nearby Cupertino. CWS calculated the land acquisition line item by multiplying the Cupertino cost per square foot by the required minimum square footage for the project. Accordingly, CWS factored location into its acquisition estimate by using a local Cupertino price per square foot. Therefore, an additional 5% location factor is redundant and should be excluded from the project cost. Refer to Attachment 3-4 (CWS Response to Public Advocates Office Data Request JMI-006 (Los Altos New Well Siting Study)) of this Report.

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

[98] Chapter 1 at Section III.A.1.

[99] See Report on California Water Service Company's Administrative & General Expenses and Special Requests #7.

5. LAS 117 Station Rebuild Construction (PID 133283)

The Commission should reduce the proposed direct project cost from $1,503,378 to $1,173,403 in 2027[100] due to removing funding for the generator and project contingency. CWS requests multiple improvements at their Station 117 in the Los Altos District.[101]

The Commission should deny funding for a permanent generator, consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding generator projects.[102] The Commission should exclude project contingency from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding contingency.[103]

Based on the above adjustments, the Commission should allow a direct cost estimate of $1,173,403 for PID 133283.[104]

B. Common Plant Issues

The Commission should adopt the Common Plant recommendations summarized below.

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

[101] CWS requested improvements in PID 133283 include a wider entrance and motorized ate, new driveway and slope, new panelboard, pump replacement, replace existing station piping, permanent generator,

[102] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues. Specifically, the Commission should not allow funding for the electrical installation gen set with foundation 15-80 kW, gen set w/ ATS 50-80 kW, and generator concrete pad line items in CWS's capital project cost estimate.

[103] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[104] Attachment 3-5 (PID 133283 Direct Cost Estimate).

1. Project Contingency

The Commission should exclude project contingency from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding contingency.[105]

2. CM/SI

The Commission should exclude CM/SI from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding cost add-ons.[106]

3. Multi-GRC Projects (Not Included in Revenue Requirement in this GRC)

CWS seeks preapproval in this GRC to replace three panelboards under PID 132515 that CWS expects to take multiple rate case cycles to complete.[107] CWS plans to start this project during this GRC period and add them to the revenue requirement of the GRC in which the project will be completed.[108] The Commission should not preapprove this project. CWS can exercise its management discretion to pursue this project and then seek recovery of reasonable and prudently-incurred costs in a future GRC when the project is complete, in service, and beneficial to ratepayers. This recommendation is discussed further in Chapter 10 of this Report.

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[105] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[106] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[107] CWS plans to replace the panelboards at Stations 39, 115, and 123 under PID 132515.

[108] CWS Los Altos 2024 GRC PJ at 7.

4. Main Replacement Program (PIDs 111MRP25, 111MRP26, and 111MRP27)

The Commission should adopt a budget of $5,102,735 in 2025, $5,230,304 in 2026 and $5,360,934 in 2027 for CWS's Main Replacement Program budget as discussed further in Chapter 8 of this Report regarding CWS's Main Replacement Program.

5. Tank Improvement Program

The Commission should adopt a budget of $145,678 in 2025 for CWS's tank improvement projects, consistent with Cal Advocates' witness Cortney Sorensen's recommendation regarding CWS's Tank Improvement Program.[109]

6. Physical Security Program

The Commission should adopt a budget of $241,063 in 2025 and $171,374 in 2026 for CWS's Physical Security Program, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding CWS's Physical Security Program.[110]

7. Vehicle Replacement Program

The Commission should adopt a budget of $50,841 in 2026 and $174,912 in 2027 for CWS's Vehicle Replacement Program, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding CWS's Vehicle Replacement Program.[111]

8. Well Renewal Program

The Commission should adopt a budget of $42,857 in 2027 for CWS's Well Renewal Program, consistent with Cal Advocates' witness, Cortney Sorensen's recommendation regarding CWS's Well Renewal Program.[112]

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[109] See Report on Common Plant Well Renewal Program and Tank Improvement Program.

[110] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[111] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[112] See Report on Common Plant Well Renewal Program and Tank Improvement Program.

9. MCC/Panelboard Replacement Program

The Commission should adopt a budget of $4,270,633 in 2027 for CWS's MCC/Panelboard Replacement Program, consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding CWS's MCC/Panelboard Replacement Program.[113]

10. Control Valve Overhaul

The Commission should adopt a budget of $125,741 in 2025, $129,182 in 2026, and $132,706 in 2027 for the control valve overhaul projects, consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding control valve overhaul projects.[114]

11. Pump Replacement

The Commission should adopt the budgets for the pump replacement projects shown in Table 3-2 below, consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding pump replacement projects.[115]

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[113] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues.

[114] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues.

[115] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues.

Table 3-2: Pump Replacement Projects – Los Altos District[116]

PID	Project Description	CWS	Cal Advocates
132214	LAS-27-1 Pump Replacement	$ 121,599.09	$ 82,197.20
132221	LAS-121-2 Pump Replacement	$ 44,425.88	$ 30,030.51
132213	LAS-7-E Pump Replacement	$ 114,429.92	$ 77,529.78
132215	LAS-33-B Pump Replacement	$ 85,580.93	$ 57,983.70
132218	LAS-113-B Pump Replacement	$ 72,518.59	$ 49,133.57
132222	LAS-123-1 Pump Replacement	$ 74,314.58	$ 50,350.41
132216	LAS-34-B Pump Replacement	$ 151,677.60	$ 102,997.10
132219	LAS-119-D Pump Replacement	$ 87,718.36	$ 59,565.40
Direct Cost Total		**$ 752,264.95**	**$ 509,787.67**

12. AMI

The Commission should only allow $215,515 in 2026 for the LAS-AMI Initiative-Vehicles/Equipment (PID 133597) project.[117] In addition, the Commission should only allow $2,613,784 in 2027 for the LAS 2027 AMI Initiative-Meters (PID 133625) project. These recommendations are further discussed in Chapter 7 of this Report.

C. Non-Specific and Unscheduled Budgets

The Commission should reject funding for CWS's non-specific budget and unscheduled budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendations regarding non-specific and unscheduled budgets.[118]

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

[117] CWS states that the project year for PID 133597 is 2026 instead of 2025 in their response to data request A2407003 Cal Advocates DR JMI-014 (AMI 2).

[118] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

D. Previously Funded but Not in Service Projects

It is not reasonable to impose an additional cost burden on ratepayers when they do not receive a corresponding benefit. The Commission should reduce CWS's proposed budget for uncompleted projects that were funded and included in rates in prior GRCs by $12,087,743 in 2025, $16,699,008 in 2026, and $14,162,496 in 2027.[119] CWS can exercise its management discretion to proceed with these projects and seek recovery of all reasonable and prudent costs in a future GRC when the projects are completed, placed in service and providing a benefit to ratepayers. This recommendation is consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding previously funded but not in service projects.[120] Attachment 3-6 of this Report lists these previously funded projects.[121]

IV. CONCLUSION

The Commission should exclude the Los Altos Hills Stations SCADA Upgrade (PID 132757) because CWS is funding this project through their non-specific budget. The Commission should exclude the cost of the LAS New Well Property Purchase (PID 133287) project from rates until the well is in service to ratepayers. The Commission should deny CWS's request of $311,441 in 2027 for the LAS Well Hardness Study (PID 133284) because the ratepayer benefit of this study speculative and cannot be justified. The Commission should reject CWS's request of $163,379 in 2026 for the Vehicle for New Complements (PID 134768), consistent with Cal Advocates' witness Roy Keowen's recommendation regarding new employees.[122] The Commission should reduce the proposed direct project cost from $1,503,378 to $1,173,403 in 2027 for the LAS 117

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

[120] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[121] Attachment 3-6 (Previously Funded but Not Complete Projects – Los Altos District).

[122] See Report on California Water Service Company's Administrative & General Expenses and Special Requests #7.

Station Rebuild Construction (PID 133283) project due to removing funding for the generator and project contingency.

Further, the Commission should adopt Cal Advocates' recommended direct project cost amounts of $6,075,100 in 2025, $9,709,515 in 2026, and $20,322,668 in 2027 for plant additions.[123]

[123] These amounts include the Common Plant Issues recommendations.

LIST OF ATTACHMENTS FOR CHAPTER 3

	Attachment #	Description
1	Attachment 3-1	Capital Budget Details – Los Altos District
2	Attachment 3-2	Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures
3	Attachment 3-3	Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures
4	Attachment 3-4	CWS Response to Public Advocates Office Data Request JMI-006 (Los Altos New Well Siting Study)
5	Attachment 3-5	PID 133283 Direct Cost Estimate
6	Attachment 3-6	Previously Funded but Not in Service Projects – Los Altos District

CHAPTER 4 REDWOOD VALLEY DISTRICT PLANT

I. INTRODUCTION

In this GRC period (2025 to 2027), CWS requests an average of $5.5 million in annual plant additions for the Redwood Valley District.[124] This amount is approximately 176% higher than CWS's annual average plant additions from 2018-2023 in the same district.[125] CWS's request for projects that were funded and included in rates in previous GRCs but are not yet in service for 2025-2027 represents approximately 32.3%, 25.7%, and 7.6%, respectively of CWS's annual proposed plant additions in the Redwood Valley District. This indicates that CWS's request exceeds what CWS has historically been able to complete. CWS's request is inflated with previously funded projects that are no yet completed. These projects were already funded and included in rates in prior GRCs under the presumption that CWS would complete these projects as scheduled.

II. SUMMARY OF RECOMMENDATIONS

For Redwood Valley District, the Commission should adopt direct project costs of $272,900 in 2025, $660,521 in 2026, and $3,835,377 in 2027 for plant additions. Table 4-1, below, summarizes Cal Advocates' recommended capital plant additions. The Commission should reduce the proposed direct project cost for the Coast Springs 4 Station Rebuild (PID 133268) project from $1,471,949 to $1,282,281 in 2027,[126] due to removal of project components already incorporated in previously approved capital projects, duplicate items, items no longer part of the project scope, and project contingency. The Commission should deny funding for the Lucerne Pressure Reducing Valve (PRV) at 17th & Country Club (PID 133260) project because the total

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[124] The Redwood Valley District includes the Armstrong Valley, Rancho del Paradiso, Noel Heights, Hawkins, Coast Springs, and Lucerne systems.

[125] Attachment 4-2 (Redwood Valley District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

[126] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." CWS's RO model and capital project cost estimate show the incorrect direct project cost for PID 133268. CWS states that $1,471,949 is the correct direct project cost for PID 133268.

trihalomethane levels (TTHM) are consistently below the maximum contaminant level (MCL). The Commission should exclude from rates in this GRC period funding for the studies proposed in the Redwood Valley District since the ratepayer benefits related to these studies are speculative.[127]

Cal Advocates' recommendations for plant additions for the Redwood Valley District also reflect several Common Plant issues.[128] The Commission should exclude from rates in this GRC the costs associated with project contingency, CM/SI, design and permitting only projects, multi-GRC projects not included in revenue requirement in this rate case, non-specific budget, unscheduled budget, and previously funded but not in service projects. The Commission should adopt Cal Advocates' recommended budgets related to the Flowmeter Replacement Program, Main Replacement Program, generator projects, tank improvement projects, sample station projects, pump replacement projects, and AMI. Attachment 4-1 of this Report presents Cal Advocates' project-specific adjustments.[129]

Table 4-1: Capital Budget Summary – Redwood Valley District

Redwood Valley ($000)	2025	2026	2027	Annual Average
Cal Advocates' Recommendation	$ 272.90	$ 660.52	$ 3,835.38	$ 1,589.60
CWS's Proposed	$ 2,806.94	$ 4,655.16	$ 8,948.58	$ 5,470.23
CWS> Cal Advocates	$ 2,534.04	$ 3,994.64	$ 5,113.21	$ 3,880.63
Cal Advocates as % of CWS	10%	14%	43%	29%

[127] The proposed studies in the Redwood Valley District include: RDV 205 ARM Well Siting Study (PID 133267), COS Potable Reuse Study (PID 133269), and LUC Seismic Mitigation Plan (PID 133837).

[128] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District; Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues; Report on Common Plant Well Renewal Program and Tank Improvement Program; and Chapters 6, 7, 8, and 10 of this Report regarding these Common Plant issues.

[129] Attachment 4-1 (Capital Budget Details – Redwood Valley District).

III. ANALYSIS

The Redwood Valley District recorded an average annual gross plant addition[130] of $1.98 million in the last six years (2018 to 2023).[131] Attachment 4-2 compares CWS's and Cal Advocates' estimates for the test years with the recorded annual average gross plant additions.[132]

A. Proposed District-Specific Projects

1. Coast Springs 4 Station Rebuild (PID 133268)

The Commission should reduce the proposed direct project cost from $1,471,949 to $1,282,281 in 2027 due to removal of project components already incorporated in previously approved capital projects, duplicate items, items no longer part of the project scope, and project contingency.[133] CWS requests multiple improvements at the existing Coast Springs Station 4.[134]

CWS states that a portion of the project scope is to complete security upgrades at the existing station which include fencing.[135] CWS requests $32,000 for fencing in their capital cost estimate for PID 133268.[136] **<<BEGIN CONFIDENTIAL>>** [redacted]

[redacted]

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[130] Gross plant additions include company funded plant additions, contributions, and advance deposits for specific plants.

[131] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

[132] Attachment 4-2 (Redwood Valley District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures).

[133] In CWS's Bay Area Region 2024 GRC PJ Book, the capital project cost originally showed a direct project cost of $1,366,584 for PID 133268. However, CWS states in response to data request JMI-016 that this direct project costs is incorrect. CWS states that $1,471,949 is the correct direct project cost for PID 133268.

[134] The project scope for PID 133268 includes: raising the height of the existing well, replace the existing station building, install a new well pump, piping and appurtenances, install a flowmeter, install a new panelboard and associated electrical equipment,.

[135] CWS Bay Area Region 2024 GRC PJ Book at 244.

[136] CWS Bay Area Region 2024 GRC PJ Book at 244.

[redacted]

[redacted][138] **<<END CONFIDENTIAL>>**. Since the Commission previously approved funding for fencing, additional funding for fencing in this GRC is redundant. Therefore, Cal Advocates has removed cost of fencing in its recommended budget for this project.

Further, two line items appear twice in the PID 133268 capital project cost estimate: specifically, "electrical installation 100-200 amp (A)" and "SCADA SCADA pack."[139] CWS confirmed that these duplicates are errors, so Cal Advocates has removed the duplicate items from the recommended project costs.[140]

Additionally, the "storage tank – bolted steel (stl)" line item in the project cost estimate is no longer part of the project scope for PID 133268.[141] CWS states that the preliminary project scope included construction of a small tank to function as a wet well. However, CWS later decided that the tank was unnecessary and no longer plans to construct a tank at Station 4.[142] Thus, Cal Advocates has removed this line item for its project cost recommendation.

Lastly, the Commission should exclude funding for project contingency from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding contingency.[143]

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[137] [redacted] D.24-03-042 at 124.

[138] [redacted]

[139] CWS Bay Area Region 2024 GRC PJ Book at 244-245.

[140] Attachment 4-3 (CWS Response to Public Advocates Office Data Request JMI-013 (Station Rebuild – Redwood Valley)).

[141] Attachment 4-3 (CWS Response to Public Advocates Office Data Request JMI-013 (Station Rebuild – Redwood Valley)).

[142] Attachment 4-3 (CWS Response to Public Advocates Office Data Request JMI-013 (Station Rebuild – Redwood Valley)).

[143] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation,

Based on the above adjustments, the Commission should allow a direct cost estimate of $1,282,281 for PID 133268.[144]

2. Lucerne PRV at 17th & Country Club (PID 133260)

The Commission should deny funding for this project since the TTHM levels is consistently below the MCL. CWS requests $977,415 in 2027 to install a pressure reducing valve (PRV) to control the tank levels in the system, minimize water age, reduce chlorine doses and chlorine residual in the system, and minimize fluctuations in disinfection by-products in the system.[145]

CWS states that it takes quarterly samples at sample site 6 because it is located at the farthest point of the distribution system, and that the TTHM level from the May 2023 sample was close to the MCL of 80 micrograms per liter (µg/L).[146] However, violations occur when the running average exceeds the MCL.[147] While the TTHM level during the May 2023 sample is close to the MCL, the water quality data CWS provided in its Bay Area Region Project Justification shows that the TTHM level is below the MCL.[148] More recent water quality data also shows that the TTHM levels are consistently under the MCL as shown in Table 4-2 below.

Livermore District, Stockton District, and Travis District.

[144] Attachment 4-4 (PID 133268 Direct Cost Estimate).

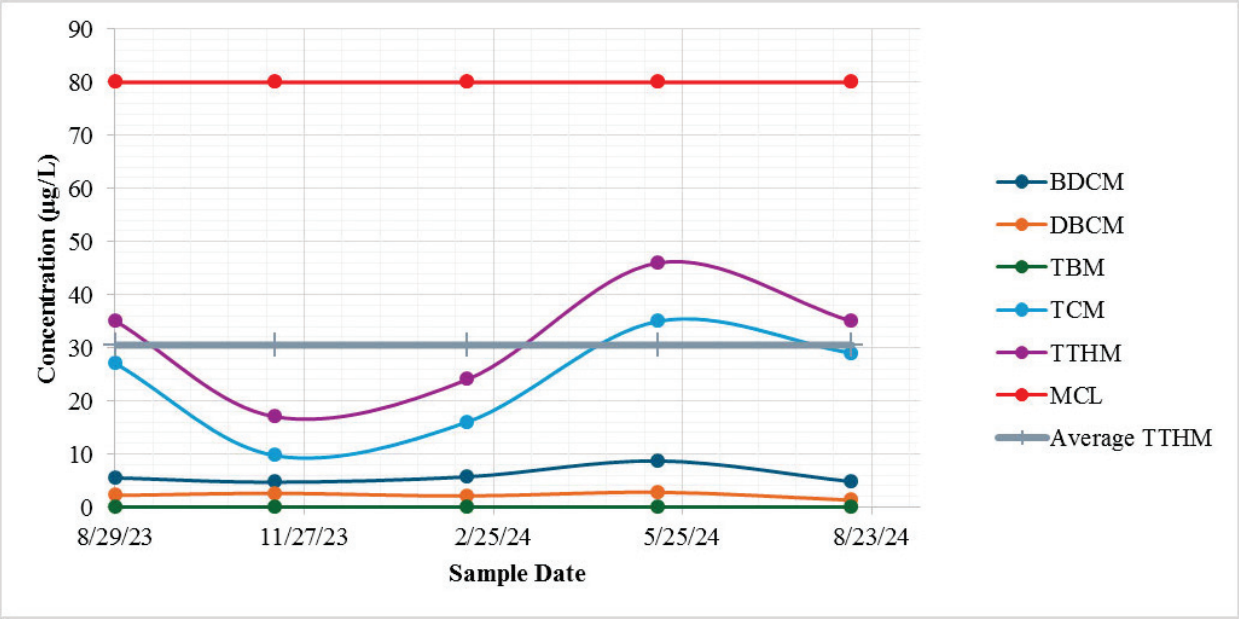
[145] CWS Bay Area Region 2024 GRC PJ Book at 193. Trihalomethanes is a disinfection by-product that is found in distribution or in water storage tanks with aging water.

[146] CWS Bay Area Region 2024 GRC PJ Book at 191-192.

[147] California Drinking Water Program 2022 Annual Compliance Report at 48. https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/2022/acr-2022-final.pdf

[148] CWS Bay Area Region 2024 GRC PJ Book at 191.

Table 4-2: Lucerne Sample Site 6 Water Quality Data - Trihalomethanes[149]



Because the TTHM levels are consistently under the MCL, the project is not needed. Therefore, the Commission should reject CWS's request for funding PID 133260.

3. Study Projects

CWS requests funding for direct costs for several studies that may or may not ever result in the construction of projects. Table 4-3 below lists these study projects.[150] CWS can exercise its management discretion to proceed with these studies and then seek cost recovery in a future rate case if the results lead to actual projects that are beneficial for ratepayers. For this GRC, however, the Commission should deny CWS's request for

[149] Attachment 4-5 (CWS Response to Public Advocates Office Data Request JMI-010 (THM – Lucerne), Attachment 1).

[150] PID 133267 is for a well siting study for the Armstrong Valley system. This study evaluates the optimal location for a well in the Armstrong Valley system. PID 133269 is for a portable reuse study in the Coast Springs system. This study identifies the amount of available wastewater, viable treatment options for both direct and indirect use, and intake path for the produced water, determine need for produced water, determining the need for the produced water, identifying demand, and a cost benefit analysist of the project. PID 133837 is for a seismic mitigation plan for the Lucerne Treatment Plant. The seismic mitigation plan involves hiring a consultant for site visits, a seismic risk study, a mitigation plan, and cost estimate.

advance ratepayer funding of the proposed studies as discussed further in Chapter 1 of this Report regarding study projects.[151]

Table 4-3: Study Projects – Redwood Valley District[152]

PID	Project Description	Year	Direct Cost
133267	RDV 205 ARM Well Siting Study	2026	$ 248,302.97
133269	COS Potable Reuse Study	2027	$ 204,768.08
133837	LUC Seismic Mitigation Plan	2026	$ 102,629.72
Direct Total			$ 555,700.77

B. Common Plant Issues

The Commission should adopt the Common Plant recommendations summarized below.

1. Project Contingency

The Commission should exclude project contingency from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding contingency.[153]

2. CM/SI

The Commission should exclude CM/SI from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding cost add-ons.[154]

3. Design and Permitting Only Projects

Table 4-4 shows the Redwood Valley District projects for which CWS requests funding only for design and permitting costs. The Commission should exclude in rates in

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[151] Chapter 1 at Section III.A.1.

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

[153] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[154] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

this GRC funding for only design and permitting costs. CWS can exercise its management discretion to pursue the design and permitting for these projects and seek funding in a future GRC when they result in actual projects with a defined scope, plan, schedule, and cost estimate. This recommendation is further discussed in Chapter 10 of this Report.

Table 4-4: Design and Permitting Only Projects – Redwood Valley District[155]

PID	Project Description	Year	Direct Project Cost in 2024 Rate Case
133266	NOH 201 Plant Re-design	2027	$ 426,245.75
133836	LUC Intake Extension Design	2027	$ 283,434.22
Direct Total			**$ 709,679.97**

4. Multi-GRC Projects (Not Included in Revenue Requirement in this GRC)

CWS seeks preapproval for the Noel Heights (NOH) 202 Paving and Grading project (PID 133486), which is not expected to be in service during this rate case.[156] CWS plans to start this project during this GRC period and add it to the revenue requirement of the GRC in which the project will be completed.[157] The Commission should not preapprove this project. CWS can exercise its management discretion to pursue the project and then seek recovery of reasonable and prudently-incurred costs of PID 133486 once the project is complete, in service, and beneficial to ratepayers. This recommendation is discussed further in Chapter 10 of this Report.

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

[156] CWS Bay Area Region 2024 GRC PJ Book at 182.

[157] CWS Bay Area Region 2024 GRC PJ Book at 182.

5. Flowmeter Replacement Program (PID 132043 and 132044)

The Commission should adopt a budget of $202,790 in 2026 and reject CWS's request for $107,120 in 2027 for CWS's Flowmeter Replacement Program budget as discussed further in Chapter 6 of this Report regarding CWS's Flowmeter Replacement Program.

6. Main Replacement Program (PIDs 146MRP25, 146MRP26, and 146MRP27)

The Commission should adopt a budget of $154,362 in 2025, $158,221 in 2026 and $162,173 in 2027 for CWS's Main Replacement Program budget as discussed further in Chapter 8 of this Report regarding CWS's Main Replacement Program.

7. Generator Projects

The Commission should adopt a budget of $10,189 in 2027 for the LUC Portable Generator (PID 133261) project, consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding generator projects.[158]

8. Pump Replacement

The Commission should adopt a budget of $31,619 in 2027 for the NOH 201-A Pump Replacement (PID 133256) project, consistent with Cal Advocates' witness, Katherine Nguyen's recommendation regarding pump replacement projects.[159]

9. AMI

The Commission should only allow $248,750 in 2027 for AMI in the Redwood Valley District. This recommendation is discussed further in Chapter 7 of this Report.

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[158] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues.

[159] See Report and Recommendations on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues.

10. Tank Improvement Program

The Commission should adopt a budget of $47,901 in 2026[160] and $22,159 in 2027 for CWS's tank improvement projects, consistent with Cal Advocates' witness Cortney Sorensen's recommendation regarding CWS's Tank Improvement Program.[161]

11. Sample Stations Program

The Commission should adopt a budget of $4,742 in 2025 for CWS's Sample Stations Program, consistent with Cal Advocates' witness Cortney Sorensen's recommendation regarding CWS's Sample Stations Program.[162]

C. Non-Specific and Unscheduled Budgets

The Commission should reject funding for CWS's non-specific budget and unscheduled budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendations regarding non-specific and unscheduled budgets.[163]

D. Previously Funded but Not in Service Projects

It is not reasonable to impose additional cost burdens on ratepayers when they do not receive a corresponding benefit. The Commission should reduce CWS's proposed budget for uncompleted projects that were funded and included in rates in prior GRCs by $905,892 in 2025, $1,197,423 in 2026, and $675,629 in 2027.[164] CWS can exercise its management discretion to proceed with these projects and seek recovery of prudent and reasonable costs in a future GRC when the projects are completed, placed in service, and providing a benefit to ratepayers. This recommendation is consistent with Cal

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[160] The Commission should only allow $42,788 for the RDV 2025 Tank Improvements (PID 133487) project and $5,113 for the RDV 2026 Tank Improvements (PID 133488) project.

[161] See Report on Common Plant Well Renewal Program and Tank Improvement Program.

[162] See Report on Common Plant Well Renewal Program and Tank Improvement Program.

[163] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District..

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

Advocates' witness, Sari Ibrahim's recommendation regarding previously funded but not in service projects.[165] Attachment 4-6 provides a list of these projects.[166]

IV. CONCLUSION

The Commission should reduce CWS's proposed direct project costs from $1,471,949 to $1,282,281 in 2027[167] for the Coast Springs 4 Station Rebuild (PID 133268) project to reflect removal of several line items, including project components already approved in previous capital project budgets, duplicate items, items no longer included in the project scope, and project contingency. The Commission should deny funding for the Lucerne PRV at 17th & Country Club (PID 133260) project because the project is unnecessary given that TTHM is consistently below the MCL. In addition, The Commission should reject CWS's request to fund studies proposed in the Redwood Valley District because ratepayers will not benefit from the studies unless or until the studies result in construction of useful projects.[168]

Further, the Commission should adopt Cal Advocates' recommended direct cost amounts of $272,900 in 2025, $660,521 in 2026, and $3,835,377 in 2027 for plant additions.[169]

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[165] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[166] Attachment 4-6 (Previously Funded but Not Complete Projects – Redwood Valley District).

[167] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." CWS's RO model and capital project cost estimate show the incorrect direct project cost for PID 133268. CWS states that $1,471,949 is the correct direct project cost for PID 133268.

[168] The proposed studies in the Redwood Valley District include: RDV 205 ARM Well Siting Study (PID 133267), COS Potable Reuse Study (PID 133269), and LUC Seismic Mitigation Plan (PID 133837).

[169] These amounts include the Common Plant Issues recommendations.

LIST OF ATTACHMENTS FOR CHAPTER 4

	Attachment #	Description
1	Attachment 4-1	Capital Budget Details – Redwood Valley District
2	Attachment 4-2	Redwood Valley District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures
3	Attachment 4-3	CWS Response to Public Advocates Office Data Request JMI-013 (Station Rebuild – Redwood Valley)
4	Attachment 4-4	PID 133268 Direct Cost Estimate
5	Attachment 4-5	CWS Response to Public Advocates Office Data Request JMI-010 (THM – Lucerne), Attachment 1
6	Attachment 4-6	Previously Funded but Not in Service Projects – Redwood Valley District
7	Attachment 4-7 CONFIDENTIAL	A.21-07-002, Capital Project Justification--Physical Security and Other Matters, pp. 159 and 169

CHAPTER 5 METER REPLACEMENT PROGRAM

I. INTRODUCTION

CWS requested an annual budget for its Meter Replacement Program of $5,683,247, $5,825,328, and $4,077,673 for 2025-2027, respectively, for the routine replacement of its small and large meters in its districts.[170] CWS explains that it replaces its small meters (5/8"-2") based on the General Order (GO) 103-A replacement schedule and replaces large meters[171] on a 20-year cycle.[172] However, based on meter inventory provided by CWS, 78 large meters are not due for replacement during this GRC period based on CWS's replacement schedule.

II. SUMMARY OF RECOMMENDATIONS

As shown in Tables 5-1 through 5-3, the Commission should authorize direct project budget of $5,429,814 in 2025, $5,467,158 in 2026, and $3,740,018 in 2027, excluding budgets for 78 large meters that do not require replacement in this rate case cycle. Tables 5-1 through 5-3 below show the budget comparison between CWS's and Cal Advocates' recommendations.

[170] CWS Common Plant Issues (Common Plant) 2024 GRC PJ Book at 355-359. Costs shown are direct project costs. CWS states in response to data request A2407003 JMI-015(RO Model) that the direct projects shown in CWS's RO model are incorrect for AVD0900, KCD0900, and MRL0900. The direct project costs shown in Tables 5-1 through 5-3 reflect the correct direct project costs.

[171] Large meters are meters larger than 2-inches.

[172] CWS Common Plant 2024 GRC PJ Book at 353.

Table 5-1:2025 Meter Replacement Program – Direct Cost Comparison[173]

District	PID	Total District Direct Cost	
		CWS	Cal Advocates
Antelope Valley	AVD0900	$ 13,863.32	$ 13,863.32
	SMD0900	$ 427,348.26	$ 427,348.26
Bayshore	SSF0900	$ 212,066.12	$ 212,066.12
Bakersfield	BKD0900	$ 558,054.48	$ 558,054.48
Bear Gulch	BGD0900	$ 300,718.23	$ 300,718.23
Chico	CHD0900	$ 251,733.04	$ 251,733.04
Dixon	DIX0900	$ 19,316.22	$ 19,316.22
Dominguez	DOM0900	$ 875,883.09	$ 839,696.32
East Los Angeles	ELA0900	$ 246,160.84	$ 246,160.84
Hermosa Redondo	HRD0900	$ 498,409.30	$ 377,786.75
Kern River Valley	KRV0900	$ 13,925.03	$ 13,925.03
King City	KCD0900	$ 42,809.05	$ 30,705.05
Livermore	LIV0900	$ 197,154.78	$ 197,154.78
Los Altos	LAS0900	$ 274,002.07	$ 274,002.07
Marysville	MRL0900	$ 39,988.24	$ 27,884.25
Oroville	ORO0900	$ 46,755.84	$ 46,755.84
Palos Verdes	PVD0900	$ 463,623.94	$ 403,312.67
Salinas	SLN0900	$ 273,679.31	$ 273,679.31
Selma	SEL0900	$ 55,689.70	$ 43,585.71
Stockton	STK0900	$ 325,999.49	$ 325,999.49
Visalia	VIS0900	$ 409,239.11	$ 409,239.11
Westlake	WLK0900	$ 110,437.00	$ 110,437.00
Willows	WIL0900	$ 26,390.36	$ 26,390.36
Direct Total		**$ 5,683,246.80**	**$ 5,429,814.24**

[173] CWS Common Plant 2024 GRC PJ Book at 356-359; Attachment 5-2 (Revised Meter Replacement Budget Direct Cost Estimates).

Table 5-2: 2026 Meter Replacement Program – Direct Cost Comparison[174]

District	PID	Total District Direct Cost	
		CWS	Cal Advocates
Antelope Valley	AVD0900	$ 14,209.91	$ 10,058.41
	SMD0900	$ 438,031.96	$ 438,031.96
Bayshore	SSF0900	$ 217,367.77	$ 217,367.77
Bakersfield	BKD0900	$ 572,005.84	$ 572,005.84
Bear Gulch	BGD0900	$ 308,236.19	$ 308,236.19
Chico	CHD0900	$ 258,026.36	$ 258,026.36
Dixon	DIX0900	$ 19,799.12	$ 19,799.12
Dominguez	DOM0900	$ 897,780.16	$ 761,778.23
East Los Angeles	ELA0900	$ 252,314.86	$ 252,314.86
Hermosa Redondo	HRD0900	$ 510,869.54	$ 387,231.42
Kern River Valley	KRV0900	$ 14,273.16	$ 14,273.16
King City	KCD0900	$ 43,879.27	$ 31,472.68
Livermore	LIV0900	$ 202,083.65	$ 202,083.65
Los Altos	LAS0900	$ 280,852.12	$ 280,852.12
Marysville	MRL0900	$ 40,987.94	$ 28,581.35
Oroville	ORO0900	$ 47,924.74	$ 47,924.74
Palos Verdes	PVD0900	$ 475,214.54	$ 438,123.11
Salinas	SLN0900	$ 280,521.29	$ 280,521.29
Selma	SEL0900	$ 57,081.94	$ 44,675.35
Stockton	STK0900	$ 334,149.48	$ 334,149.48
Visalia	VIS0900	$ 419,470.08	$ 419,470.08
Westlake	WLK0900	$ 113,197.92	$ 100,791.33
Willows	WIL0900	$ 27,050.11	$ 19,389.20
Direct Total		**$ 5,825,327.97**	**$ 5,467,157.72**

[174] CWS Common Plant 2024 GRC PJ Book at 356-359; Attachment 5-2 (Revised Meter Replacement Budget Direct Cost Estimates).

Table 5-3: 2027 Meter Replacement Program – Direct Cost Comparison[175]

District	PID	Total District Direct Cost	
		CWS	Cal Advocates
Antelope Valley	AVD0900	$ -	$ -
	SMD0900	$ -	$ -
Bayshore	SSF0900	$ -	$ -
Bakersfield	BKD0900	$ 586,305.99	$ 586,305.99
Bear Gulch	BGD0900	$ -	$ -
Chico	CHD0900	$ 264,477.02	$ 264,477.02
Dixon	DIX0900	$ 20,294.10	$ 20,294.10
Dominguez	DOM0900	$ 920,224.67	$ 780,822.69
East Los Angeles	ELA0900	$ 258,622.73	$ 233,189.22
Hermosa Redondo	HRD0900	$ 523,641.27	$ 422,258.02
Kern River Valley	KRV0900	$ 14,629.99	$ 14,629.99
King City	KCD0900	$ 44,976.25	$ 32,259.50
Livermore	LIV0900	$ 207,135.74	$ 207,135.74
Los Altos	LAS0900	$ -	$ -
Marysville	MRL0900	$ 42,012.64	$ 29,295.89
Oroville	ORO0900	$ 49,122.86	$ 36,406.10
Palos Verdes	PVD0900	$ -	$ -
Salinas	SLN0900	$ 287,534.32	$ 274,817.57
Selma	SEL0900	$ 58,508.99	$ 45,792.24
Stockton	STK0900	$ 342,503.21	$ 342,503.21
Visalia	VIS0900	$ 429,956.84	$ 429,956.84
Westlake	WLK0900	$ -	$ -
Willows	WIL0900	$ 27,726.37	$ 19,873.93
Direct Total		**$ 4,077,673.00**	**$ 3,740,018.04**

III. ANALYSIS

A. Three-Inch Meters

The Commission should remove $4,152 from the 2026 budget for meter replacement because one of the two 3-inch meters in the Antelope Valley District is not due for replacement.

[175] CWS Common Plant 2024 GRC PJ Book at 356-359; Attachment 5-2 (Revised Meter Replacement Budget Direct Cost Estimates).

According to CWS's inventory of 3-inch meters in the Antelope Valley District,[176] only one of the two 3-inch meters will reach the end of their 20-year replacement cycle during this GRC.[177] Therefore, CWS should replace only one 3-inch meter.

The Commission should remove $4,152 from CWS's estimated budget for the remaining 3-inch meter in the Antelope Valley District as shown in Table 5-4 below.

Table 5-4: 3" Meters Inventory Summary – Antelope Valley[178]

District	PID	Number of 3" Meters Proposed to be Replaced in 2025-2027	Number of 3" Meters that Reach CWS's 20 Year Replacement Schedule by 2027	Number of 3" Meters in 2025-2027 that should be Removed from Meter Replacement Program Cost Estimates
Antelope Valley	AVD0900	2	1	1

Attachment 5-2 of this Report shows the revised budget estimate for AVD 0900.[179] Table 5-9 shows the revised Meter Replacement Program budget for the Antelope Valley District.

B. Four Inch Meters

The Commission should remove $7,661 in 2026 and $7,852 in 2027 from the replacement budget because two of the three 4-inch meters in the Willows District do not warrant replacement. According to CWS's inventory of 4-inch meters in the Willows

[176] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

[177] Attachment 5-1 (Meter Inventory Tables).

[178] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachments 2-4.

[179] Attachment 5-2 (Revised Meter Replacement Budget Direct Cost Estimates).

District,[180] only one 4-inch meter will reach the end of their 20-year replacement cycle during this GRC.[181] Therefore, CWS should replace only one 4-inch meter.

The Commission should remove $7,661 in 2026 and $7,852 in 2027 from CWS's estimated budget for the remaining two 4-inch meters in the Willows District as shown in Table 5-5 below.

Table 5-5: 4" Meters Inventory Summary – Willows District[182]

District	PID	Number of 4" Meters Proposed to be Replaced in 2025-2027	Number of 4" Meters that Reach CWS's 20 Year Replacement Schedule by 2027	Number of 4" Meters in 2025-2027 that should be Removed from Meter Replacement Program Cost Estimates
Willows	WIL0900	3	1	2

Attachment 5-2 of this Report shows the revised budget estimate for WIL 0900.[183] Tables 5-9 and 5-10 show the revised Meter Replacement Program budget for the Willows District.

C. Six Inch Meters

The Commission should remove $36,312 in 2025, $49,626 in 2026, and $89,017 in 2027 from the replacement budget because 14 of the 23 6-inch meters in the East Los Angeles, King City, Marysville, Oroville, Salinas, Selma, and Westlake districts do not warrant replacement.

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[180] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

[181] Attachment 5-1 (Meter Inventory Tables).

[182] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachments 2-4.

[183] Attachment 5-2 (Revised Meter Replacement Budget Direct Cost Estimates).

According to CWS's inventory of 6-inch meters in the East Los Angeles, King City, Marysville, Oroville, Salinas, Selma, and Westlake districts,[184] only nine 6-inch meters in these districts will reach the end of their 20-year replacement cycle during this GRC.[185] Therefore, CWS should replace only nine 6-inch meters.

The Commission should remove $36,312 in 2025, $49,626 in 2026, and $89,017 in 2027 from CWS's estimated budget for fourteen 6-inch meters from the East Los Angeles, King City, Marysville, Oroville, Salinas, Selma, and Westlake districts as shown in Table 5-6 below.

Table 5-6: 6" Meters Inventory Summary – East Los Angeles, King City, Marysville, Oroville, Salinas, Selma, and Westlake districts[186]

District	PID	Number of 6" Meters Proposed to be Replaced in 2025-2027	Number of 6" Meters that Reach CWS's 20 Year Replacement Schedule by 2027	Number of 6" Meters in 2025-2027 that should be Removed from Meter Replacement Program Cost Estimates
East Los Angeles	ELA0900	6	4	2
King City	KCD0900	3	0	3
Marysville	MRL0900	3	0	3
Oroville	ORO0900	3	2	1
Salinas	SLN0900	3	2	1
Selma	SEL0900	3	0	3
Weslake	WLK0900	2	1	1
Total		**23**	**9**	**14**

[184] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

[185] Attachment 5-1 (Meter Inventory Tables).

[186] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachments 2-4.

Attachment 5-2 of this Report shows the revised budget estimates for ELA 0900, KCD 0900, MRL 0900, ORO 0900, SLN 0900, SEL 0900, and WLK 0900. Tables 5-8 through 5-10 below show the revised Meter Replacement Program budget for the East Los Angeles, King City, Marysville, Oroville, Salinas, Selma, and Westlake districts.

D. Eight Inch

The Commission should remove $217,121 in 2025, $396,731 in 2026, and $240,785 in 2027 from CWS's proposed meter replacement budget because 61 of the73 8-inch meters in the Dominguez, Hermosa Redondo, and Palos Verdes districts do not warrant replacement.

According to CWS's inventory of 8-inch meters in the Dominguez, Hermosa Redondo, and Palos Verdes districts,[187] only 12 8-inch meters will reach the end of their 20-year replacement cycle during this GRC.[188] Therefore, CWS should replace only 12 8-inch meters.

The Commission should remove $217,121 in 2025, $396,731 in 2026, and $240,785 in 2027 from CWS's estimated budget for the remaining 61 8-inch meters in the Dominguez, Hermosa Redondo, and Palos Verdes districts as shown in Table 5-7 below.

[187] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

[188] Attachment 5-1 (Meter Inventory Tables).

Table 5-7: 8" Meters Inventory Summary – Dominguez, Hermosa Redondo, and Palos Verdes districts[189]

District	PID	Number of 8" Meters Proposed to be Replaced in 2025-2027	Number of 8" Meters that Reach CWS's 20 Year Replacement Schedule by 2027	Number of 8" Meters in 2025-2027 that should be Removed from Meter Replacement Program Cost Estimates
Dominguez	DOM0900	33	8	25
Hermosa Redondo	HRD0900	30	2	28
Palos Verdes	PVD0900	10	2	8
Total		**73**	**12**	**61**

Attachment 5-2 of this Report shows the revised budget estimates for DOM 0900, HRD 0900, and PVD 0900.[190] Tables 5-8 through 5-10 below show the revised Meter Replacement Program budget for the Dominguez, Hermosa Redondo, and Palos Verdes districts.

E. Recommended Budget

The Commission should approve Cal Advocates' recommended Meter Replacement Program budgets for 2025-2027 as shown in Tables 5-8 through 5-10.[191]

[189] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachments 2-4.

[190] Attachment 5-2 (Revised Meter Replacement Budget Direct Cost Estimates).

[191] The revised direct project costs are shown in Attachment 5-2 (Revised Meter Replacement Budget Direct Cost Estimates). CWS states in response to data request A2407003 JMI-015(RO Model) that the direct projects shown in CWS's RO model are incorrect for AVD0900, KCD0900, and MRL0900. The direct project costs shown in Tables 5-8 through 5-10 reflect the correct direct project costs.

Table 5-8: 2025 Recommended Meter Replacement Program Budget[192]

District	PID	Total District Direct Cost	
		CWS	Cal Advocates
Antelope Valley	AVD0900	$ 13,863.32	$ 13,863.32
	SMD0900	$ 427,348.26	$ 427,348.26
Bayshore	SSF0900	$ 212,066.12	$ 212,066.12
Bakersfield	BKD0900	$ 558,054.48	$ 558,054.48
Bear Gulch	BGD0900	$ 300,718.23	$ 300,718.23
Chico	CHD0900	$ 251,733.04	$ 251,733.04
Dixon	DIX0900	$ 19,316.22	$ 19,316.22
Dominguez	DOM0900	$ 875,883.09	$ 839,696.32
East Los Angeles	ELA0900	$ 246,160.84	$ 246,160.84
Hermosa Redondo	HRD0900	$ 498,409.30	$ 377,786.75
Kern River Valley	KRV0900	$ 13,925.03	$ 13,925.03
King City	KCD0900	$ 42,809.05	$ 30,705.05
Livermore	LIV0900	$ 197,154.78	$ 197,154.78
Los Altos	LAS0900	$ 274,002.07	$ 274,002.07
Marysville	MRL0900	$ 39,988.24	$ 27,884.25
Oroville	ORO0900	$ 46,755.84	$ 46,755.84
Palos Verdes	PVD0900	$ 463,623.94	$ 403,312.67
Salinas	SLN0900	$ 273,679.31	$ 273,679.31
Selma	SEL0900	$ 55,689.70	$ 43,585.71
Stockton	STK0900	$ 325,999.49	$ 325,999.49
Visalia	VIS0900	$ 409,239.11	$ 409,239.11
Westlake	WLK0900	$ 110,437.00	$ 110,437.00
Willows	WIL0900	$ 26,390.36	$ 26,390.36
Direct Total		**$ 5,683,246.80**	**$ 5,429,814.24**

[192] CWS Common Plant 2024 GRC PJ Book at 356-359; Attachment 5-2 (Revised Meter Replacement Budget Direct Cost Estimates).

Table 5-9: 2026 Recommended Meter Replacement Program Budget[193]

District	PID	Total District Direct Cost	
		CWS	Cal Advocates
Antelope Valley	AVD0900	$ 14,209.91	$ 10,058.41
	SMD0900	$ 438,031.96	$ 438,031.96
Bayshore	SSF0900	$ 217,367.77	$ 217,367.77
Bakersfield	BKD0900	$ 572,005.84	$ 572,005.84
Bear Gulch	BGD0900	$ 308,236.19	$ 308,236.19
Chico	CHD0900	$ 258,026.36	$ 258,026.36
Dixon	DIX0900	$ 19,799.12	$ 19,799.12
Dominguez	DOM0900	$ 897,780.16	$ 761,778.23
East Los Angeles	ELA0900	$ 252,314.86	$ 252,314.86
Hermosa Redondo	HRD0900	$ 510,869.54	$ 387,231.42
Kern River Valley	KRV0900	$ 14,273.16	$ 14,273.16
King City	KCD0900	$ 43,879.27	$ 31,472.68
Livermore	LIV0900	$ 202,083.65	$ 202,083.65
Los Altos	LAS0900	$ 280,852.12	$ 280,852.12
Marysville	MRL0900	$ 40,987.94	$ 28,581.35
Oroville	ORO0900	$ 47,924.74	$ 47,924.74
Palos Verdes	PVD0900	$ 475,214.54	$ 438,123.11
Salinas	SLN0900	$ 280,521.29	$ 280,521.29
Selma	SEL0900	$ 57,081.94	$ 44,675.35
Stockton	STK0900	$ 334,149.48	$ 334,149.48
Visalia	VIS0900	$ 419,470.08	$ 419,470.08
Westlake	WLK0900	$ 113,197.92	$ 100,791.33
Willows	WIL0900	$ 27,050.11	$ 19,389.20
Direct Total		**$ 5,825,327.97**	**$ 5,467,157.72**

[193] CWS Common Plant 2024 GRC PJ Book at 356-359; Attachment 5-2 (Revised Meter Replacement Budget Direct Cost Estimates).

Table 5-10: 2027 Recommended Meter Replacement Program Budget[194]

District	PID	Total District Direct Cost	
		CWS	Cal Advocates
Antelope Valley	AVD0900	$ -	$ -
	SMD0900	$ -	$ -
Bayshore	SSF0900	$ -	$ -
Bakersfield	BKD0900	$ 586,305.99	$ 586,305.99
Bear Gulch	BGD0900	$ -	$ -
Chico	CHD0900	$ 264,477.02	$ 264,477.02
Dixon	DIX0900	$ 20,294.10	$ 20,294.10
Dominguez	DOM0900	$ 920,224.67	$ 780,822.69
East Los Angeles	ELA0900	$ 258,622.73	$ 233,189.22
Hermosa Redondo	HRD0900	$ 523,641.27	$ 422,258.02
Kern River Valley	KRV0900	$ 14,629.99	$ 14,629.99
King City	KCD0900	$ 44,976.25	$ 32,259.50
Livermore	LIV0900	$ 207,135.74	$ 207,135.74
Los Altos	LAS0900	$ -	$ -
Marysville	MRL0900	$ 42,012.64	$ 29,295.89
Oroville	ORO0900	$ 49,122.86	$ 36,406.10
Palos Verdes	PVD0900	$ -	$ -
Salinas	SLN0900	$ 287,534.32	$ 274,817.57
Selma	SEL0900	$ 58,508.99	$ 45,792.24
Stockton	STK0900	$ 342,503.21	$ 342,503.21
Visalia	VIS0900	$ 429,956.84	$ 429,956.84
Westlake	WLK0900	$ -	$ -
Willows	WIL0900	$ 27,726.37	$ 19,873.93
Direct Total		**$ 4,077,673.00**	**$ 3,740,018.04**

IV. CONCLUSION

The Commission should authorize $5,429,814 in 2025, $5,467,158 in 2026 and $3,740,018 in 2027 for CWS meter replacement. Cal Advocates' proposed budget excludes funding for 78 large meters that do not require replacement based on CWS's replacement cycle.

[194] CWS Common Plant 2024 GRC PJ Book at 356-359; Attachment 5-2 (Revised Meter Replacement Budget Direct Cost Estimates).

LIST OF ATTACHMENTS FOR CHAPTER 5

	Attachment #	Description
1	Attachment 5-1	Meter Inventory Tables
2	Attachment 5-2	Revised Meter Replacement Budget Direct Cost Estimates

CHAPTER 6 FLOWMETER REPLACEMENT PROGRAM

I. INTRODUCTION

This chapter presents analyses and recommendations on CWS's funding request for its Flowmeter Replacement Program. CWS requests an annual budget for its Flowmeter Replacement Program of $799,026, $3,494,639, and $3,119,005 in 2025-2027, respectively, for the routine replacement of its flowmeters in its districts.[195] CWS requests to replace flowmeters throughout its districts that are inaccurate.[196] However, some of the proposed flowmeters are still functional and able to provide a benefit to ratepayers and it is not necessary to authorize funding to replace these flowmeters.

II. SUMMARY OF RECOMMENDATIONS

As shown in Tables 6-1 through 6-3, the Commission should authorize $199,008 in 2025, $754,487 in 2026 and $896,542 in 2027 for CWS flowmeters replacement. Cal Advocates' proposed flowmeter replacement budget reflects removal of 46 flowmeters that do not warrant replacement at this time.[197] The recommended budget also reflects removing project contingency. Tables 6-1 through 6-3 below show a cost comparison between the proposed and recommended budgets.

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[195] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2." The direct project cost budgets for the East Los Angeles 2025 Flowmeter Replacement (PID 132084), Hermosa Redondo 2026 Flowmeter Replacement (PID 132062), and Stockton 2025 Flowmeter Replacement (PID 132039) projects are reflected in the 2027 budget. CWS states that the completion year for PID 132084, PID 132062, and PID 132039 is 2027.

[196] CWS Common Plant 2024 GRC PJ Book at 149.

[197] Costs shown are direct project costs.

Table 6-1: 2025 Flowmeter Replacement Program – Direct Cost Comparison[198]

		2025	
District	**PID**	**CWS**	**Cal Advocates**
Bakersfield		$ -	$ -
Bayshore		$ -	$ -
Chico	132074	$ 239,204.97	$ 72,486.35
Dominguez		$ -	$ -
East Los Angeles		$ -	$ -
Hermosa Redondo		$ -	$ -
Kern River Valley	132096	$ 281,472.79	$ -
Livermore	132001	$ 278,348.51	$ 126,522.05
Marysville		$ -	$ -
Palos Verdes		$ -	$ -
Redwood Valley		$ -	$ -
Stockton		$ -	$ -
Visalia		$ -	$ -
Direct Total		$ 799,026.27	$ 199,008.40

Table 6-2: 2026 Flowmeter Replacement Program – Direct Cost Comparison[199]

		2026	
District	**PID**	**CWS**	**Cal Advocates**
Bakersfield	132029	$ 972,844.14	$ 160,800.68
Bayshore	131990	$ 622,139.33	$ -
Chico	132075	$ 316,417.37	$ 71,913.04
Dominguez		$ -	$ -
East Los Angeles	132085	$ 201,902.97	$ -
Hermosa Redondo		$ -	$ -
Kern River Valley	132097	$ 288,607.15	$ -
Livermore	132002	$ 281,612.15	$ 128,005.52
Marysville	132052	$ 210,075.17	$ 190,977.43
Palos Verdes	132048	$ 121,222.22	$ -
Redwood Valley	132043	$ 223,069.39	$ 202,790.35
Stockton	132040	$ 256,748.89	$ -
Visalia		$ -	$ -
Direct Total		$ 3,494,638.78	$ 754,487.03

[198] CWS Common Plant 2024 GRC PJ Book at 155-156.

[199] CWS Common Plant 2024 GRC PJ Book at 155-156

Table 6-3: 2027 Flowmeter Replacement Program – Direct Cost Comparison[200]

		2027	
District	**PID**	**CWS**	**Cal Advocates**
Bakersfield		$ -	$ -
Bayshore		$ -	$ -
Chico	132076	$ 327,500.92	$ 148,864.05
Dominguez	132077	$ 206,945.73	$ -
East Los Angeles	132087	$ 206,956.08	$ -
	132084	$ 207,576.08	$ -
Hermosa Redondo	132063	$ 281,005.08	$ 127,729.58
	132062	$ 273,678.91	$ 124,399.50
Kern River Valley	132098	$ 295,742.53	$ -
Livermore		$ -	$ -
Marysville		$ -	$ -
Palos Verdes	132049	$ 206,971.68	$ -
Redwood Valley	132044	$ 107,120.02	$ -
Stockton	132041	$ 256,519.66	$ 77,733.23
	132039	$ 245,144.13	$ 74,286.10
Visalia	132746	$ 503,844.00	$ 343,530.00
Direct Total		$ 3,119,004.82	$ 896,542.47

III. ANALYSIS

Attachment 6-1 of this report shows the list of flowmeters CWS plans on replacing as part of the Flowmeter Replacement Program during this GRC.[201]

A. Flowmeter Calibration Form

CWS states that it has a flowmeter calibration program which evaluates each production and treatment process flowmeter once a year[202] and that the calibration results

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[200] CWS Common Plant 2024 GRC PJ Book at 155-156. CWS also requests to start the Flowmeter Replacement Program in its Visalia District (under PID 132746). CWS states on page 153 of its Common Plant 2024 GRC PJ Book that PID 132746 is not part of the revenue requirements in this application. However, CWS's RO model shows a budget of $503,844 for PID 132746. CWS clarified during discovery that it requests $503,844 in 2027 for PID 132746 in this GRC. In addition, CWS clarified that the statement regarding PID 132746 not being part of the revenue requirement in this rate case is incorrect. The direct project cost budgets for PID 132084, PID 132062, and PID 132039 projects are reflected in the 2027 budget. CWS states that the completion year for PID 132084, PID 132062, and PID 132039 is 2027.

[201] Attachment 6-1 (Flowmeter Replacement Program – Flowmeter List).

[202] CWS Common Plant 2024 GRC PJ Book at 149.

are used to determine the condition of each flowmeter.[203] CWS provided the calibration forms for its requested replacement of flowmeters during discovery.[204] However, CWS states that some calibration sheets may be missing as they were not attached to their specific work order when completed.[205]

1. Missing Calibration Forms

A list of calibration forms not provided is shown in Attachment 6-2 of this report.[206] Since the current condition of these flowmeters is unknown at this time, it does not make sense to authorize funding to replace the flowmeter. Therefore, funding should not be authorized for the flowmeters listed in Attachment 6-2 until the calibration test is conducted and there is confirmation that the flowmeter cannot be calibrated.

2. Flowmeter Accuracy

According to CWS's flowmeter calibration form, a flowmeter is considered accurate if the production meter reading is within two percent of the test meter reading.[207] The Commission should remove the following flowmeters because they are within CWS's acceptable accuracy, as shown in Table 6-4 below: three flowmeters being proposed in the Bakersfield District (BK) (BK 146-04, BK 116, and BK KCWA-12); two flowmeters being proposed in the Chico District (CH) (CH 80 and CH 11); one flowmeter in Lucerne (LUC) (LUC Plant Flow 2); four in the Stockton District (STK) (STK 11, STK76 Backwash, STK 68, and STK 65); and one flowmeter in the Visalia (VIS) District (VIS 25).

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[203] CWS Response to Public Advocates Office Data Request JMI-003 (Flowmeter Replacement).

[204] CWS Response to Public Advocates Office Data Request JMI-003 (Flowmeter Replacement), Attachment 1.

[205] CWS Response to Public Advocates Office Data Request JMI-003 (Flowmeter Replacement).

[206] Attachment 6-2 (Missing Calibration Forms List).

[207] CWS Common Plant Issues 2024 GRC PJ Book at 166.

Table 6-4: Flowmeter Accuracy (Difference between Production Meter Reading and Test Meter Reading from Test Meter Reading[208]

PID	Year	District	Flowmeter	Variance
			BK-146-04	1%
			BK-116	0.06%
132029	2026	Bakersfield	KCWA-12	0.4%
132074	2025		CH-080	0.229%
132075	2026	Chico	CH-011	0.302%
132044	2027	Redwood Valley	LUC Plant Flow 2	1.87%
			STK-085	1%
132039	2025		STK-076 Backwash Flow	0.82%
			STK-068	1%
132040	2026	Stockton	STK-065	0.62%
132746	2027	Visalia	VIS-025	0.36%

In addition, the calibration forms state that no corrective actions are needed for these flowmeters.[209] Because these flowmeters are within CWS's acceptable accuracy, they do not need to be replaced at this time and the associated costs should be removed from the project budget.

B. Project Contingency

CWS includes a 10% contingency in its capital cost estimates for its Flowmeter Replacement Program.[210] The Commission should remove project contingency from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding contingency.[211]

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[208] Attachment 6-3 (Calibration Forms).

[209] Attachment 6-3 (Calibration Forms).

[210] CWS Response to A2407003 Cal Advocates DR JMI-003 (Flowmeter Replacement), Attachment 2 – Question 4 Flowmeter Estimates.

[211] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

IV. CONCLUSION

The Commission should adopt $199,008 in 2025, $754,487 in 2026, and $896,542 in 2027 for CWS's Flowmeter Replacement Program. Cal Advocates' recommended budget reflects removal of the 46 flowmeters that do not need to be replaced during the 2025-2027 period and removal of project contingency.[212]

[212] The direct project cost budgets for PID 132084, PID 132062, and PID 132039 projects are reflected in the 2027 budget. CWS states that the completion year for PID 132084, PID 132062, and PID 132039 is 2027.

LIST OF ATTACHMENTS FOR CHAPTER 6

	Attachment #	Description
1	Attachment 6-1	Flowmeter Replacement Program – Flowmeter List
2	Attachment 6-2	Missing Calibration Forms List
3	Attachment 6-3	Calibration Forms

CHAPTER 7 ADVANCED METERING INFRASTRUCTURE

I. INTRODUCTION

This chapter discusses CWS's request to implement AMI in five ratemaking areas.

II. SUMMARY OF RECOMMENDATIONS

One half of the revenue CWS requests beyond the $1,893,288 in 2027[213] related to meter replacement should be contingent on meeting the performance standards listed in Section III.B of this chapter.[214] The remaining half should be added to rates based on a standard review of the reasonableness and prudency of costs. CWS should track and report the criteria listed below and present them in subsequent rate cases comparing the actual and forecasted criteria metric for each year.

III. ANALYSIS

CWS requests funding to implement AMI in the following ratemaking areas: Bay Area Region, Bear Gulch, Los Altos, Los Angeles County Region, and Westlake.[215] This represents approximately 125,000 service connections or approximately 26% of CWS's current customer base.[216] CWS plans on implementing AMI over a four year period which includes one ramp up year followed by a three-year deployment phase.[217] CWS plans to replace small meters (less than 2") in accordance with the GO 103-A replacement schedule[218] and to replace small meters scheduled under GO 103-A three years of AMI deployment. CWS states that any meter not scheduled for full replacement

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[213] Attachment 7-4 (2027 Meter Replacement due to GO 103-A).

[214] Cost shown is direct project cost.

[215] CWS Common Plant 2024 GRC PJ Book at 146.

[216] CWS Common Plant 2024 GRC PJ Book at 144; CWS Testimony Book #3, Attachment F at 8.

[217] CWS Common Plant 2024 GRC PJ Book at 146.

[218] CWS Testimony Book #3, Attachment F at 9.

will be retrofitted with an encoded register.[219] Table 7-1 below shows CWS's request on an individual district level.

Table 7-1: 2025-2027 AMI– Direct Project Costs220,221

District	2025	2026	2027
Antelope Valley	$ -	$ -	$ 219,633.38
Bayshore	$ -	$ 1,048,688.51	$ 13,485,590.70
Bear Gulch	$ -	$ 559,956.80	$ 5,109,121.36
CSS	$ -	$ 1,537,614.52	$ -
Los Altos	$ -	$ 474,131.98	$ 4,939,695.02
Palos Verdes	$ -	$ -	$ 6,281,129.21
RDOM	$ -	$ 559,956.80	$ -
Redwood Valley	$ -	$ -	$ 497,499.31
Westlake	$ -	$ 302,482.26	$ 2,188,453.00
Direct Total	$ -	$ 4,482,830.87	$ 32,721,121.98

While CWS only requests implementing AMI in these five ratemaking areas, CWS plans to fully implement AMI companywide in future rate cases.[222] CWS estimates that it will cost $195.4 million to fully implement AMI in the five ratemaking areas over an eighteen-year period.[223] Because this high cost will increase customer rates in these

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[219] CWS Testimony Book #3, Attachment F at 9.

[220] CWS Common Plant 2024 GRC PJ Book at 147. CWS provided a revised version of Attachments A and B in response to data request A2407003 Cal Advocates DR JMI-014 (AMI 2). Attachment 7-1(CWS Response to A2407003 Cal Advocates DR JMI-014 (AMI 2)).

[221] The PIDs for the Bayshore AMI projects shown in CWS Common Plant 2024 GRC PJ Book, Attachment B differs from the PIDs shown in CWS's RO model (CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1"). CWS confirmed that PID 133599 is the correct PID for the Bayshore (BSH)-AMI Initiative-Vehicles/Equipment project in response to data request A2407003 Cal Advocates DR JMI-014 (AMI 2). CWS confirmed that the correct PIDs for the MPS 2027 AMI Initiative-Meters and SSF 2027 AMI Initiative-Meters projects are PID 133627 and PID 133634, respectively in response to data request A2407003 Cal Advocates DR JMI-014 (AMI 2). CWS also states that the project year for AMI Initiative-Vehicles/Equipment projects in the Bayshore, Bear Gulch, Los Altos, Rancho Dominguez, and Westlake districts (PIDs 133599, 133593, 133597, 133598, and 133601, respectively) is 2026 instead of 2025 in their response to data request A2407003 Cal Advocates DR JMI-014 (AMI 2). CWS states that one of the BSH-AMI Initiative-Vehicles/Equipment projects was erroneously duplicated in Common Plant 2024 GRC PJ Book at 147-148.

[222] CWS Testimony Book #3, Attachment F at 8.

[223] CWS Testimony Book, #3, Attachment E at 12.

five ratemaking areas, it is important to have performance metrics to measure and monitor whether CWS completes the project as scheduled and achieves the stated customer benefits.

A. The Commission Acting as a Substitute For Competition

In a competitive market, a company makes an investment with the hope of earning a profit on investment. There is no guarantee that an investment will earn a profit. If a company makes an investment that does not result in a profit, then the company will incur potential losses.

However, utilities do not operate in a competitive market. Under rate-of-return regulation, utilities have a financial incentive to make capital investments because the only profit that is included in customer rates is the authorized return applied to these capital investments. This can be in the public interest when the investment made is necessary and provides customer benefits. However, in a monopoly environment, if the need and anticipated benefits of investments fail to materialize, unreasonable profit can be sustained unless economic regulation intercedes.

The National Regulatory Research Institute's Primer on Public Utility Regulation says "Because regulated utilities exist within and are important to the overall economy, regulation of public utilities cannot be divorced from the operating logic of competition in the rest of the economy. Instead, regulation is a substitute for competition and should attempt to put the utility sector under the same restraints competition places on the industrial sector."[224] Requiring CWS to share the risk of capital investments that have highly speculative customer benefits will encourage more disciplined investment decisions and project execution.

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[224] "A Primer on Public Utility Regulation for New State Regulatory Commissioners." The National Regulatory Research Institute, Apr. 2003 at 2. https://energycollection.us/Energy-Regulators/Primer-Public-Utility.pdf.

B. Performance Criteria

Without the performance criteria, customers would be responsible for paying 100% of the costs and profit of AMI, regardless of whether CWS's alleged benefits are achieved. To fulfill its role as a substitute for competition, the Commission should require that 50% of the budget CWS requests for AMI per year beyond the cost of meter replacement be contingent on meeting the standards in the performance criteria. This shifts the costs of a speculative infrastructure project from being entirely borne by ratepayers to being shared equally with CWS.

For this rate case, CWS requests $4,482,831 in 2026 and $32,721,122 in 2027 for capital additions.[225] CWS also requests $140,597 annually for AMI-related expenses.[226] In 2030, this means 50% or $17,451,567 in capital costs[227] and $210,896 in expenses[228] would be subject to the criteria mentioned below. If CWS is unable to meet certain criteria, each criterion would be weighted equally. This means that, beginning in 2030, when the AMI project is scheduled for implementation, CWS would be able to recover up to half of the annual projects from customers if these standards are not met.[229]

CWS should track and report the criteria listed below and present them in subsequent rate cases, comparing the actual and forecasted criteria metric for each year. This will allow the Commission to review the recorded metric criteria.

1. Operations and Maintenance (O&M) Savings

CWS states that it adjusted its RO model to include the following savings as a result of AMI: reduction in leak/courtesy adjustments, reduced meter reading expenses,

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[225] Attachment 7-1(CWS Response to A2407003 Cal Advocates DR JMI-014 (AMI 2)).

[226] CWS RO model file "CH05_OM_FDR_Other_OM," tab "SD_Misc Adjustments."

[227] Direct project costs. This calculation is discussed in Section F of this chapter.

[228] $140,597.25 per year × 3 years × 50% = $210,895.87.

[229] CWS's AMI implementation schedule occurs over a four year period. CWS capital request for AMI begins in 2026 and the first year of meter replacement or retrofitting begins in 2027. The remaining two years of meter replacement or retrofitting would occur during the next rate case in 2028 and 2029. This means AMI should be fully implemented by the end of 2029, assuming CWS completes these projects as scheduled.

reduction in system water loss, and lower pumping expense due to water loss reductions.[230] CWS should track and report these savings. Attachment 7-3 shows these alleged O&M savings CWS included in its RO model,[231] which should be used as a baseline for this rate case.

2. Customer Adoption Rate

CWS states that one of the main ways AMI benefits its customers is by providing a method to view, understand, and ultimately better manage their water consumption.[232] CWS states that AMI will help customers comply with conservation mandates enacted through legislation such as Senate Bill 606 and Assembly Bill 1668.[233] Active customer engagement with AMI is important to maximize any potential benefits related to AMI.

CWS's AMI pilot in the Dominguez District, however, shows a low engagement rate. Approximately 33% of the almost 7,000 customers with AMI endpoints enrolled in the customer portal.[234] CWS states that this customer enrollment rate was achieved with minimal outreach.[235] CWS claims that it anticipates a higher enrollment level through a comprehensive customer communications campaign that would support a larger AMI program.[236] Customer enrollment should be used as a metric to motivate CWS to encourage as many customers as possible to enroll in the customer portal.

3. Reduction in Water Loss

CWS claims that one of the alleged benefits for AMI includes reducing water loss.[237] CWS prioritizes implementing AMI in its Los Angeles County Region and

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[230] CWS Testimony Book #3, Attachment G at 5.

[231] Attachment 7-3 (CWS O&M Savings Included in RO Model).

[232] CWS Testimony Book #3, Attachment E at 6.

[233] CWS Testimony Book #3, Attachment E at 8.

[234] CWS Response to A2407003 Cal Advocates DR JMI-002 (AMI), Attachment 1.

[235] CWS Response to A2407003 Cal Advocates DR JMI-002 (AMI), Attachment 1.

[236] CWS Response to A2407003 Cal Advocates DR JMI-002 (AMI), Attachment 1.

[237] CWS Testimony Book #3, Attachment E at 17.

Westlake District due to the high cost of water loss[238] based on information from San Jose Water Company's (SJWC) AMI pilot. In SJWC's pilot, approximately 2.8% of the total water use was lost to leaks.[239] The US Environmental Protection Agency (EPA) states that 10% of all indoor consumption in the United States is lost due to leaks.[240] CWS claims that one of the benefits of AMI is quicker notification of leaks.[241] CWS should be able to achieve less than 10% consumed water lost due to leaks after implementing AMI in the five proposed ratemaking areas.

CWS also anticipates a 5% reduction in system-side water loss attributed to AMI.[242] CWS should be able to achieve a 5 % reduction in system-side water loss of after implementing AMI in the five proposed ratemaking areas.

C. The Results Related to AMI Pilot are Currently Pending

CWS requests to fully implement AMI in the Bear Gulch District. The Commission approved a pilot in Portola Valley (under PID 114644), which is part of CWS's Bear Gulch service area. PID 114644 was originally expected to be completed in 2022,[243] but is now expected to be completed in 2024.[244] The status of the pilot was provided during discovery.[245] CWS states that deployment is planned to be completed by the end of 2024.[246] The report of the pilot results is currently anticipated to be

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[238] CWS Testimony Book #3, Attachment F at 8-9.

[239] CWS Testimony Book #3, Attachment E at 17. Ms. Anklan provides testimony in this application regarding AMI and in SJWC's AMI application (A.19-12-002).

[240] Smart Water Meters and Data Analytics Decreased Wasted Water due to Leaks. Journal AWWA, Volume 110, Number 11 at E.24-30. http://awwa.onlinelibrary.wiley.com/doi/10.1002/awwa.1124. Accessed 11/26/2024.

[241] CWS Testimony Book #3, Attachment E at 4-5.

[242] CWS Testimony Book #3, Attachment E at 9.

[243] Bear Gulch Report on the Results of Operation at 83.

[244] Bear Gulch Report on the Results of Operation at 72.

[245] Attachment 7-2 (CWS Response to A2407003 Cal Advocates DR JMI-002 (AMI)).

[246] Attachment 7-2 (CWS Response to A2407003 Cal Advocates DR JMI-002 (AMI)).

completed by the third quarter of 2025.[247] This means that the pilot results will not be known until after the other parties serve their testimony in this GRC.[248]

D. Cost Recovery of Large-Scale AMI Deployment Based on Performance Metrics has been Adopted by Other Investor-Owned Utilities

Other investor-owned utilities have requested to implement AMI in their service areas. SWJC requested full implementation of AMI in its service area in A.19-12-002. The Commission approved the parties' proposed settlement agreement for SWJC's application in D.22-06-013, which provides that a portion of the annual revenue requirement is contingent on AMI meeting certain performance criteria.[249]

E. Project Contingency

CWS includes a 10% contingency in its capital cost estimates for the AMI Initiative-Vehicles/Equipment projects and the CSS 2026 AMI Initiative- Information Technology (IT) INT/DEV (PID 133646) project.[250] The Commission should remove project contingency from the proposed project budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding contingency.[251]

F. Capital Costs Beyond 2027 Meter Replacement Subjected to Performance Metrics

CWS plans to replace small meters (less than 2") in accordance with the GO 103-A replacement schedule as part of the AMI implementation.[252] In this rate case, CWS only requests funding in the Antelope Valley, Bayshore, Bear Gulch, Los Altos, Palos

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[247] Attachment 7-2 (CWS Response to A2407003 Cal Advocates DR JMI-002 (AMI)).

[248] A.24-07-003 Assigned Commissioner's Scoping and Ruling Memo at 8.

[249] D.22-06-013 at 16-18.

[250] CWS Response to Public Advocates Office Data Request JMI-014 (AMI 2), Attachment 4.

[251] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

[252] CWS Testimony Book #3, Attachment F at 9.

Verdes, Rancho Dominguez, and Westlake districts to replace the meters under its Meter Replacement Program in 2025-2026. The Meter Replacement Program is the routine replacement of meters under the GO 103-A schedule.[253] The funding associated with GO 103-A replacement for these districts in 2027 was calculated by taking CWS's 2026 Meter Replacement Program budget request and escalating to 2027 dollars. CWS uses a 2.5% annual escalation factor in its capital cost estimates.[254] The total estimated 2027 meter replacement direct project cost is $1,893,288 for the five ratemaking areas.[255] Attachment 7-4 shows the estimated 2027 meter replacement calculation for the five ratemaking areas.[256] This means $2,037,650 of capital costs in 2026,[257] and $15,413,917 in capital costs in 2027[258] will be contingent on the AMI meeting the performance metrics.

IV. CONCLUSION

Without the performance criteria, customers would be responsible for paying 100% of the costs and profit of AMI, regardless of whether CWS's alleged benefits are achieved. To fulfill its role as a substitute for competition, the Commission should require that 50% of the annual budget requested by CWS for AMI beyond the cost of meter replacement under GO 103-A[259] be contingent on meeting the standards in the performance criteria. Under this performance-based approach, risk of this speculative project is shared equally between CWS and ratepayers.

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[253] CWS Common Plant 2024 GRC PJ Book at 353.

[254] CWS Common Plant 2024 GRC PJ Book at 681.

[255] Attachment 7-4 (2027 Meter Replacement due to GO 103-A).

[256] Attachment 7-4 (2027 Meter Replacement due to GO 103-A).

[257] [2026 AMI Direct Project Cost Total÷ (1+contingency)] ÷ 2 = [$4,482,830.87÷ (1+10%)] ÷ 2 = $2,037,650.

[258] Attachment 7-5 (2027 Capital Amount Contingent on Performance Standards).

[259] The estimated meter replacement direct cost for the five ratemaking areas is $1,893,288 in 2027.

LIST OF ATTACHMENTS FOR CHAPTER 7

	Attachment #	Description
1	Attachment 7-1	CWS Response to A2407003 Cal Advocates DR JMI-014 (AMI 2)
2	Attachment 7-2	CWS Response to A2407003 Cal Advocates DR JMI-002 (AMI)
3	Attachment 7-3	CWS O&M Savings Included in RO Model
4	Attachment 7-4	2027 Meter Replacement due to GO 103-A
5	Attachment 7-5	2027 Capital Amount Contingent on Performance Standards

CHAPTER 8 MAIN REPLACEMENT PROGRAM

I. INTRODUCTION

CWS requests an annual budget for its Main Replacement Program of $157,827,625, $169,836,597, and $170,645,498 in 2025-2027, respectively for the routine replacement of pipeline in its districts.[260] This chapter discusses CWS's proposed Main Replacement Program.

II. SUMMARY OF RECOMMENDATIONS

As shown in Tables 8-1 through 8-3, the Commission should authorize $93,646,922 in 2025, $96,037,006 in 2026, and $97,891,376 in 2027 for the Main Replacement Program.[261] Tables 8-1 through 8-3 below show the recommended capital budget on and individual district basis.

[260] CWS Common Plant 2024 GRC PJ Book at 29. Costs shown are direct project costs.

[261] Direct project costs.

Table 8-1: 2025 Main Replacement Program – Direct Cost Comparison[262]

	2025	
District	**CWS**	**Cal Advocates**
Antelope Valley	$ 585,543.14	$ 155,402.34
Bakersfield	$ 17,652,262.68	$ 8,316,567.94
Bayshore	$ 26,530,318.68	$ 12,508,655.03
Bear Gulch	$ 14,567,401.24	$ 9,899,251.90
Chico	$ 8,355,484.70	$ 5,169,829.55
Dixon	$ 1,012,922.84	$ 528,918.71
Dominguez	$ 9,730,723.32	$ 3,999,381.30
East Los Angeles	$ 6,681,004.05	$ 4,386,757.68
Hermosa Redondo	$ 6,507,330.09	$ 4,146,076.69
King City	$ 987,351.48	$ 722,482.29
Livermore	$ 6,173,332.30	$ 4,689,507.46
Los Altos	$ 7,595,458.21	$ 5,102,735.26
Marysville	$ 993,519.76	$ 471,514.79
Oroville	$ 1,090,862.24	$ 648,068.04
Palos Verdes	$ 7,843,042.32	$ 4,597,367.45
Redwood Valley	$ 1,101,072.40	$ 154,362.40
Salinas	$ 6,463,990.58	$ 5,051,389.11
Selma	$ 1,262,150.06	$ 1,280,623.52
Stockton	$ 20,405,790.06	$ 17,993,088.29
Visalia	$ 9,400,336.81	$ 2,624,388.21
Westlake	$ 2,047,719.12	$ 479,902.86
Willows	$ 840,008.60	$ 720,651.31
Direct Total	**$ 157,827,624.68**	**$ 93,646,922.12**

[262] CWS Common Plant 2024 GRC PJ Book at 29.

Table 8-2: 2026 Main Replacement Program – Direct Cost Comparison[263]

	2026	
District	**CWS**	**Cal Advocates**
Antelope Valley	$ 600,181.80	$ 159,287.42
Bakersfield	$ 18,093,569.50	$ 8,524,482.25
Bayshore	$ 27,193,576.80	$ 12,821,371.48
Bear Gulch	$ 14,931,586.36	$ 10,146,733.26
Chico	$ 8,564,371.82	$ 5,299,075.29
Dixon	$ 1,038,245.84	$ 542,141.64
Dominguez	$ 9,973,991.52	$ 4,099,365.88
East Los Angeles	$ 6,848,029.18	$ 4,496,426.64
Hermosa Redondo	$ 6,670,013.48	$ 4,249,728.70
King City	$ 1,012,035.36	$ 740,544.42
Livermore	$ 6,327,665.62	$ 4,806,745.15
Los Altos	$ 11,024,423.87	$ 5,230,303.72
Marysville	$ 1,018,357.61	$ 531,632.85
Oroville	$ 1,118,133.91	$ 664,269.81
Palos Verdes	$ 12,863,319.56	$ 4,712,301.68
Redwood Valley	$ 1,128,599.20	$ 158,221.45
Salinas	$ 6,625,590.27	$ 5,178,254.16
Selma	$ 1,293,703.83	$ 1,312,639.12
Stockton	$ 20,915,934.79	$ 18,442,915.48
Visalia	$ 9,635,345.29	$ 2,689,997.93
Westlake	$ 2,098,912.20	$ 491,900.46
Willows	$ 861,008.73	$ 738,667.52
Direct Total	**$ 169,836,596.54**	**$ 96,037,006.30**

[263] CWS Common Plant 2024 GRC PJ Book at 29.

Table 8-3: 2027 Main Replacement Program – Direct Cost Comparison[264]

	2027	
District	**CWS**	**Cal Advocates**
Antelope Valley	$ 615,171.61	$ 163,265.69
Bakersfield	$ 18,545,467.31	$ 8,737,386.34
Bayshore	$ 27,872,752.92	$ 13,141,593.03
Bear Gulch	$ 14,931,231.15	$ 10,400,401.61
Chico	$ 8,778,272.19	$ 5,431,422.90
Dixon	$ 1,064,176.76	$ 555,682.01
Dominguez	$ 10,223,097.96	$ 4,201,750.01
East Los Angeles	$ 7,019,062.79	$ 4,608,727.57
Hermosa Redondo	$ 6,836,601.09	$ 4,355,868.24
King City	$ 1,037,311.56	$ 759,039.97
Livermore	$ 6,485,702.97	$ 4,926,796.58
Los Altos	$ 11,299,765.55	$ 5,360,933.73
Marysville	$ -	$ -
Oroville	$ 1,146,059.95	$ 680,860.33
Palos Verdes	$ 13,184,588.83	$ 4,829,994.30
Redwood Valley	$ 1,156,786.60	$ 162,173.12
Salinas	$ 6,791,068.47	$ 5,307,584.25
Selma	$ 1,326,014.90	$ 1,345,423.11
Stockton	$ 19,422,524.83	$ 18,903,988.47
Visalia	$ 9,875,993.78	$ 2,757,182.23
Westlake	$ 2,151,333.72	$ 504,185.95
Willows	$ 882,512.96	$ 757,116.20
Direct Total	**$ 170,645,497.90**	**$ 97,891,375.63**

III. ANALYSIS

CWS proposes funding for the continuation of its Main Replacement Program which was first introduced in CWS's 2015 rate case.

A. Historical Replacement Rates

Table 8-4 below compares CWS's adopted and recorded replacement rates from 2016-2023.[265] Table 8-4 shows that CWS has consistently failed to meet the adopted

[264] CWS Common Plant 2024 GRC PJ Book at 29.

[265] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement); CWS Response to Public Advocates Office Data Request SIB-014 (Pipeline Replacement) (from A.21-07-002).

replacement rates. In Table 8-4, the negative numbers show that the recorded replacement rate is less than the adopted replacement rate.

Table 8-4: 2016-2023 Adopted and Recorded Main Replacement Rate Comparison[266]

	2016			2017			2018			2019		
District	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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
Visalia	2.20%	0.31%	-1.89%	0.22%	0.15%	-0.07%	0.22%	0.00%	-0.22%	0.22%	0.00%	-0.22%
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%
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%

	2020			2021			2022			2023		
District	Adopted	Recorded	Difference	Adopted	Recorded	Difference	Adopted	Recorded	Difference	Adopted	Recorded	Difference
Antelope Valley	0.55%	0.00%	-0.55%	0.64%	0.00%	-0.64%	0.60%	0.82%	0.22%	0.60%	0.00%	-0.60%
Bakersfield	0.60%	0.46%	-0.14%	0.51%	0.20%	-0.31%	0.70%	0.25%	-0.45%	0.70%	0.28%	-0.42%
Bear Gulch	1.25%	1.07%	-0.18%	1.90%	0.90%	-1.00%	1.00%	0.70%	-0.30%	1.00%	0.63%	-0.37%
Bayshore	0.67%	0.46%	-0.21%	1.73%	0.61%	-1.12%	0.75%	0.65%	-0.10%	0.75%	0.46%	-0.29%
Chico	0.55%	0.63%	0.08%	0.15%	0.16%	0.01%	0.60%	0.28%	-0.32%	0.60%	0.64%	0.04%
Dixon	0.55%	0.96%	0.41%	0.00%	0.00%	0.00%	0.30%	0.00%	-0.30%	0.75%	0.73%	-0.02%
Dominguez	0.50%	0.00%	-0.50%	0.73%	0.63%	-0.10%	0.50%	0.43%	-0.07%	0.50%	0.63%	0.13%
East Los Angeles	0.55%	0.38%	-0.17%	0.66%	0.51%	-0.15%	0.60%	0.39%	-0.21%	0.60%	0.62%	0.02%
Hermosa Redondo	0.55%	1.09%	0.54%	0.49%	0.28%	-0.21%	0.60%	0.63%	0.03%	0.60%	0.20%	-0.40%
Kern River Valley	0.55%	0.38%	-0.17%	0.57%	0.25%	-0.32%	0.60%	0.36%	-0.24%	0.60%	0.14%	-0.46%
King City	0.55%	0.97%	0.42%	0.76%	0.84%	0.08%	0.60%	0.00%	-0.60%	0.60%	0.54%	-0.06%
Los Altos	0.60%	0.64%	0.04%	0.43%	0.17%	-0.26%	0.70%	0.57%	-0.13%	0.70%	0.24%	-0.46%
Livermore	0.55%	1.14%	0.59%	0.00%	0.00%	0.00%	0.60%	0.00%	-0.60%	0.60%	0.68%	0.08%
Marysville	0.55%	0.00%	-0.55%	0.29%	0.00%	-0.29%	0.30%	0.50%	0.20%	0.40%	0.00%	-0.40%
Oroville	0.55%	1.04%	0.49%	0.74%	0.59%	-0.15%	0.30%	0.00%	-0.30%	0.30%	0.00%	-0.30%
Palos Verdes	0.55%	0.18%	-0.37%	1.03%	1.12%	0.09%	0.26%	0.27%	0.01%	0.77%	0.00%	-0.77%
Redwood Valley	0.55%	0.00%	-0.55%	1.56%	0.00%	-1.56%	0.60%	0.54%	-0.06%	0.60%	0.00%	-0.60%
Salinas	0.55%	0.57%	0.02%	1.26%	0.51%	-0.75%	0.60%	0.31%	-0.29%	0.60%	0.25%	-0.35%
Selma	0.50%	0.00%	-0.50%	0.67%	0.71%	0.04%	0.50%	0.69%	0.19%	0.50%	1.37%	0.87%
Stockton	1.50%	0.63%	-0.87%	1.36%	0.88%	-0.48%	1.56%	1.03%	-0.53%	1.56%	1.57%	0.01%
Visalia	0.30%	0.05%	-0.25%	0.15%	0.26%	0.11%	0.40%	0.00%	-0.40%	0.40%	0.43%	0.03%
Westlake	0.25%	0.38%	0.13%	0.00%	0.00%	0.00%	0.25%	0.00%	-0.25%	0.25%	0.00%	-0.25%
Willows	0.65%	0.00%	-0.65%	0.00%	0.00%	0.00%	0.40%	0.00%	-0.40%	0.40%	1.44%	1.04%

[266] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement). CWS Response to Public Advocates Office Data Request SIB-014 (Pipeline Replacement) (from A.21-07-002).

This trend shows that CWS ratepayers have been continuously funding pipeline projects that were not completed. For the years 2021-2023, CWS recorded a companywide replacement rate of 0.45%, 0.40%, and 0.51%, respectively. This equates to approximately 57.7%, 58.8%, and 71.83% of the adopted companywide replacement rate for 2021-2023, respectively. It is not reasonable for ratepayers to pay for projects that do not materialize as scheduled. Therefore, the Main Replacement Program should be based on what CWS can realistically replace according to historic behavior. Table 8-5 below shows the historic main replacement for the past five years (2019-2023).

Table 8-5: 2019-2023 Main Replacement – Miles Replaced and Replacement Rate[267]

Year	2019	2020	2021	2022	2023
Main Replaced (miles)	98,820	152,859	131,057	117,943	259,957
Replacement Rate	0.31%	0.48%	0.45%	0.40%	0.51%

Attachment 8-1 shows the historic main replacement rate on an individual district level.[268] Table 8-6 below shows the recommended length of main replacement per year based on the historic main replacement rate. CWS's capital cost estimates were adjusted to include the recommended length of main replacement per year.[269]

[267] CWS Response to MDR II.E.11. CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 1 Q1 Main Replacement Rates and Costs. CWS Response to Public Advocates Office Data Request SIB-014 (Pipeline Replacement) (from A.21-07-002).

[268] Attachment 8-1 (2019-2023 Historical District Level Replacement Rate).

[269] Attachment 8-2 (Revised Main Replacement Budget Direct Cost Estimates).

Table 8-6: Recommended Replacement Length Base on Historical Replacement Rate[270]

District	Total Length (ft)	Average Replacement Rate	Replacement Length (ft)
Antelope Valley	188,158	0.16%	308.58
Bakersfield	5,191,171	0.26%	13,289.40
Bear Gulch	1,820,016	0.73%	13,286.12
Bayshore	2,791,778	0.52%	14,405.57
Chico	2,196,852	0.40%	8,699.54
Dixon	186,591	0.34%	630.68
Dominguez	1,938,973	0.34%	6,553.73
East Los Angeles	1,402,943	0.50%	7,042.77
Hermosa Redondo	1,107,857	0.52%	5,805.17
King City	189,069	0.47%	888.62
Los Altos	1,531,994	0.52%	7,966.37
Livermore	1,173,673	0.50%	5,891.84
Marysville	279,356	0.26%	731.91
Oroville	315,122	0.33%	1,027.30
Palos Verdes	1,809,515	0.31%	5,681.88
Redwood Valley	175,916	0.11%	189.99
Salinas	1,800,344	0.43%	7,669.46
Selma	473,235	0.55%	2,621.72
Stockton	2,775,805	0.97%	26,980.83
Visalia	3,225,777	0.15%	4,774.15
Westlake	605,481	0.08%	460.17
Willows	200,494	0.56%	1,126.78

B. Project Contingency

CWS includes a 10% contingency in its capital cost estimates for its Main Replacement Program.[271] The Commission should remove project contingency funding from the proposed budget, consistent with Cal Advocates' witness, Sari Ibrahim's recommendation regarding contingency.[272]

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[270] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 3 Q3 Total Pipeline Material Length and Age.

[271] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[272] See Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District.

IV. CONCLUSION

The Commission should authorize a direct project cost of $93,646,922 in 2025, $96,037,006 in 2026, and $97,891,376 in 2027 for the Main Replacement Program. Cal Advocates' recommended budgets also reflect removal of project contingency.

LIST OF ATTACHMENTS FOR CHAPTER 8

	Attachment #	Description
1	Attachment 8-1	2019-2023 Historical District Level Replacement Rate
2	Attachment 8-2	Revised Main Replacement Budget Direct Cost Estimates

CHAPTER 9 AMERICA'S WATER INFRASTRUCTURE ACT REPORT AND EMERGENCY RESPONSE PLAN

I. INTRODUCTION

This chapter presents review, analysis, and recommendations regarding CWS's America's Water Infrastructure Act (AWIA) report submissions and compliance with AWIA requirements.[273] 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 requirements 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.

II. SUMMARY OF RECOMMENDATIONS

CWS has updated its ERPs since the last rate case. CWS plans on updating its risk and resilience assessment (RRAs) during this rate case cycle.

III. ANALYSIS

AWIA is a risk assessment and mitigation process required by the Federal Government.[274] AWIA was signed into law on October 23, 2018. AWIA Section 2013 requires community (drinking) water systems serving more than 3,300 people to develop or update risk assessments and 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.[275]

CPUC General Order 103-A Section VII.3 states that ERPs must follow DDW's requirements.[276] DDW's ERP Guidance published in 2015 states that several federal and

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[273] America's Water Infrastructure Act of 2018 (Pub.L No. 115-270 132 Stat. 3765).

[274] CWS Additional Testimony (from A.21-07-002) at 96.

[275] America's Water Infrastructure Act: Risk Assessments and Emergency Response Plans | US EPA, https://www.epa.gov/waterresilience/awia-section-2013.

[276] CPUC General Order 103-A Section VII.3 – Emergency/Disaster Response Plan at 29.

state statutes and regulations form the legal requirements of ERPs.[277] 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.[278] 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.[279] The California Health and Safety Code further specifies that the public must be notified of significant rises in bacterial count or other imminent dangers to health,[280] that water treatment operators be certified by the SWRCB,[281] and that tampering with a public water system is a felony.[282] California Waterworks Standards Section 64560 requires that well site control zones be established to protect sources against contamination.[283]

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[277] DDW Emergency Response Plan Guidance for Public Water Drinking Systems Serving Population 3,300 or more (approximately 1,000 SC or more). (http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/security/ddw_emergency_guidelines_0215.pdf).

[278] DDW Emergency Response Plan Guidance for Public Water Drinking Systems Serving Population 3,300 or more (approximately 1,000 SC or more). (http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/security/ddw_emergency_guidelines_0215.pdf).

[279] 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 Servicing a population of 3,300 or more (approximately 1,000 SC or more). http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/security/ddw_emergency_guidelines_0215.pdf

[280] 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).

[281] California Legislative Information website, Health and Safety Code Section 116555, January 1, 1998. (https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=116555).

[282] 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).

[283] DDW Emergency Response Plan Guidance for Public Water Drinking Systems Serving Population 3,300 or more (approximately 1,000 SC or more).

Pursuant to the Public Health Security and Bioterrorism Preparedness and Response Act of 2022, 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 its Minimum Data Requirement response.[284]

The AWIA originally requires utilities to conduct a risk and resilience assessment, develop and update an emergency response plan, and submit certification by the following due dates shown in Table 9-1 and Table 9-2 below.

Table 9-1: RRA Deadline

System Size	Deadline
≥ 100,000 people	3/31/2020
50,000-99,999	12/31/2020
3,301-49,999	6/30/2021

Table 9-2: ERP Deadline

System Size	Deadline
≥ 100,000 people	9/30/2020
50,000-99,999	6/30/2021
3,301-49,999	12/30/2021

CWS divided AWIA compliance into three categories based on population size. CWS considers systems serving over 100,000 people to be the highest priority, designated as Priority 1. The risk assessment for these systems was originally required to be completed by March 31, 2020. Priority 2 systems are systems serving between 50,000 and 99,999 people. The risk assessment for Priority 2 systems was originally required to be completed by December 31, 2021. Finally, Priority 3 systems service between 3,301 and 49,999 people and the risk assessment for these systems is required to be completed

(http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/security/ddw_emergency_guidelines_0215.pdf).

[284] CWS 2024 MDR Book, Response to Minimum Data Requirement II.E-17 at 90.

by June 30, 2021. CWS states that it submitted the ERP for its Priority 1, 2, and 3 water systems on 9/27/20, 6/30/21, and 12/31/21, respectively.[285]

Section 2013 of AWIA requires community water systems that serve a population of 3,300 or more to conduct a risk and resilience assessment and develop an emergency response plan that must be updated and certified every five years. This means that CWS is required to update its risk and resilience assessment and emergency response plan during this rate case cycle. CWS states that all districts have updated and fully vetted their ERPs,[286] and that the ERPs were last updated between May 1, 2024 and July 1, 2024.[287] The date the ERPs were updated for each district is shown in Table 9-3 below.

[285] CWS Response to Cal Advocates Data Request SN2-008 (from A.21-07-002).

[286] CWS Testimony Book #3 at 52.

[287] Attachment 9-1 (CWS Response to A2407003 Cal Advocates DR JMI-008 (AIWA Compliance)).

Table 9-3: CWS Updated ERPs[288]

District	System	Last ERP Certification	Last ERP Update	Next ERP Certification Deadline	Next Planned ERP Update	Note
Antelope Valley	Antelope Valley	n/a	5/1/2024	n/a	5/1/2025	No AWIA Requirement
	San Carlos	6/30/2021	7/1/2024	6/30/2026	7/1/2025	
	San Mateo	9/30/2020	7/1/2024	9/30/2025	7/1/2025	
Bayshore	South San Francisco	6/30/2021	7/1/2024	6/30/2025	7/1/2025	
Bear Gulch	Bear Gulch	6/30/2021	6/1/2024	6/30/2026	6/1/2025	
	Bakersfield	9/30/2020	5/1/2024	9/30/2025	5/1/2025	
Bakersfield	North Garden	12/31/2021	5/1/2024	12/31/2026	5/1/2025	
Chico	Chico	9/30/2020	6/1/2024	9/30/2025	6/1/2025	
Dixon	Dixon	12/31/2021	7/1/2024	12/31/2026	7/1/2025	
East Los Angeles	East Los Angeles	9/30/2020	5/1/2024	9/30/2025	5/1/2025	
Kern River Valley	Kern River Valley	n/a	6/1/2024	n/a	6/1/2025	No AWIA Requirement
King City	King City	12/31/2021	6/1/2024	12/31/2026	6/1/2025	
Livermore	Livermore	6/30/2021	6/1/2024	6/30/2026	6/1/2025	
Los Altos	Los Altos	6/30/2021	5/1/2024	6/30/2026	5/1/2025	
Marysville	Marysville	12/31/2021	7/1/2024	12/31/2026	7/1/2025	
Oroville	Oroville	12/31/2021	6/1/2024	12/31/2026	6/1/2025	
	Dominguez	9/30/2020	6/1/2024	9/30/2025	6/1/2025	
Rancho	Hermosa Redondo	6/30/2021	6/1/2024	6/30/2026	6/1/2025	
Dominguez	Palos Verdes	6/30/2021	6/1/2024	6/30/2026	6/1/2025	
Redwood Valley	Redwood Valley	n/a	7/1/2024	n/a	7/1/2025	No AWIA Requirement
	Los Lomas	12/31/2021	6/1/2024	12/21/2026	6/1/2025	
	Oak Hills	12/31/2021	6/1/2024	12/21/2026	6/1/2025	
	Salinas	9/30/2020	6/1/2024	9/30/2025	6/1/2025	
Salinas	Salinas Hills	12/31/2021	6/1/2024	12/21/2026	6/1/2025	
Selma	Selma	12/31/2021	6/1/2024	12/21/2026	6/1/2025	
Stockton	Stockton	9/30/2020	6/1/2024	9/30/2025	6/1/2025	
Travis	Travis AFB	12/31/2021	7/1/2024	12/21/2026	7/1/2025	
Visalia	Visalia	9/30/2020	6/1/2024	9/30/2025	6/1/2025	
Westlake	Westlake	12/31/2021	6/1/2024	12/21/2026	6/1/2025	
Willows	Willows	12/31/2021	7/1/2024	12/21/2026	7/1/2025	

[288] Attachment 9-1 (CWS Response to A2407003 Cal Advocates DR JMI-008 (AIWA Compliance)).

Table 9-3 shows that CWS have updated its ERPs since the last rate case. CWS provided all of its ERPs updated in 2024.[289] Table 9-4 below shows the last time CWS updated its RRAs and the next deadline by which CWS is expected to update its RRAs.

[289] CWS Response to A2407003 Cal Advocates DR JMI-008 (AIWA Compliance).

Table 9-4: CWS RRAs[290]

District	System	Last RRA Update	Next RRA Deadline	Note
Antelope Valley	Antelope Valley	7/31/2022	n/a	No AWIA Requirement
	San Carlos	12/31/2020	12/31/2025	
	San Mateo	3/31/2020	3/31/2025	
Bayshore	South San Francisco	12/31/2020	12/31/2025	
Bear Gulch	Bear Gulch	12/31/2020	12/31/2025	
	Bakersfield	3/31/2020	3/31/2025	
Bakersfield	North Garden	6/30/2021	6/30/2026	
Chico	Chico	3/31/2020	3/31/2025	
Dixon	Dixon	6/30/2021	6/30/2026	
East Los Angeles	East Los Angeles	3/31/2020	3/31/2025	
Kern River Valley	Kern River Valley	7/31/2022	n/a	No AWIA Requirement
King City	King City	6/30/2021	6/30/2026	
Livermore	Livermore	12/31/2020	12/31/2025	
Los Altos	Los Altos	12/31/2020	12/31/2025	
Marysville	Marysville	6/30/2021	6/30/2026	
Oroville	Oroville	6/30/2021	6/30/2026	
	Dominguez	3/31/2020	3/31/2025	
Rancho Dominguez	Hermosa Redondo	12/31/2020	12/31/2025	
	Palos Verdes	12/31/2020	12/31/2025	
Redwood Valley	Redwood Valley	7/31/2022	n/a	No AWIA Requirement
	Los Lomas	6/30/2021	6/30/2026	
	Oak Hills	6/30/2021	6/30/2026	
	Salinas	3/31/2020	3/31/2025	
Salinas	Salinas Hills	6/30/2021	6/30/2026	
Selma	Selma	6/30/2021	6/30/2026	
Stockton	Stockton	3/31/2020	3/31/2025	
Travis	Travis AFB	6/30/2021	6/30/2026	
Visalia	Visalia	3/31/2020	3/31/2025	
Westlake	Westlake	6/30/2021	6/30/2026	
Willows	Willows	6/30/2021	6/30/2026	

[290] Attachment 9-1 (CWS Response to A2407003 Cal Advocates DR JMI-008 (AIWA Compliance)).

CWS states that it plans to update its RRAs and ERPs during this rate case cycle.[291]

IV. CONCLUSION

CWS has updated its ERPs since the last GRC. CWS plans to update its RRAs during this GRC.

[291] Attachment 9-1 (CWS Response to A2407003 Cal Advocates DR JMI-008 (AIWA Compliance)).

LIST OF ATTACHMENTS FOR CHAPTER 9

	Attachment #	Description
1	Attachment 9-1	CWS Response to A2407003 Cal Advocates DR JMI-008 (AIWA Compliance)

CHAPTER 10 DESIGN AND PERMITTING ONLY PROJECTS AND MULTI-GRC PROJECTS

I. INTRODUCTION

CWS requests ratepayer funding (including a shareholder profit) for portions of projects that it acknowledges won't be used and useful in this GRC. CWS has separated projects that span over multiple GRCs into two separate categories: 1) projects where CWS requests funding in this GRC only for design and permitting; and 2) projects where CWS requests "approval" yet presents no requested ratepayer funding associated with project, thereby leaving the Commission with nothing it needs to approve. CWS refers to these projects as "multi-GRC projects."[292] This chapter presents the analyses and recommendations for these projects.

II. SUMMARY OF RECOMMENDATIONS

In keeping with standard ratemaking and statutory provisions,[293] the Commission should not require ratepayers to fund shareholder profit on portions of projects that are not going to be providing any beneficial service to customers during the period in which rates are being established in this GRC. Table 10-1 provides the list of projects where CWS requests to add the design and permitting portion of project costs into rate base. If necessary, CWS should pursue the design and permitting for these projects capitalizing the cost of the projects (including interest during construction) until such time the projects are complete and providing beneficial service or reasonably assumed will be providing service to customers during the time in which rates are being established. At this point, all project costs can be placed in rate base for recovery from ratepayers with shareholder profit included in rates.

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[292] CWS North Valley Region 2024 GRC Capital Project Justification (PJ) Book at 95-98; Salinas Valley Region 2024 GRC PJ Book at 38-40; Bay Area Region 2024 GRC PJ Book at 17-19, 174, 209-218, 227-232; Bear Gulch 2024 GRC PJ Book at 16-18, 20-23, 47-49, 60-63, 68-71; Visalia 2024 GRC PJ Book at 74-76. CWS Testimony Book #1 at 39-40.

[293] Public Utilities Code, Section 701.10.

The Commission should not provide "approval" for the projects when there is nothing necessary to approve. As the economic regulator, the Commission approves rates that provide monopoly utilities an opportunity to earn a fair rate of return on projects that are used and useful in providing services to customers. The list of projects presented in Table 10-4 has no requested ratepayer funding in the current GRC. Providing "approval" where none is necessary only shifts the risk of project management and completion away from the utility and on to ratepayers. These risks rightfully belong with the shareholders of CWS who ultimately are provided a return (i.e. profit) in customer rates to compensate for these risks. Similar to those projects in Table 10-1, CWS should pursue these projects, to the extent they are actually necessary, capitalizing the cost of the projects (including interest during construction) until they are complete and providing beneficial service or reasonably assumed will be providing service to customers during the time in which rates are being established. All reasonable project costs then can be placed in rate base.

III. ANALYSIS

A. Design and Permitting Only Projects

Table 10-1 below shows the list of projects where CWS proposes to add the estimated design and permitting costs into rate base despite producing no used and useful project during the period in which rates are being established in this GRC. CWS expects to request funding for the remaining portion of the project costs necessary to make a complete project in a future GRC.[294]

[294] CWS North Valley Region 2024 GRC PJ Book at 98; CWS Salinas Valley Region 2024 GRC PJ Book at 40; CWS Bay Area Region 2024 GRC PJ Book at 18, 174, 218, and 232; CWS Bear Gulch 2024 GRC PJ Book at 16, 23, 48-49, 62-63 and 71; CWS Visalia 2024 GRC PJ Book at 77.

Table 10-1: Design and Permitting Only Projects– 2024 GRC[295]

PID	District	Description	Design Project Start Year	Design Project Completion Year	Direct Project Cost
133125	Oroville	ORO-015 Sediment Basin Pipeline Improvement	2025	2027	$ 404,692.12
133230	Salinas	SLN Pipe Design 180 to 400 Zones	2025	2026	$ 1,110,599.46
132983	Bayshore	Preliminary Design for SSF 008 Tank	2025	2026	$ 830,666.96
133798	Bayshore	MPS 006 Design Only	2025	2026	$ 277,271.91
133009	Bear Gulch	BG Skylonda to Skyline Main Connection	2025	2027	$ 1,158,427.68
133012	Bear Gulch	BG 036 New 125K Gal Tank	2025	2027	$ 1,058,510.44
133014	Bear Gulch	Kings Mountain Tanks Farm Station Rebuild	2025	2027	$ 297,322.25
133016	Bear Gulch	Station 053 Tank Design and Permitting	2025	2027	$ 318,851.17
133022	Bear Gulch	Operations Building Design	2025	2027	$ 1,204,500
133266	Redwood Valley	NOH 201 Plant Re-design	2025	2027	$ 426,245.75
133836	Redwood Valley	LUC Intake Extension Design	2025	2027	$ 283,434.22
133416	Visalia	VIS Building Upgrades Design	2026	2027	$ 679,800.00

1. The Used & Useful Standard and Commission Precedent

The term "used and useful" refers to when an asset is in use and providing a service.[296] The Commission states that "[p]ursuant to the 'used and useful' principle, ratepayers should only be required to bear reasonable costs of those projects which provide direct and ongoing benefits or are used and useful in providing adequate and

[295] CWS North Valley Region 2024 GRC PJ Book at 99; CWS Salinas Valley Region 2024 GRC PJ Book at 41; CWS Bay Area Region 2024 GRC PJ Book at 20, 219, and 233; CWS Bear Gulch 2024 GRC PJ Book at 19, 24, 50, 64, and 72; CWS Visalia 2024 GRC PJ Book at 77. CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1."

[296] Utility General Rate Case – A Manual for Regulatory Analysts, CPUC Policy and Planning Division at 26. (https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpuc_public_website/content/about_us/organization/divisions/policy_and_planning/ppd_work/ppd_work_products_-2014_forward-/ppd-general-rate-case-manual-1-.pdf).

reasonable service to the ratepayers."[297] In fact, these concepts are embedded in numerous statutes of the Public Utilities Code of California, including Section 790(b), which states: "(b) All water utility infrastructure, plant, facilities, and properties constructed or acquired by, and used and useful to, a water corporation by investment pursuant to subdivision (a) shall be included among the water corporation's other utility property upon which the commission authorizes the water corporation the opportunity to earn a reasonable return."[298]

In CWS's previous GRC, CWS requested approval for portions of capital projects that would not be in service during the GRC period.[299] In the final decision for the proceeding, the Commission denied the inclusion of these projects in rate base.[300] The Commission reiterated the principle that ratepayers should only bear the cost of assets that are used by and provide a tangible benefit to ratepayers.[301] In addition, the Commission stated that the use of piecemealing recovery of project costs in a multi-step approach is unreasonable.[302]

2. Project Management and Construction Risk Should Never Be Placed on Ratepayers

There are fundamental reasons why standard ratemaking practice and Public Utilities Code look to the used and useful status of utility infrastructure before placing costs, including shareholder profits, into customer rates.[303] CWS acknowledges the

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[297] D.24-03-042 at 30, citing D.84-09-089; 1984 Cal. PUC LEXIS 1013, *72.

[298] See also Section 454.8: In any decision establishing rates for an electrical or gas corporation reflecting the reasonable and prudent costs of the new construction of any addition to or extension of the corporation's plant, when the commission has found and determined that the addition or extension is used and useful, the commission shall consider a method for the recovery of these costs which would be constant in real economic terms over the useful life of the facilities, so that ratepayers in a given year will not pay for the benefits received in other years

[299] A.21-07-002, Common Plant 2021 GRC PJ Book at 159-161.

[300] D.24-03-042 at 30.

[301] D.24-03-042 at 30.

[302] D.24-03-042 at 30.

[303] Currently CWS is authorized a shareholder profit (i.e. Return on Equity) of 10.27%.

complexity of the projects shown in Table 10-1 due to the number of unique project challenges and significant number of project unknowns at this stage.[304] This is also demonstrated by the duration of the project design and permitting phases of the projects. The duration of the project design and permitting process for some of the projects spans across the entire current GRC period. The complexity and long design and permitting timelines present a risk of project completion. In addition, some of the projects are dependent on the completion of other proposed projects, such as land acquisition projects, which also results in project management risk.[305] For example, CWS's ability to complete these associated projects or changes to the original project scope will affect the overall project cost and scope.

The uncertainty and risk associated with these projects is further demonstrated by the project cost range. CWS provides a total project cost range for some of these projects as great as 100% as shown in Table 10-2 below.

[304] CWS North Valley Region 2024 GRC PJ Book at 95-98; Salinas Valley Region 2024 GRC PJ Book at 38-40; Bay Area Region 2024 GRC PJ Book at 17-19, 174, 209-218, 227-232; Bear Gulch 2024 GRC PJ Book at 16-18, 20-23, 47-49, 60-63, 68-71; Visalia 2024 GRC PJ Book at 74-76.

[305] CWS Visalia 2024 GRC PJ Book at 74-76.

Table 10-2: Estimated Construction Costs for a Future GRC – Design and Permitting Only Projects in 2024 GRC[306]

PID	District	Description	Design Project Start Year	Design Project Completion Year	Direct Project Cost	Construction Cost Range	
						Low End	High End
133125	Oroville	ORO-015 Sediment Basin Pipeline Improvement	2025	2027	$ 404,692.12	$	12,000,000
133230	Salinas	SLN Pipe Design 180 to 400 Zones	2025	2026	$ 1,110,599.46	n/a	
132983	Bayshore	Preliminary Design for SSF 008 Tank	2025	2026	$ 830,666.96	$	5,920,000
133798	Bayshore	MPS 006 Design Only	2025	2026	$ 277,271.91	n/a	
133009	Bear Gulch	BG Skylonda to Skyline Main Connection	2025	2027	$ 1,158,427.68	$ 10,000,000	$ 20,000,000
133012	Bear Gulch	BG 036 New 125K Gal Tank	2025	2027	$ 1,058,510.44	$	2,250,000
133014	Bear Gulch	Kings Mountain Tanks Farm Station Rebuild	2025	2027	$ 297,322.25	$	2,980,000
133016	Bear Gulch	Station 053 Tank Design and Permitting	2025	2027	$ 318,851.17	$	2,680,000
133022	Bear Gulch	Operations Building Design	2025	2027	$ 1,204,500	$ 8,700,000	$ 11,300,000
133266	Redwood Valley	NOH 201 Plant Re-design	2025	2027	$ 426,245.75	n/a	
133836	Redwood Valley	LUC Intake Extension Design	2025	2027	$ 283,434.22	n/a	
133416	Visalia	VIS Building Upgrades Design	2026	2027	$ 679,800.00	n/a	

Due to the inherent risk of project management and completion and the fact that no beneficial customer service will be provided during the time in which rates are being established in this proceeding, CWS should not be allowed to add only a portion of the proposed projects into rate base during this GRC. Doing so would inappropriately shift the risk of project management and completion away from the utility and on to ratepayers.

To the extent CWS determines these projects are necessary, it can capitalize the design, permitting, and any other portion of project cost (including interest during construction)[307] until the projects are used and useful and appropriate for adding to rate

[306] CWS North Valley Region 2024 GRC PJ Book at 97 and 99; CWS Salinas Region 2024 GRC PJ Book at 41; CWS Bay Area Region 2024 GRC PJ Book at 18, 20, 219, and 233; CWS Bear Gulch 2024 GRC PJ Book at 17, 19, 22, 24, 49-50, 63-64, 70, and 72; CWS Visalia 2024 GRC PJ Book at 77.

[307] See testimony of Cal Advocates' witness, Chandrika Sharma. See Report and Recommendations on Plant for Bakersfield, Kern River Valley, King City, Salinas, Selma, and Visalia Districts, and Rate Base.

base. This will also provide transparency on the total cost of the project that ratepayers will be funding.

B. Multi-GRC Projects

CWS requests multiple projects in this rate case that CWS acknowledges would not be completed in this GRC.[308] Table 10-3 below lists the number of projects CWS proposes the Commission "approve" without a corresponding request for ratepayer funding in the current GRC.

Table 10-3: Number of Multi-GRC Capital Projects Proposed in the 2024 GR[309]

Region or District	Number of Projects Starting in this GRC for Completion after 2027
Bay Area Region	3
Bakersfield	8
Bear Gulch	2
Chico	3
East Los Angeles	2
Kern River Valley	6
Los Altos	3
Los Angeles County	2
Salinas Valley Region	5
Selma	1
South Bay Region	7
Stockton	3
Visalia	14
Willows	1
Total	**60**

[308] CWS Testimony Book #1 at 39-40.

[309] CWS Testimony Book #1 at 39-40. CWS's Visalia 2024 GRC PJ Book at 6 only shows fifteen projects in Table 2. CWS originally included the VIS Flowmeter Replacements project (PID 132746) in their list of multi-GRC projects in the Visalia District. However, CWS requests a direct project cost of $503,844 in 2027 for PID 132746. PID 132746 was excluded from Table 10-4 because CWS plans to complete this project during this GRC.

CWS essentially requests preapproval for projects that are uncertain at this time due to long project design and construction periods.[310] CWS does not expect to include the project costs in rates until the 2027 GRC at the earliest.[311] CWS states that it is not requesting funding in this GRC for the numerous GRC projects shown in Table 10-4 below.[312] Therefore, it remains unclear what "approval" CWS requires.

[310] CWS Testimony Book #1 at 40.

[311] CWS Testimony Book #1 at 40.

[312] CWS Testimony Book #1 at 40.

Table 10-4: Multi-GRC Capital Projects Proposed in the 2024 GRC per District[313]

PID	District	Description	Budgetary Cost Estimate Range	
			Low End	High End
	Bayshore	SF 007 Panelboard Replacement	$ 845,000	$ 3,380,000
132507	Bayshore	SF 001 Panelboard Replacement	$ 660,000	$ 2,640,000
133486	Redwood Valley	NOH 202 Paving and Grading	$ 80,000	$ 320,000
133180	Bakersfield	BK 304 CV001 Panel Upgrade	$ 350,000	$ 1,400,000
133838	Bakersfield	BK 204 Well Replacement Program	$ 1,500,000	$ 6,000,000
133183	Bakersfield	BK 209 New Storage Tank	$ 2,400,000	$ 9,800,000
133184	Bakersfield	BK 87 Rebuild Design and Construct	$ 920,000	$ 3,700,000
132660	Bakersfield	BK 176 Pressure Tank Replacement	$ 250,000	$ 960,000
132697	Bakersfield	BK 219 GAC Vessel Replacement	$ 150,000	$ 600,000
	Bakersfield	BK 178 Panelboard Overhauls	$ 125,000	$ 500,000
132512	Bakersfield	BK 007 Panelboard Overhauls	$ 290,000	$ 1,160,000
133020	Bear Gulch	BG 052 Water Treatment Recommission	$ 700,000	$ 2,800,000
133021	Bear Gulch	BG 055 Water Treatment Recommission	$ 330,000	$ 1,400,000
	Chico	CH 030 Panelboard Overhauls	$ 755,000	$ 3,020,000
	Chico	CH 034 Panelboard Overhauls	$ 745,000	$ 2,980,000
132515	Chico	CH 029 Panelboard Overhauls	$ 810,000	$ 3,240,000

[313] CWS Bay Area Region 2024 GRC PJ Book at 10, 182, and 263; CWS Bakersfield 2024 GRC PJ Book at 7, 28, 36, 42, 48, and 62; CWS Bear Gulch 2024 GRC PJ Book at 7, 55, and 59; CWS North Valley Region 2024 GRC PJ Book at 9; CWS East Los Angeles 2024 GRC PJ Book at 6, 35, and 39; CWS Kern River Valley 2024 GRC PJ Book at 7, 15-16, 88, 149, 226, 230, and 243; CWS Los Altos 2024 GRC PJ Book at 7; CWS Los Angeles County Region 2024 GRC PJ Book at 8, 25, 74, and 110; CWS Salinas Valley Region 2024 GRC PJ Book at 9, 36, 132, and 178; CWS Selma 2024 GRC PJ Book at 5 and 36; CWS South Bay Region 2024 GRC PJ Book at 9, 23, 26, 64, 72, 114, 130, 155, and 161; CWS Stockton 2024 GRC PJ Book at 6, 20, 24, and 36; CWS Visalia 2024 GRC PJ Book at 6, 15, 19, 23, 43, 50, 53 and 72; CWS Willows 2024 GRC PJ Book at 5 and 21; CWS Common Plant 2024 GRC PJ Book at 384, 421, and 450.

133066	East Los Angeles	ELA 062 New Generator	$ 600,000	$ 2,500,000
133793	East Los Angeles	ELA New Well and Treatment	$ 4,500,000	$ 18,000,000
133480	Kern River Valley	ONYX STA 001 Corrosion Control	$ 600,000	$ 2,400,000
133481	Kern River Valley	SOLA STA 008 Corrosion Control	$ 1,000,000	$ 4,400,000
133784	Kern River Valley	ARD 009 Station Rebuild	$ 325,000	$ 1,300,000
133477	Kern River Valley	LBOD 013 Well Replacement	$ 900,000	$ 3,500,000
133789	Kern River Valley	SMTN 005 Station Rebuild	$ 215,000	$ 870,000
133482	Kern River Valley	KRV 2nd Intake	$ 700,000	$ 3,000,000
	Los Altos	LAS 123 Panelboard Overhauls	$ 600,000	$ 2,400,000
	Los Altos	LAS 039 Panelboard Overhauls	$ 700,000	$ 2,800,000
132515	Los Altos	LAS 115 Panelboard Overhauls	$ 600,000	$ 2,400,000
133126	Palos Verdes	PV 004 Portable Generator Conn	$ 61,000	$ 250,000
132967	Antelope Valley	LHUG 001 Portable Generator	$ 35,000	$ 150,000
133234	Salinas	SLNH New Well Station #3	$ 2,600,000	$ 10,000,000
133226	Salinas	SLN PBC at Forest Song Dr	$ 216,000	$ 860,000
	Salinas	SLN 023 Panelboard Overhauls	$ 410,000	$ 1,640,000
132547	Salinas	SLN 303 Panelboard Overhauls	$ 430,000	$ 1,720,000
134742	King City	KC 2025 Generator Replacements	$ 1,120,000	$ 4,480,000
133250	Selma	SEL New Well Design and Equip	$ 2,300,000	$ 9,400,000
133045	Dominguez	DOM Well 277 Replacement	$ 1,300,000	$ 5,200,000
133048	Dominguez	DOM New Well	$ 4,800,000	$ 19,500,000
133054	Dominguez	DOM 298 Station Rebuild Construction	$ 1,100,000	$ 4,600,000
133053	Dominguez	DOM 203 Station Rebuild	$ 1,300,000	$ 5,500,000
133084	Hermosa Redondo	HR 029 New Chemical Building	$ 380,000	$ 1,500,000
133085	Hermosa Redondo	DOM/HR Consolidation Study	$ 430,000	$ 1,800,000
133081	Hermosa Redondo	HR 023 Booster Pump Vault Design	$ 500,000	$ 1,800,000

132965	Visalia	VIS 097 Main Extension	$ 500,000	$ 2,100,000
132966	Visalia	VIS 049 Main Extension	$ 500,000	$ 1,900,000
133155	Visalia	VIS New Storage Tank	$ 2,000,000	$ 8,000,000
133150	Visalia	VIS Property Purchase #2	$ 200,000	$ 850,000
133145	Visalia	VIS New Well Station #3	$ 2,600,000	$ 10,500,000
133144	Visalia	VIS New Well Station #2	$ 1,200,000	$ 5,000,000
133143	Visalia	VIS New Well Station #1	$ 2,000,000	$ 9,000,000
132742	Visalia	VIS 060 Pressure Tank Replacement	$ 250,000	$ 960,000
132743	Visalia	VIS 069 Pressure Tank Replacement	$ 250,000	$ 960,000
132550	Visalia	VIS 300 Panelboard Overhaul	$ 120,000	$ 480,000
132551	Visalia	VIS 201 Panelboard Overhaul	$ 120,000	$ 480,000
132552	Visalia	VIS 033 Panelboard Overhaul	$ 130,000	$ 520,000
132553	Visalia	VIS 057 Panelboard Overhaul	$ 135,000	$ 540,000
132554	Visalia	VIS 060 Panelboard Overhaul	$ 155,000	$ 620,000
133138	Willows	WIL New Well CrVI Treatment	$ 1,500,000	$ 6,000,000

1. "Approval" of Projects Is Unnecessary

As the economic regulator, the Commission approves or authorizes the rates utilities charge for recovery of costs (including a shareholder profit) on projects that are used and useful in providing beneficial customer service (or are reasonably expected to providing service during the period for which rates are being established). There is no Commission approval necessary for a utility to proceed with a project. This is best demonstrated by way of example. Water GRCs in California establish rates for a three-year future period. During this three year period it is almost certain that some previously unanticipated project will become necessary. In the event that a critical piece of utility infrastructure becomes inoperable will the utility discontinue service to customers until such time as it has "approval" from the Commission to complete a project? Of course not. The only approval the Commission needs to provide is the approval to include this unanticipated project in rates in a subsequent GRC. For the Commission to provide any other type of approval is unnecessary and harmful to ratepayers.

2. The "Approval" CWS Seeks is Harmful to Ratepayers

Because CWS is not requesting ratepayer funding for the projects identified in Table 10-4, the only result of CWS's requested "approval" of the projects is to shift the

risk of project management and completion away from itself and on to ratepayers. This should not be permitted. When a project is used and useful (or assumed to be) during the period for which rates are established, CWS can seek cost recovery (which includes profit). As with any business, this profit compensates shareholders for the risk of their investment. If the Commission pre-approves a CWS project, then it will be the ratepayers rather than shareholders who would incur the risk. CWS is free to pursue whatever projects it deems appropriate and should be held accountable for its decisions.

In A.21-07- 002, CWS requested "approval" for capital projects that it acknowledged would not be completed during the 2021 GRC cycle.[314] CWS did not request funding for many of these projects.[315] In D.24-03-042, the Commission denied "approving" these projects.[316] The Commission stated that there is no need to address CWS's request because these projects are not ripe for Commission review.[317] The Commission stated that CWS already has authority to pursue recovery of these projects in a future GRC or through an Advice Letter once the projects are completed and used and useful.[318] While the Commission previously allowed for recovery via Advice Letter or in a subsequent GRC, the Commission should limit CWS's recovery in this proceeding for similarly proposed projects until a subsequent GRC. Unlike the regularly recurring and carefully scheduled GRC process, which evenly spaces review of Class A rate requests over a three-year cycle, Advice Letters can be presented at any time causing an unscheduled yet significant burden to Commission. Additionally, Advice Letters are reviewed in a time period much shorter than that afforded by a GRC proceeding and without the benefit of an evidentiary record and robust discovery. The highly speculative and complex nature of the projects presented in Table 10-4 warrant a thorough

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[314] A.21-07-002, Common Plant 2021 GRC PJ Book at 162-163.

[315] CWS requested these projects under Special Request 5 in A.21-07-002. A.21-07-002 at 12.

[316] D.24-03-042 at 162-163.

[317] D.24-03-042 at 162-163.

[318] D.24-03-042 at 162.

examination in a GRC proceeding where the projects are expected to be used and useful for the period during which the GRC is setting customer rates.

IV. CONCLUSION

The Commission should not allow the cost of the design and permitting portion of projects not used and useful to be added to rate base. CWS can exercise its managerial discretion to pursue the design and permitting phase of projects and seek recovery of reasonable costs in a future GRC.

Similarly, the Commission should not place the risk of project management and approval on the public by "approving" projects where no approval is necessary.

ATTACHMENTS

LIST OF ATTACHMENTS FOR CHAPTER 1

	Attachment #	Description
1	Attachment 1-1	Qualifications of Witness
2	Attachment 1-2	Capital Budget Details – Bayshore District
3	Attachment 1-3	Bayshore District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures
4	Attachment 1-4	PID 132985 Direct Cost Estimate
5	Attachment 1-5	Previously Funded but Not in Service Projects – Bayshore District

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 the 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 Cal Advocates since June 2012. Since that time, I prepared testimonies on capital investment in several General Rate Cases (GRCs): California Water Service Company in 2012, 2015, 2018 and 2021; California-American Water in 2013, 2016, 2019, and 2022; San Jose Water Company in 2015; and Golden State Water Company in 2017, 2020 and 2023.

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, and Los Altos District. I am also responsible for the preparation of testimony regarding the following common plant issues: Meter Replacement Program, Flowmeter Replacement Program, advanced metering infrastructure, Main Replacement Program, America's Water Infrastructure and Emergency Response Plan, design and permitting only projects, and multi-GRC projects.

Q.5 Does that complete your prepared testimony?

A.5 Yes.

Attachment 1-2:
Capital Budget Details – Bayshore District

Att. Table 1-1: 2025 Capital Budget Details – Bayshore District[1]

2025	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
1	131986	BAY 2025 ACV Replacements	$ 382,448	$ 418,675	$ 36,227	91%
2	131991	MPS 2025 Control Valve Overhauls	$ 196,469	$ 467,565	$ 271,096	42%
3	131994	SSF 2025 Control Valve Overhauls	$ 47,153	$ 112,216	$ 65,063	42%
4	132116	SC 118-A Pump Replacement	$ 75,464	$ 111,639	$ 36,174	68%
5	132265	BAY 2025 Vehicle Replacement	$ 87,827	$ 85,825	$ (2,002)	102%
6	132380	BAY-MPS 2025 Vault Lid Replacements	$ 33,254	$ 36,404	$ 3,150	91%
7	132383	BAY-SSF 2025 Vault Lid Replacements	$ 33,254	$ 36,404	$ 3,150	91%
8	132585	Small portable generators	$ 343,521	$ 377,873	$ 34,352	91%
9	132824	SSF 2025 Physical Security Upgrades	$ 280,720	$ 439,017	$ 158,297	64%
10	132885	MPS 2025 Physical Security Upgrades	$ 300,554	$ 470,035	$ 169,481	64%
11	132994	BAY 2025 Replace Isolation Valves	$ 139,972	$ 139,972	$ -	100%
12	133367	BAY Copy Machine	$ 23,765	$ 26,142	$ 2,377	91%

[1] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2025	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
13	133368	SSF Field Yard Pipe	$ 32,796	$ 36,075	$ 3,280	91%
14	133369	BAY Leak Detection Equipment	$ 20,087	$ 21,989	$ 1,903	91%
15	133370	BAY Forklift	$ 46,556	$ 50,966	$ 4,410	91%
16	133371	BAY Water Quality Testing Units	$ 38,328	$ 42,058	$ 3,730	91%
17	133372	BAY Locating Equipment	$ 39,123	$ 43,035	$ 3,912	91%
18	133373	BAY Portable Lighting	$ 6,134	$ 6,715	$ 581	91%
19	133375	BAY Solar Arrow/ Message Board	$ 28,438	$ 31,132	$ 2,694	91%
20	133790	BAY 2025 Instrumentation Replc.	$ 808	$ 8,446	$ 7,638	10%
21	152MRP25	BAY 2025 Main Replacement Program	$ 12,508,655	$ 26,530,319	$ 14,021,664	47%
22	SMD0900	Meter Replacement Program-MPS	$ 427,348	$ 427,348	$ -	100%
23	SSF0900	Meter Replacement Program-SSF	$ 212,066	$ 212,066	$ -	100%
Specifics Total			**$ 15,304,739**	**$ 30,131,914**	**$ 14,827,176**	**51%**
Non-Specific-MPS			**$ -**	**$ 803,600**	**$ 803,600**	**0%**
Non-Specific-SSF			**$ -**	**$ 171,900**	**$ 171,900**	**0%**
Non-Specific-BAY			**$ -**	**$ 126,000**	**$ 126,000**	**0%**
Unscheduled-MPS			**$ -**	**$ 2,811,397**	**$ 2,811,397**	**0%**
Unscheduled-SSF			**$ -**	**$ 659,583**	**$ 659,583**	**0%**
Projects Previously Funded but not yet Complete			**$ 434,547**	**$ 9,931,704**	**$ 9,497,157**	**4%**
TOTAL 2025			**$ 15,739,286**	**$ 44,636,099**	**$ 28,896,813**	**35%**

Att. Table 1-2: 2026 Capital Budget Details – Bayshore District[2]

2026	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
1	131987	BAY 2026 ACV Replacements	$ 392,915	$ 429,142	$ 36,227	92%
2	131990	2026 BAY - 6 Flowmeter Replacements	$ -	$ 622,139	$ 622,139	0%
3	131992	MPS 2026 Control Valve Overhauls	$ 209,920	$ 498,424	$ 288,504	42%
4	131995	SSF 2026 Control Valve Overhauls	$ 40,369	$ 95,851	$ 55,482	42%
5	132105	SSF 002-C Pump Replacement	$ 56,439	$ 83,494	$ 27,055	68%
6	132106	SSF 005-A Pump Replacement	$ 57,984	$ 85,581	$ 27,597	68%
7	132108	SM 006-D Pump Replacement	$ 56,439	$ 83,494	$ 27,055	68%
8	132115	SSF 101-A Pump Replacement	$ 56,439	$ 83,494	$ 27,055	68%
9	132266	BAY 2026 Vehicle Replacement	$ 106,370	$ 161,378	$ 55,007	66%
10	132381	BAY-MPS 2026 Vault Lid Replacements	$ 34,164	$ 37,314	$ 3,150	92%
11	132384	BAY-SSF 2026 Vault Lid Replacements	$ 34,164	$ 37,314	$ 3,150	92%
12	132779	BAY SC 107 Pump House Building	$ 134,254	$ 164,720	$ 30,466	82%
13	132928	MPS 2026 Physical Security Upgrades	$ 249,267	$ 388,928	$ 139,661	64%

[2] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2026	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
14	132935	SSF 2026 Physical Security Upgrades	$ 313,133	$ 488,577	$ 175,444	64%
15	132968	BAY New Main Delores Parkside	$ 299,461	$ 299,461	$ -	100%
16	132983	SSF 008-T1 Preliminary Design	$ -	$ 830,667	$ 830,667	0%
17	132988	SSF 001 Cr-As Treatment Pilot Study	$ -	$ 72,493	$ 72,493	0%
18	132992	BAY 2025 Grid Strengthening	$ -	$ 545,775	$ 545,775	0%
19	132995	BAY 2026 Replace Isolation Valves	$ 139,972	$ 139,972	$ -	100%
20	132999	MPS 2025 Tank Improvements	$ 118,821	$ 1,585,920	$ 1,467,099	7%
21	133000	SSF 2025 Tank Improvements	$ 55,152	$ 613,682	$ 558,530	9%
22	133001	MPS 2026 Tank Improvements	$ 91,341	$ 1,021,270	$ 929,928	9%
23	133002	SSF 2026 Tank Improvements	$ 59,800	$ 663,877	$ 604,076	9%
24	133798	MPS 006 Design Only	$ -	$ 277,272	$ 277,272	0%
25	134125	BAY 2025 Grid Strengthening	$ -	$ 252,903	$ 252,903	0%
26	134300	MPS 2025 Brackish Aquifer Conductiv	$ -	$ 1,143,105	$ 1,143,105	0%
27	134303	SSF 2025 Brackish Aquifer Conductiv	$ -	$ 571,553	$ 571,553	0%
28	134769	BAY - VEHICLE FOR NEW COMPLEMENTS	$ -	$ 149,855	$ 149,855	0%

2026	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
29	152MRP26	BAY 2026 Main Replacement Program	$ 12,821,371	$ 27,193,577	$ 14,372,205	47%
30	SMD0900	Meter Replacement Program-MPS	$ 438,032	$ 438,032	$ -	100%
31	SSF0900	Meter Replacement Program-SSF	$ 217,368	$ 217,368	$ -	100%
32	133599	BSH-AMI INITIATIVE-VEHICLES/EQUIPM	$ 476,677	$ 1,048,689	$ 572,012	45%
Specifics Total			**$ 16,459,853**	**$ 40,325,319**	**$ 23,865,466**	**41%**
Non-Specific-MPS			**$ -**	**$ 823,700**	**$ 823,700**	**0%**
Non-Specific-SSF			**$ -**	**$ 176,200**	**$ 176,200**	**0%**
Non-Specific-BAY			**$ -**	**$ 129,100**	**$ 129,100**	**0%**
Unscheduled-MPS			**$ -**	**$ 2,881,682**	**$ 2,881,682**	**0%**
Unscheduled-SSF			**$ -**	**$ 676,073**	**$ 676,073**	**0%**
Projects Previously Funded but not yet Complete			**$ 255,740**	**$ 11,045,831**	**$ 10,790,091**	**2%**
TOTAL 2026			**$ 16,715,593**	**$ 56,057,905**	**$ 39,342,312**	**30%**

Att. Table 1-3: 2027 Capital Budget Details – Bayshore District[3]

2027	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
1	131988	BAY 2027 ACV Replacements	$ 403,633	$ 439,860	$ 36,227	92%
2	131993	MPS 2027 Control Valve Overhauls	$ 207,353	$ 491,224	$ 283,872	42%
3	131996	SSF 2027 Control Valve Overhauls	$ 41,470	$ 98,245	$ 56,774	42%
4	132111	MPS 012-E Pump Replacement	$ 50,474	$ 74,330	$ 23,855.92	68%
5	132112	MPS 114-B Pump Replacement	$ 22,930	$ 33,768	$ 10,837.62	68%
6	132117	MPS-120-B Pump Replacement	$ 50,474	$ 74,330	$ 23,855.92	68%
7	132267	BAY 2027 Vehicle Replacement	$ 328,844	$ 726,767	$ 397,923	45%
8	132382	BAY-MPS 2027 Vault Lid Replacements	$ 35,096	$ 38,246	$ 3,150	92%
9	132385	BAY-SSF 2027 Vault Lid Replacements	$ 35,096	$ 38,246	$ 3,150	92%
10	132933	MPS 2027 Physical Security Upgrades	$ 182,459	$ 284,050	$ 101,591	64%
11	132937	SSF 2027 Physical Security Upgrades	$ 271,151	$ 422,125	$ 150,974	64%
12	132984	SM 027 Paving	$ 936,646	$ 1,024,173	$ 87,526	91%

[3] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs. CWS's RO model shows the incorrect direct project cost for the SM 017 Station Rebuild Construction (PID 132998) project. CWS's capital project cost estimate shows a subtotal cost of $2,520,477.62 for PID 132998. CWS calculates the direct project cost by escalating the subtotal project by 2.5% per year. Based on CWS's methodology for calculating direct project cost (from 2023 to 2027 dollars), the estimated direct project cost for PID 132998 is $2,782,135.69. CWS plans on providing the correct direct project for PID 132998 in their rebuttal testimony. CWS's RO model also shows the incorrect direct project cost for the SC 117 Station Rebuild Construction (PID 132985) project. CWS states that $1,940,520.29 is the correct direct project cost for PID 132985.

2027	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
13	132985	SC 117 Station Rebuild Constr	$ 1,442,733	$ 1,940,520	$ 497,788	74%
14	132989	SC 112 T2-T3 Residual Control	$ 985,681	$ 1,205,420	$ 219,739	82%
15	132991	SC 109 New Generator and ATS	$ -	$ 567,488	$ 567,488	0%
16	132993	SC Wildfire Mititgation 585 Zone	$ 1,110,224	$ 1,351,392	$ 241,168	82%
17	132996	BAY 2027 Replace Isolation Valves	$ 139,972	$ 139,972	$ -	100%
18	132997	MPS Replace Transmission Valves	$ 1,782,573	$ 2,128,901	$ 346,328	84%
19	132998	SM 017 Station Rebuild Construction	$ 2,528,434	$ 2,782,136	$ 253,701	91%
20	133003	SSF 2027 Tank Improvements	$ 4,936	$ 284,400	$ 279,464	2%
21	133004	MPS 2027 Tank Improvements	$ 84,795	$ 948,073	$ 863,278	9%
22	133374	BAY Pressure Data Loggers	$ 79,278	$ 86,586	$ 7,308	92%
23	133376	BAY Field Yard Classroom Remodel	$ 519,554	$ 571,509	$ 51,955	91%
24	132499	BAY 2025 - MCC Replacement	$ 1,550,723	$ 2,083,329	$ 532,606	74%
25	133627	MPS 2027 AMI INITIATIVE-METERS	$ 4,819,073	$ 9,189,163	$ 4,370,090	52%
26	133634	SSF 2027 AMI INITIATIVE-METERS	$ 2,259,615	$ 4,296,428	$ 2,036,813	53%
27	152MRP27	BAY 2027 Main Replacement Program	$ 13,141,593	$ 27,872,753	$ 14,731,160	47%
Specifics Total			**$ 33,014,807**	**$ 59,193,431**	**$ 26,178,624**	**56%**
Non-Specific-MPS			**$ -**	**$ 844,400**	**$ 844,400**	**0%**
Non-Specific-SSF			**$ -**	**$ 180,400**	**$ 180,400**	**0%**
Non-Specific-BAY			**$ -**	**$ 132,300**	**$ 132,300**	**0%**
Unscheduled-MPS			**$ -**	**$ 2,953,724**	**$ 2,953,724**	**0%**
Unscheduled-SSF			**$ -**	**$ 692,975**	**$ 692,975**	**0%**
Projects Previously Funded but not yet Complete			**$ -**	**$ 3,144,369**	**$ 3,144,369**	**0%**
TOTAL 2027			**$ 33,014,807**	**$ 67,141,599**	**$ 34,126,792**	**49%**

Attachment 1-3:
Bayshore District Capital Budget Comparison:
CWS Proposed, Cal Advocates Estimates,
and CWS Recorded Expenditures

Att. Table 1-4: Bayshore District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[1]

Bayshore ($000)	2025	2026	2027	Annual Average	% of Recorded
2018-2023 Recorded	--	--	--	$ 26,376.7	100%
Cal Advocates	$ 15,739.3	$ 16,715.6	$ 33,014.8	$ 21,823.2	83%
CWS	$ 44,636.1	$ 56,057.9	$ 67,141.6	$ 55,945.2	212%

[1] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

Attachment 1-4:
PID 132985 Direct Cost Estimate

Att. Table 1-5: PID 132985 Direct Cost Estimate[1]

		Unit Cost		Total	
Item	**QTY**	**CWS**	**Cal Advocates**	**CWS**	**Cal Advocates**
6" Fire Hydrant	2	$ 29,252.00	$ 29,252.00	$ 58,504.00	$ 58,504.00
Block Building	480	$ 555.00	$ 555.00	$ 266,400.00	$ 266,400.00
Booster Pump	3	$ 76,425.00	$ 76,425.00	$ 229,275.00	$ 229,275.00
	3	$ 12,228.00	$ 12,228.00	$ 36,684.00	$ 36,684.00
Capital Budget Technician	4	$ 108.96	$ 108.96	$ 435.84	$ 435.84
Cithy Permit Fee	1	$ 9,808.00	$ 9,808.00	$ 9,808.00	$ 9,808.00
Control Valve	1	$ 14,964.00	$ 14,964.00	$ 14,964.00	$ 14,964.00
Control Valve Install	1	$ 53,592.00	$ 53,592.00	$ 53,592.00	$ 53,592.00
Cost Engineer	8.4	$ 139.41	$ 139.41	$ 1,171.04	$ 1,171.04
District Field Staff	130.27	$ 88.12	$ 88.12	$ 11,479.39	$ 11,479.39
District Superintendant	87.61	$ 115.92	$ 115.92	$ 10,155.75	$ 10,155.75
Driveway and App	400	$ 18.95	$ 18.95	$ 7,580.00	$ 7,580.00
Electrical Engineer	96.94	$ 139.41	$ 139.41	$ 13,514.41	$ 13,514.41
Electrical Installation	3	$ 30,174.00	$ 30,174.00	$ 90,522.00	$ 90,522.00
EMT	132.4	$ 112.12	$ 112.12	$ 14,844.69	$ 14,844.69
Fence and Gate	400	$ 80.00	$ 80.00	$ 32,000.00	$ 32,000.00
Geotech Report	3	$ 13,665.00	$ 13,665.00	$ 40,995.00	$ 40,995.00
On-site Grading	3677	$ 1.33	$ 1.33	$ 4,890.41	$ 4,890.41
Project Manager	244.99	$ 139.41	$ 139.41	$ 34,154.06	$ 34,154.06
SCADA Technician	65.81	$ 108.96	$ 108.96	$ 7,170.66	$ 7,170.66
Station Piping	1	$ 306,664.00	$ 306,664.00	$ 306,664.00	$ 306,664.00
Subtotal				$ 1,244,804.24	$ 1,244,804.24
Location Factor		5%		$ 62,240.21	$ 62,240.21
		10%	0%	$ 112,032.38	$ -
Subtotal				$ 1,419,076.84	$ 1,307,044.46
Contingency		10%	0%	$ 141,907.68	$ -
Subtotal				$ 1,560,984.52	$ 1,307,044.46
Escalation		24.31%	10.38%	$ 379,535.77	$ 135,688.06
Direct Cost				**$ 1,940,520.29**	**$ 1,442,732.52**

[1] CWS Bay Area Region 2024 GRC PJ Book at 76. CWS's RO model and capital project cost estimate show the incorrect direct project cost for PID 132985. CWS states in response to Public Advocates Office Data Request JMI-016 (RO Model 2) that $1,940,520.29 is the correct direct project cost for PID 132985.

Attachment 1-5:
Previously Funded but Not in Service Projects – Bayshore District

Att. Table 1-6: Previously Funded but Not in Service Projects – Bayshore District[1]

Year	Description	Work Order #	2025	2026	2027
2025	SSF Wildfire New Main 555 Zone	00124410	$ 2,230,548.52	$ -	$ -
2026	BAY SC-116 Rebuild	00125645	$ -	$ 2,507,664.98	$ -
2026	Wildfire SC-121 Station Rebuild	00124462	$ -	$ 1,666,082.70	$ -
2027	2020- VEH. FOR PROPOSED COMPLEMENT	00118094	$ -	$ -	$ 970,595.56
2025	SC Wildfire New Main 600 Zone	00124360	$ 1,024,211.61	$ -	$ -
2026	MPS-027 T1,T2,T3 Nitrification Cont	00124965	$ -	$ 1,179,270.89	$ -
2025	SC 106 Nitrification Control	00124989	$ 1,018,564.56	$ -	$ -
2026	SC 123 Nitrification Control	00124991	$ -	$ 531,000.00	$ -
2025	MPS Sta 106 Slope Mitigation	00124349	$ 565,400.84	$ -	$ -
2025	SSF Wildfire 380 Zone SFPUC Conn.	00124442	$ 500,002.60	$ -	$ -
2025	Partial Rebuild SC 106	00098596	$ 951,963.71	$ -	$ -
2025	MPS-029 T1 Nitrification Control	00124970	$ 718,143.46	$ -	$ -
2026	SSF 005 Panelboard Replacement	00123709	$ -	$ 399,902.93	$ -
2025	Widen Driveway	00099307	$ 334,464.14	$ -	$ -
2026	MPS Station 29 Replace Generator	00123641	$ -	$ 315,453.16	$ -
2027	2020 Vehicle Replacement Program	00115747	$ -	$ -	$ 267,298.58
2026	BAY SM STA 028 Wildfire Generator	00125025	$ -	$ 257,889.78	$ -
2026	SSF STA 101 Wildfire Generator	00123796	$ -	$ 253,651.65	$ -
2025	BAY SM STA 012 Wildfire Generator	00123848	$ 266,610.84	$ -	$ -
2025	BAY 2023 Vehicle Replacement Progrm	00123292	$ 196,208.53	$ -	$ -
2025	MPS 027-T2 - Tank Retrofits	00124249	$ 134,618.06	$ -	$ -
2026	2021 Vehicle Replacement Program	00115748	$ -	$ 92,658.77	$ -
2026	BAY 2024 Vehicle Replacemnt Program	00123702	$ -	$ 98,144.94	$ -
2026	MPS 2024 Flowmeter Replacement	00123906	$ -	$ 97,446.38	$ -
2025	MPS 109-T2 - Tank Retrofits	00124622	$ 56,430.86	$ -	$ -
2025	SSF-1 Treatment Plant Automation	00124748	$ 521,164.56	$ -	$ -
2025	MPS 2023 Flowmeter Replacement	00123903	$ 111,392.41	$ -	$ -
2025	MPS 029-T1 - Tank Retrofits	00123306	$ 33,600.15	$ -	$ -
2025	MPS 032-T1 - Tank Retrofits	00124688	$ 14,282.43	$ -	$ -
2025	SSF Sta.11 New Access Road	00114980	$ 27,806.21	$ -	$ -
2026	Install new station piping SM116	00115010	$ -	$ 176,962.82	$ -
2027	Panelboard Replacement MPS 117	00115080	$ -	$ -	$ 274,912.56
2025	Panelboard Replacement MPS 112	00115112	$ 484,974.67	$ -	$ -
2025	MPS 116-PT1 - Replace Pressure Tank	00116058	$ 57,823.57	$ -	$ -
2026	Station 26 Stabilization Project	00116335	$ -	$ 433,899.47	$ -
2027	Bayshore Ops. Center Improvements	00117796	$ -	$ -	$ 449,665.08
2026	MPS SM-17 Sta Rebuild - Design	00124427	$ -	$ 118,593.25	$ -
2027	Land Purchase for Recycled Water St	00125813	$ -	$ -	$ 1,181,897.18
2026	Purchase Land for SM Well	00061972	$ -	$ 2,661,469.00	$ -
2025	SSF 008-T1 Roof Replacement	00130599	$ 248,945.15	$ -	$ -
Direct Total			**$ 9,497,156.87**	**$ 10,790,090.71**	**$ 3,144,368.96**

[1] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

LIST OF ATTACHMENTS FOR CHAPTER 2

	Attachment #	Description
1	Attachment 2-1	Capital Budget Details – Bear Gulch District
2	Attachment 2-2	Bear Gulch District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures
3	Attachment 2-3	Previously Funded but Not in Service Projects – Bear Gulch District
4	Attachment 2-4	Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures

Attachment 2-1:
Capital Budget Details – Bear Gulch District

Att. Table 2-1: 2025 Capital Budget Details – Bear Gulch District[1]

2025	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
1	131977	BG 2025 Control Valve Overhauls	$ 196,469	$ 467,565	$ 271,096	42%
2	132268	BG 2025 VEHICLE REPLACEMENT PROGRAM	$ 401,383	$ 392,233	$ (9,150)	102%
3	132447	BG 2025 Physical Security Upgrades	$ 91,897	$ 143,717	$ 51,820	64%
4	133017	BG Watershed Restor/Fire Protection	$ -	$ 182,038	$ 182,038	0%
5	134012	BG 2025 Instrumentation Replc	$ 135	$ 1,407	$ 1,273	10%
6	102MRP25	BG 2025 Main Replacement Program	$ 9,899,252	$ 14,567,401	$ 4,668,149	68%
7	BGD0900	Meter Replacement Program	$ 300,718	$ 300,718	$ -	100%
Specifics Total			**$ 10,889,855**	**$ 16,055,080**	**$ 5,165,226**	**68%**
Non-Specific			**$ -**	**$ 1,517,800**	**$ 1,517,800**	**0%**
Unscheduled			**$ -**	**$ 3,318,304**	**$ 3,318,304**	**0%**
Projects Previously Funded but not yet Complete			**$ -**	**$ 11,640,301**	**$ 11,640,301**	**0%**
TOTAL 2025			**$ 10,889,855**	**$ 32,531,485**	**$ 21,641,630**	**33%**

[1] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

Att. Table 2-2: 2026 Capital Budget Details – Bear Gulch District[2]

2026	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
1	131966	BG Replace Skyline PRV/Vaults	$ 257,321	$ 316,660	$ 59,339	81%
2	131984	BG 2026 Control Valve Overhauls	$ 201,846	$ 479,254	$ 277,408	42%
3	132269	BG 2026 VEHICLE REPLACEMENT PROGRAM	$ 57,985	$ 87,970	$ 29,986	66%
4	132366	BG 2026 Vault Lid Replacements	$ 18,011	$ 21,161	$ 3,150	85%
5	132707	BG 2026 Physical Security Upgrades	$ 121,629	$ 189,776	$ 68,147	64%
6	133011	Bay Area Water Transfer (BG)	$ -	$ 270,565	$ 270,565	0%
7	133013	BG Brackish Aquifer Conductivity	$ -	$ 571,553	$ 571,553	0%
8	133023	BG 002 Staff Housing	$ 141,000	$ 155,100	$ 14,100	91%
9	133024	BG 002 Cathodic Protection	$ 12,212	$ 12,212	$ -	100%
10	133025	BG 021 Cathodic Protection	$ 21,202	$ 23,322	$ 2,120	91%
11	133026	BG 2025 Tank Improvements	$ 99,281	$ 1,104,721	$ 1,005,439	9%
12	134775	BG - VEHICLE FOR NEW COMPLEMENTS	$ -	$ 164,233	$ 164,233	0%
13	102MRP26	BG 2026 Main Replacement Program	$ 10,146,733	$ 14,931,586	$ 4,784,853	68%
14	BGD0900	Meter Replacement Program	$ 308,236	$ 308,236	$ -	100%
15	133593	BG - AMI INITIATIVE-VEHICLES/EQUIP	$ 254,526	$ 559,957	$ 305,431	45%
Specifics Total			**$ 11,639,982**	**$ 19,196,306**	**$ 7,556,324**	**61%**
Non-Specific			**$ -**	**$ 1,555,800**	**$ 1,555,800**	**0%**
Unscheduled			**$ -**	**$ 3,401,261**	**$ 3,401,261**	**0%**
Projects Previously Funded but not yet Complete			**$ -**	**$ 12,572,003**	**$ 12,572,003**	**0%**
TOTAL 2026			**$ 11,639,982**	**$ 36,725,370**	**$ 25,085,388**	**32%**

[2] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

Att. Table 2-3: 2027 Capital Budget Details – Bear Gulch District[3]

2027	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
1	131985	BG 2027 Control Valve Overhauls	$ 207,353	$ 491,224	$ 283,872	42%
2	132270	BG 2027 VEHICLE REPLACEMENT PROGRAM	$ 198,237	$ 438,116	$ 239,879	45%
3	132367	BG 2027 Vault Lid Replacements	$ 18,539	$ 21,689	$ 3,150	85%
4	132508	BG 2025 - MCC Replacements	$ 1,758,098	$ 2,361,928	$ 603,830	74%
5	132728	BG 2027 Physical Security Upgrades	$ 158,250	$ 246,363	$ 88,113	64%
6	133005	BG 022 New Generator	$ -	$ 228,040	$ 228,040	0%
7	133006	BG 043 New Generator	$ -	$ 503,664	$ 503,664	0%
8	133008	BG 005 Variable Frequency Drive	$ 178,339	$ 196,173	$ 17,834	91%
9	133009	BG Skylonda to Skyline Main Conn	$ -	$ 1,158,428	$ 1,158,428	0%
10	133012	BG 036 New 125K Gal Tank	$ -	$ 1,058,510	$ 1,058,510	0%
11	133014	BG KM Tanks Farm Station Rebuild	$ -	$ 273,850	$ 273,850	0%
12	133016	BG 053 Tank Design & Permitting	$ -	$ 296,037	$ 296,037	0%
13	133018	BG 016-T2 Mixing and Dosing	$ 963,107	$ 1,177,813	$ 214,707	82%
14	133019	BG 017-T1 Mixing and Dosing	$ 963,107	$ 1,177,813	$ 214,707	82%
15	133022	BG 002 New Ops Building Design	$ -	$ 1,204,500	$ 1,204,500	0%
16	133028	BG 2027 Tank Improvements	$ 27,619	$ 305,921	$ 278,303	9%

[3] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2027	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
17	133622	BG 2027 AMI INITIATIVE-METERS	$ 2,712,532	$ 5,109,121	$ 2,396,590	53%
18	102MRP27	BG 2027 Main Replacement Program	$ 10,400,402	$ 14,931,231	$ 4,530,830	70%
Specifics Total			**$ 17,585,580**	**$ 31,180,423**	**$ 13,594,842**	**56%**
Non-Specific			**$ -**	**$ 1,594,900**	**$ 1,594,900**	**0%**
Unscheduled			**$ -**	**$ 3,486,293**	**$ 3,486,293**	**0%**
Projects Previously Funded but not yet Complete			**$ -**	**$ 2,616,668**	**$ 2,616,668**	**0%**
TOTAL 2027			**$ 17,585,580**	**$ 38,878,283**	**$ 21,292,703**	**45%**

Attachment 2-2:
Bear Gulch District Capital Budget Comparison:
CWS Proposed, Cal Advocates Estimates,
and CWS Recorded Expenditures

Att. Table 2-4: Bear Gulch District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[1]

Bear Gulch ($000)	2025	2026	2027	Annual Average	% of Recorded
2018-2023 Recorded	--	--	--	$ 22,273.8	100%
Cal Advocates	$ 10,889.9	$ 11,640.0	$ 17,585.6	$ 13,371.8	60%
CWS	$ 32,531.5	$ 36,725.4	$ 38,878.3	$ 36,045.0	162%

[1] 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 2-5: Previously Funded but Not in Service Projects – Bear Gulch District[1]

Year	Description	Work Order #	2025	2026	2027
2025	BG Wildfire New Main Tynan Way	00124381	$ 200,000.00	$ -	$ -
2026	Sta 14 Partial Rebuild	00114641	$ -	$ 2,953,586.50	$ -
2026	BG Sta. 23 Panelboard Replacement	00123957	$ -	$ 422,251.48	$ -
2026	BG Sta. 20 Panelboard Replacement	00123935	$ -	$ 407,746.89	$ -
2025	Portola Road Pipeline	00114328	$ 2,043,063.29	$ -	$ -
2025	Operations Center Design	00076196	$ 65,400.84	$ -	$ -
2025	BG 038-T1 - Tank Retrofits	00123429	$ 35,824.09	$ -	$ -
2026	Sta 33 STA Rebuild	00065389	$ -	$ 862,111.79	$ -
2026	Sta 42 0.25MG Welded Steel Tank	00097302	$ -	$ 2,677,915.37	$ -
2027	Sta 5 3MG Welded Steel Tank	00097310	$ -	$ -	$ 2,616,667.65
2026	Sta 3 Reduce Sediment Intake	00097637	$ -	$ 369,009.23	$ -
2025	Upper Diversion Slope Stabilization	00098018	$ 593,192.41	$ -	$ -
2026	BG Skeggs Tanks (Design)	00098036	$ -	$ 423,336.35	$ -
2025	Upper Low Zone Mitigation	00098236	$ 716,613.83	$ -	$ -
2025	Sta 18 Station Rebuild	00114325	$ 1,590,720.17	$ -	$ -
2025	Sta 21 Partial Rebuild	00114642	$ 1,872,104.28	$ -	$ -
2026	Sta 17 Partial Rebuild	00114643	$ -	$ 215,533.36	$ -
2025	BG16 Slope Stabilization	00116305	$ 109,673.37	$ -	$ -
2025	BG 2020 Flowmeter Replacements	00116387	$ 8,093.90	$ -	$ -
2026	BG Skeggs Tanks Construction	00116413	$ -	$ 3,080,331.38	$ -
2025	Replace Genset - Sta 33	00118028	$ 273,858.38	$ -	$ -
2026	Skylonda - Skyline Main Conn	00133565	$ -	$ 1,160,180.59	$ -
2025	BG Skyline 06IN Relocate	00126093	$ 4,131,756.12	$ -	$ -
Direct Total			**$ 11,640,300.68**	**$ 12,572,002.92**	**$ 2,616,667.65**

[1] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

LIST OF ATTACHMENTS FOR CHAPTER 3

	Attachment #	Description
1	Attachment 3-1	Capital Budget Details – Los Altos District
2	Attachment 3-2	Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures
3	Attachment 3-3	Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures
4	Attachment 3-4	CWS Response to Public Advocates Office Data Request JMI-006 (Los Altos New Well Siting Study)
5	Attachment 3-5	PID 133283 Direct Cost Estimate
6	Attachment 3-6	Previously Funded but Not in Service Projects – Los Altos District

Attachment 3-1:
Capital Budget Details – Los Altos District

Att. Table 3-1: 2025 Capital Budget Details – Los Altos District[1]

2025	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
1	131998	LAS 2025 Control Valve Overhauls	$ 125,741	$ 299,242	$ 173,501	42%
2	132214	LAS-27-1 Pump Replacement	$ 82,197	$ 121,599.09	$ 39,402	68%
3	132221	LAS-121-2 Pump Replacement	$ 30,031	$ 44,425.88	$ 14,395	68%
4	132402	LAS 2025 Vault Lid Replacements	$ 33,254	$ 36,404	$ 3,150	91%
5	132757	LAS LA Hills Stations SCADA upgrade	$ -	$ 919,192	$ 919,192	0%
6	132782	LAS 2025 Physical Security Upgrades	$ 241,063	$ 376,997	$ 135,934	64%
7	133103	LAS 2025 Tank Improvements	$ 145,678	$ 1,620,985	$ 1,475,307	9%
8	133278	LAS 037 Generator for SCADA	$ 33,808	$ 37,188	$ 3,381	91%
9	133398	LAS Fire Flow/Hydrant Testing Equip	$ 6,592	$ 6,592	$ -	100%
10	111MRP25	LAS 2025 Main Replacement Program	$ 5,102,735	$ 7,595,458	$ 2,492,723	67%
11	LAS0900	Meter Replacement Program	$ 274,002	$ 274,002	$ -	100%
Specifics Total			**$ 6,075,100**	**$ 11,332,086**	**$ 5,256,986**	**54%**
Non-Specific			**$ -**	**$ 2,148,800**	**$ 2,148,800**	**100%**
Unscheduled			**$ -**	**$ 2,723,649**	**$ 2,723,649**	
Projects Previously Funded but not yet Complete			**$ -**	**$ 12,087,743**	**$ 12,087,743**	**0%**
TOTAL 2025			**$ 6,075,100**	**$ 28,292,278**	**$ 22,217,178**	**21%**

[1] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

Att. Table 3-2: 2026 Capital Budget Details – Los Altos District[2]

2026	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
1	132213	LAS-7-E Pump Replacement	$ 77,530	$ 114,429.92	$ 36,900	68%
2	132215	LAS-33-B Pump Replacement	$ 57,984	$ 85,580.93	$ 27,597	68%
3	132218	LAS-113-B Pump Replacement	$ 49,134	$ 72,518.59	$ 23,385	68%
4	132222	LAS-123-1 Pump Replacement	$ 50,350	$ 74,314.58	$ 23,964	68%
5	132331	LAS 2026 VEHICLE REPLACEMENT PROGRAM	$ 50,841	$ 77,133	$ 26,291	66%
6	132403	LAS 2026 Vault Lid Replacements	$ 34,164	$ 37,314	$ 3,150	92%
7	132784	LAS 2026 Physical Security Upgrades	$ 171,374	$ 267,392	$ 96,018	64%
8	132972	LAS Transmission Valve	$ 562,692	$ 688,751	$ 126,059	82%
9	133273	LAS 2026 Isolation Valve Install	$ 1,130,355	$ 1,234,576	$ 104,221	92%
10	133276	LAS New PRV Blandor To Price	$ 613,264	$ 750,554	$ 137,290	82%
11	133281	LAS PRV Replace El Monte & Foothill	$ 782,192	$ 957,185	$ 174,993	82%
12	133285	LAS WSFMP Update	$ 274,382	$ 299,681	$ 25,299	92%
13	133287	LAS New Well Property Purchase	$ -	$ 4,786,474	$ 4,786,474	0%
14	133914	LAS 2026 Control Valve Overhauls	$ 129,182	$ 306,723	$ 177,541	42%
15	134768	LAS - VEHICLE FOR NEW COMPLEMENTS	$ -	$ 163,379	$ 163,379	0%
16	111MRP26	LAS 2026 Main Replacement Program	$ 5,230,304	$ 11,024,424	$ 5,794,120	47%

[2] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

2026	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
17	LAS0900	Meter Replacement Program	$ 280,252	$ 280,252	$ -	100%
18	133597	LAS-AMI INITIATIVE-VEHICLES/EQUIP	$ 215,515	$ 474,132	$ 258,617	45%
Specifics Total			**$ 9,709,515**	**$ 21,694,813**	**$ 11,985,298**	**45%**
Non-Specific			**$ -**	**$ 2,202,500**	**$ 2,202,500**	**0%**
Unscheduled			**$ -**	**$ 2,791,740**	**$ 2,791,740**	**0%**
Projects Previously Funded but not yet Complete			**$ -**	**$ 16,699,008**	**$ 16,699,008**	**0%**
TOTAL 2026			**$ 9,709,515**	**$ 43,388,061**	**$ 33,678,546**	**22%**

Att. Table 3-3: 2027 Capital Budget Details – Los Altos District[3]

2027	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
1	132000	LAS 2027 Control Valve Overhauls	$ 132,706	$ 314,383	$ 181,678	42%
2	132216	LAS-34-B Pump Replacement	$ 102,997	$ 151,677.60	$ 48,681	68%
3	132219	LAS-119-D Pump Replacement	$ 59,565	$ 87,718.36	$ 28,153	68%
4	132277	LAS-027-01 Well Renewal	$ 42,857	$ 297,548	$ 254,691	14%
5	132332	LAS 2027 VEHICLE REPLACEMENT PROGRAM	$ 174,912	$ 386,566	$ 211,654	45%
6	132404	LAS 2027 Vault Lid Replacements	$ 35,096	$ 38,246	$ 3,150	92%
7	132534	LAS 2025 - MCC Replacements	$ 4,270,633	$ 5,737,409	$ 1,466,777	74%
8	132912	LAS STA 042 Rebuild	$ 1,992,968	$ 2,192,265	$ 199,297	91%
9	133274	LAS 2027 Isolation Valve Install	$ 1,161,189	$ 1,265,410	$ 104,221	92%
10	133282	LAS 014 New Pump 505 Zone	$ 201,005	$ 201,005	$ -	100%
11	133283	LAS 117 Station Rebuild Construction	$ 1,173,403	$ 1,503,378	$ 329,975	78%
12	133284	LAS Well Hardness Study	$ -	$ 311,441	$ 311,441	0%
13	133290	LAS 115 Chloramination	$ 963,263	$ 1,178,004	$ 214,741	82%

[3] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs. CWS's RO model shows the subtotal project cost for the LAS 117 Station Rebuild Construction (PID 133283) project. CWS's capital project cost estimate in their Los Altos Project Justification shows a direct project cost of $1,503,378.23 for PID 133283.

2027	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
14	133291	LAS 116 Disinfection	$ 969,602	$ 1,183,253	$ 213,651	82%
15	133294	LAS 123 Disinfection	$ 1,067,755	$ 1,179,822	$ 112,067	91%
16	133625	LAS 2027 AMI INITIATIVE-METERS	$ 2,613,784	$ 4,939,695	$ 2,325,911	53%
17	111MRP27	LAS 2027 Main Replacement Program	$ 5,360,934	$ 11,299,766	$ 5,938,832	47%
Specifics Total			**$ 20,322,668**	**$ 32,267,587**	**$ 11,944,918**	**63%**
Non-Specific			**$ -**	**$ 2,257,600**	**$ 2,257,600**	**0%**
Unscheduled			**$ -**	**$ 2,861,533**	**$ 2,861,533**	**0%**
Projects Previously Funded but not yet Complete			**$ -**	**$ 14,162,496**	**$ 14,162,496**	**0%**
TOTAL 2027			**$ 20,322,668**	**$ 51,549,216**	**$ 31,226,548**	**39%**

Attachment 3-2:
Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures

Att. Table 3-4: Los Altos District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[1]

Los Altos ($000)	2025	2026	2027	Annual Average	% of Recorded
2018-2023 Recorded	--	--	--	$ 13,302.4	100%
Cal Advocates	$ 6,075.1	$ 9,709.5	$ 20,322.7	$ 12,035.8	90%
CWS	$ 28,292.3	$ 43,388.1	$ 51,549.2	$ 41,076.5	309%

[1] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

Attachment 3-3:
CWS Response to Public Advocates Office Data Request JMI-012 (LAS LA Hills Station SCADA Upgrade (Los Altos))

RESPONSE TO DATA REQUEST

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

To: **Public Advocates Office**

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Emily Fisher — Attorney — (415) 703-1327 — emily.fisher@cpuc.ca.gov

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From: **California Water Service**

Natalie D. Wales — Director, Rates — (408) 367-8566 — nwales@calwater.com

Patrick Alexander — General Rate Case Manager — (408) 367-8230 — palexander@calwater.com

Melody Singh — Manager, Revenue — (916) 329-1856 — msingh@calwater.com

Date: **September 30, 2024** Re: **JMI-012** Subj: **LAS LA Hills Stations SCADA Upgrade Los Altos**	Request Received from CPUC: **Sept 23, 2024** Requested Due Date: **Sept 30, 2024**

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Does not contain confidential information.**

Data Requests and Responses

Los Altos Hills Station Supervisory Control and Data Acquisition (SCADA) (Los Altos)

1. "Table 1 Capital Budget Summary – Los Altos District" ("Table 1") in the Los Altos Capital Project Justification, pp. 5-6, contains direct project costs for the proposed capital projects in the Los Altos District. Footnote b to Table 1 states that "only projects above the District threshold of $700,000 direct cost are presented in this book with specific or programmatic justifications."[1]

   Table 1 shows a direct project cost of $919,192 for the Los Altos Hills Stations SCADA upgrade, project identification (PID) 132757.[2]

   a. Please confirm whether $919,192 is the correct direct project cost for PID 132757. If $919,192 is not the correct direct project cost for PID 132757, please provide the correct direct project cost.
   Response: This project had a larger scope in the beginning phases of planning for the 2024 GRC. As Cal Water progressed through successive stakeholder reviews, the project scope decreased as various other capital priorities were evaluated, but the company missed updating the estimate prior to filing. The intended estimate was more in the range of one tenth of the filed number. However, due to the urgent need for these sites in Los Altos to be upgraded, the reduced scope is being performed using non-specific funds. Therefore, Cal Water wishes to withdraw the entire budget of 00132757 from this rate case.

   b. Please provide a capital project cost estimate for correct direct project cost for PID 132757 in a format similar to the capital project cost estimates provided in the Capital Project Justification documents for PID 132757. For an example of capital project cost estimate format, please refer to Bay Area Region Capital Project Justification, p. 28, PID 132993: "SC Wildfire Mitigation 585 Zone" (Bayshore District).
   Response: The updated budget for PID 00132757 is now $0. No cost estimate is needed.

[1] Los Altos Capital Project Justification, p. 6.
[2] Los Altos Capital Project Justification, p. 5.

Attachment 3-4:
CWS Response to Public Advocates Office Data Request JMI-006 (Los Altos New Well Siting Study)

RESPONSE TO DATA REQUEST

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

To: **Public Advocates Office**

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Emily Fisher Attorney	(415) 703-1327 emily.fisher@cpuc.ca.gov
Megan Delaporta Attorney	(415) 703-1319 megan.delaporta@cpuc.ca.gov
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Justin Menda Utilities Engineer	(415) 703-2170 justin.menda@cpuc.ca.gov

From: **California Water Service**

Natalie D. Wales Director, Rates	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	(408) 367-8230 palexander@calwater.com
Melody Singh Manager, Revenue	(916) 329-1856 msingh@calwater.com

Date: **August 22, 2024** Re: **JMI-006** Subj: **Los Altos New Well Siting Study**	Request Received from CPUC: **August 15, 2024** Requested Due Date: **August 22, 2024**

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Contains Category #4 Confidential Information.**
- **This response refers to the following attachments included separately:**
  - **JMI-006 Attachment #1 - Question 1_Confidential Version**
  - **JMI-006 Attachment #2 - Question 1_Redacted Version**
  - **JMI-006 Attachment #3 - Question 2**

Data Requests and Responses

Los Altos New Well Siting Study (Los Altos):

1. Cal Water references the Luhdorff and Scalmanini Los Altos New Well Siting Study in their Los Altos Capital Project Justification when discussing the Los Altos New Well Property Purchase project (PID 133287).[1]
   a. Please provide a copy of the Los Altos New Well Siting Study.
   Response: Please see attached reports "JMI-006 Attachment #1 - Question 1_ Confidential Version" and "JMI-006 Attachment #2 - Question 1_Redacted Version". Please note California Water Service added the following language for clarification on the Water Quality findings in the attached report (Page number 13).
   "During the time of these exceedances, our sources were isolated and offline for repairs and maintenance. Prior to running our sources back online, samples were taken, and results came back clean."

2. In Cal Water's capital project cost estimate for PID 133287, the cost basis for certain line items is based on an "engineers estimate."[2] For the following line items, please describe how the costs for these line items were calculated, including all supporting documentation and vendor costs:
   a. Division of Drinking Water (DDW) Coordination and DSWAP[3]
   Response: This was provided in error. The correct cost for this should be $7,000. See attached document from a recent Cal Water vendor "JMI-006 Attachment #3 - Question 2".

   b. Land Acquisition
   Response: In Santa Clara County, a February 2024 search on Realtor.com identified 10135 Bret Ave, Cupertino CA 95104, valued at $238.67 per square foot. Cal Water requires a minimum of 15,000 square feet for the project. The product of the cost per square foot and the required minimum square feet totals $3,580,030. As vacant lots are scarce, Cal Water expects to purchase residential property and is not discounting its estimate for the value of improvements.

   c. Phase 1 Assessment
   Response: Phase 1 assessments can vary depending on site complexity. Since the exact parcel to be purchased is unknown, Cal Water assumed an allowance of 50 hours at a billable rate of $200 an hour for a consultant to perform this work.

END RESPONSE

[1] Los Altos Capital Project Justification, p. 58.
[2] Los Altos Capital Project Justification, p. 62.
[3] Drinking Water Source Assessment and Protection

Attachment 3-5:
PID 133283 Direct Cost Estimate

Att. Table 3-5: PID 133283 Direct Cost Estimate[1]

		Unit Cost		Total	
Item	**QTY**	**CWS**	**Cal Advocates**	**CWS**	**Cal Advocates**
16 ft Motorized Gate	1	$ 12,000.00	$ 12,000.00	$ 12,000.00	$ 12,000.00
6" Fire Hydrant New Install	1	$ 29,252.00	$ 29,252.00	$ 29,252.00	$ 29,252.00
Acoustical Shelter	1	$ 14,705.00	$ 14,705.00	$ 14,705.00	$ 14,705.00
Bollards	1	$ 30,000.00	$ 30,000.00	$ 30,000.00	$ 30,000.00
Booster Pump 20-40 HP	1	$ 53,231.00	$ 53,231.00	$ 53,231.00	$ 53,231.00
Booster Pump 20" x 120" Suction Can	1	$ 12,228.00	$ 12,228.00	$ 12,228.00	$ 12,228.00
Capital Budget Tech	4	$ 108.96	$ 108.96	$ 435.84	$ 435.84
City Permit Fee Building Permit	1	$ 9,808.00	$ 9,808.00	$ 9,808.00	$ 9,808.00
City Permit Fee CUP Permit	1	$ 19,663.00	$ 19,663.00	$ 19,663.00	$ 19,663.00
Control Valve 8" Diameter	1	$ 14,964.00	$ 14,964.00	$ 14,964.00	$ 14,964.00
Cost Engineer	52	$ 139.41	$ 139.41	$ 7,249.32	$ 7,249.32
Driveway and App Concrete	800	$ 18.95	$ 18.95	$ 15,160.00	$ 15,160.00
Elec Panelboard 200 amp	1	$ 94,156.00	$ 94,156.00	$ 94,156.00	$ 94,156.00
Electrical Installation 100-200 A, Outdoor Panelboard	1	$ 126,947.00	$ 126,947.00	$ 126,947.00	$ 126,947.00
Electrical Installation Gen Set w/ Foundation 15-80 kW	1	$ 97,953.00	$ -	$ 97,953.00	$ -
Electrical Installation Pump Upgrade	1	$ 30,174.00	$ 30,174.00	$ 30,174.00	$ 30,174.00
Electrical Installation RTU	1	$ 12,382.00	$ 12,382.00	$ 12,382.00	$ 12,382.00
Electrical Installation Utility Cost	1	$ 28,927.00	$ 28,927.00	$ 28,927.00	$ 28,927.00
EMT	83	$ 112.12	$ 112.12	$ 9,305.96	$ 9,305.96
Eng Tech	351	$ 108.96	$ 108.96	$ 38,244.96	$ 38,244.96
Field Labor	81	$ 88.12	$ 88.12	$ 7,137.72	$ 7,137.72
Field Manager	115	$ 115.92	$ 115.92	$ 13,330.80	$ 13,330.80
Flowmeter 8" Magmeter	1	$ 8,721.00	$ 8,721.00	$ 8,721.00	$ 8,721.00
Flowmeter Install Flowmeter Replacement in Vault	2	$ 53,332.00	$ 53,332.00	$ 106,664.00	$ 106,664.00
Gen Set w/ATS 50-80kW	1	$ 53,968.00	$ -	$ 53,968.00	$ -
Generator Concrete Pad	1	$ 19,000.00	$ -	$ 19,000.00	$ -
Hydraulic Closure	1	$ 11,909.00	$ 11,909.00	$ 11,909.00	$ 11,909.00
Labor	193	$ 139.41	$ 139.41	$ 26,906.13	$ 26,906.13
Panelboard Concrete Pad	1	$ 7,000.00	$ 7,000.00	$ 7,000.00	$ 7,000.00
SCADA RTU Panel/Radio Panel	1	$ 8,740.00	$ 8,740.00	$ 8,740.00	$ 8,740.00
SCADA SCADA pack	1	$ 3,194.00	$ 3,194.00	$ 3,194.00	$ 3,194.00
SCDADA Tech	64	$ 108.96	$ 108.96	$ 6,973.44	$ 6,973.44
Similar Projects	397	$ 139.41	$ 139.41	$ 55,345.77	$ 55,345.77
Site Survey Topography	1	$ 10,446.00	$ 10,446.00	$ 10,446.00	$ 10,446.00
Station Piping Well	1	$ 172,203.00	$ 172,203.00	$ 172,203.00	$ 172,203.00
Traffic Control	1	$ 25,870.00	$ 25,870.00	$ 25,870.00	$ 25,870.00
Vault 4'x6'x4'	2	$ 7,129.00	$ 7,129.00	$ 14,258.00	$ 14,258.00
Subtotal				$ 1,208,452.94	$ 1,037,531.94
Location Factor		5%		$ 60,422.65	$ 51,876.60
Subtotal				$ 1,268,875.59	$ 1,089,408.54
Contingency		10%	0%	$ 126,887.56	$ -
Subtotal				$ 1,395,763.15	$ 1,089,408.54
Escalation		7.71%		$ 107,615.08	$ 83,994.76
Direct Cost				**$ 1,503,378.23**	**$ 1,173,403.29**

[1] CWS Los Altos 2024 GRC PJ Book at 72-73.

Attachment 3-6:
Previously Funded but Not in Service Projects – Los Altos District

Att. Table 3-6: Previously Funded but Not in Service Projects – Los Altos District[1]

Year	Description	Work Order #	2025	2026	2027
2027	LAS New Operations Building	00124733	$ -	$ -	$ 6,773,164.67
2026	LAS Marion Way New Mainline	00125633	$ -	$ 4,673,084.04	$ -
2025	LAS STA 008 New Mainline to Mora	00125629	$ 2,228,510.21	$ -	$ -
2026	LAS 32, 1, 121 Well Chloramination	00125187	$ -	$ 2,961,539.24	$ -
2026	LAS Sta. 41 New Booster Pump	00123895	$ -	$ 1,837,672.57	$ -
2025	LAS Transm. Main Isolation Valves	00124208	$ 1,612,883.54	$ -	$ -
2025	LAS Sta. 39 and 104 Well Chloram	00123618	$ 2,033,293.67	$ -	$ -
2025	LAS Grant Rd. Rezone	00124086	$ 1,010,151.03	$ -	$ -
2025	LAS Sta. 111 Tank Mixing and Dosing	00125094	$ 914,929.96	$ -	$ -
2025	LAS Wildfire Control Valves 2024	00124140	$ 516,710.85	$ -	$ -
2025	LAS Sta. 41 Tank Mixing and Dosing	00125128	$ 974,454.85	$ -	$ -
2026	LAS Station 30 New Generator	00124330	$ -	$ 348,375.83	$ -
2026	LAS Station 31 New Generator	00124336	$ -	$ 289,228.55	$ -
2026	LAS Sta. 14 Panelboard Replacement	00123422	$ -	$ 520,083.54	$ -
2026	LAS Station 17 New Generator	00124254	$ -	$ 293,388.04	$ -
2026	LAS STA 008 Wildfire New Generator	00124093	$ -	$ 292,825.24	$ -
2027	LAS 27 New Generator	00124314	$ -	$ -	$ 263,203.78
2026	LAS Station 119 New Generator	00124269	$ -	$ 279,842.45	$ -
2025	LAS 2022 CARB Vehicle Replacement	00123876	$ 241,102.37	$ -	$ -
2027	Flow meters at 3 of 5 stations	00098765	$ -	$ -	$ 253,164.56
2025	LAS 2023 Control Valve Replacement	00123616	$ 388,185.65	$ -	$ -
2025	Upgrade Sample Stations Phase 2	00116799	$ 91,831.22	$ -	$ -
2027	New well replacement at station 20	00116020	$ -	$ -	$ 1,350,407.15
2026	LAS 118-PT1 - Pressure Vessel Rplcm	00123528	$ -	$ 449,393.25	$ -
2025	LAS 2024 Vehicle Replacement Progrm	00123755	$ 60,926.72	$ -	$ -
2026	LAS Sta. 117 Rebuild - Design	00123913	$ -	$ 210,970.46	$ -
2026	LAS Land for New Well	00124334	$ -	$ 2,270,798.10	$ -
2027	LAS Sta. 31 Redwood Tank Replace	00124598	$ -	$ -	$ 1,012,658.23
2026	LAS Sta. 30 Redwood Tank Replace	00125008	$ -	$ 851,341.46	$ -
2025	LAS Sta. 42 Tank Mixing and Dosing	00125120	$ 1,148,983.12	$ -	$ -
2027	LAS New Well For Zone 375	00124239	$ -	$ -	$ 4,197,998.77
2026	LAS 2024 Control Valve Replacement	00123617	$ -	$ 595,070.51	$ -
2025	LAS Sta. 15 Redwood Tank Replace	00124619	$ 865,780.10	$ -	$ -
2026	LAS-115 Redwood Tank Replacement	00124621	$ -	$ 825,395.00	$ -
2027	Los Altos Field Office Upgrade	00119986	$ -	$ -	$ 311,898.73
Direct Total			**$ 12,087,743.31**	**$ 16,699,008.30**	**$ 14,162,495.89**

[1] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

LIST OF ATTACHMENTS FOR CHAPTER 4

	Attachment #	Description
1	Attachment 4-1	Capital Budget Details – Redwood Valley District
2	Attachment 4-2	Redwood Valley District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures
3	Attachment 4-3	CWS Response to Public Advocates Office Data Request JMI-013 (Station Rebuild – Redwood Valley)
4	Attachment 4-4	PID 133268 Direct Cost Estimate
5	Attachment 4-5	CWS Response to Public Advocates Office Data Request JMI-010 (THM – Lucerne), Attachment 1
6	Attachment 4-6	Previously Funded but Not in Service Projects – Redwood Valley District
7	Attachment 4-7 CONFIDENTIAL	A.21-07-002, Capital Project Justification--Physical Security and Other Matters, pp. 159 and 169

Attachment 4-1:
Capital Budget Details – Redwood Valley District

Att. Table 4-1: 2025 Capital Budget Details – Redwood Valley District[1]

2025	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
1	132760	RDV 2025 NOH Full SCADA System	$ 40,840	$ 44,924	$ 4,084	91%
2	133258	LUC 005-T1 Cathodic Protection	$ 17,837	$ 17,837	$ -	100%
3	133265	ARM 001 Electrical Panel Cover	$ 55,119	$ 68,402	$ 13,283	81%
4	134444	RDV 2025 Sample Stations	$ 4,742	$ 14,341	$ 9,599	33%
5	146MRP25	RDV 2025 Main Replacement Program	$ 154,362	$ 1,101,072	$ 946,710	14%
Specifics Total			**$ 272,900**	**$ 1,246,576**	**$ 973,676**	**65%**
Non-Specific			**$ -**	**$ 337,000**	**$ 337,000**	**100%**
Unscheduled-RDV			**$ -**	**$ 220,428**	**$ 220,428**	**100%**
Unscheduled-LUC			**$ -**	**$ 97,040**	**$ 97,040**	**100%**
Projects Previously Funded but not yet Complete			**$ -**	**$ 905,892**	**$ 905,892**	**0%**
TOTAL 2025			**$ 272,900**	**$ 2,806,935**	**$ 2,534,035**	**10%**

[1] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

Att. Table 4-2: 2026 Capital Budget Details – Redwood Valley District[2]

2026	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
1	132042	RDV 2026 ACV Replacement	$ 78,583	$ 85,828	$ 7,245	92%
2	132043	RDV 2026 Flowmeter Replacement	$ 202,790	$ 223,069	$ 20,279	91%
3	132787	COS 2026 Full SCADA system	$ 26,355	$ 28,990	$ 2,635	91%
4	133257	LUC 003-T1 Cathodic Protection	$ 16,442	$ 16,442	$ -	100%
5	133267	RDV 205 ARM Well Siting Study	$ -	$ 248,303	$ 248,303	0%
6	133346	2027 RDV Vehicle Replacements	$ 130,228	$ 143,251	$ 13,023	91%
7	133487	RDV 2025 Tank Improvements	$ 42,788	$ 476,111	$ 433,323	9%
8	133488	RDV 2026 Tank Improvements	$ 5,113	$ 333,610	$ 328,497	2%
9	133837	LUC Seismic Mitigation Plan	$ -	$ 102,630	$ 102,630	0%
10	146MRP26	RDV 2026 Main Replacement Program	$ 158,221	$ 1,128,599	$ 970,378	14%
Specifics Total			**$ 660,521**	**$ 2,786,833**	**$ 2,126,313**	**24%**
Non-Specific			**$ -**	**$ 345,500**	**$ 345,500**	**0%**
Unscheduled-RDV			**$ -**	**$ 225,939**	**$ 225,939**	**0%**
Unscheduled-LUC			**$ -**	**$ 99,466**	**$ 99,466**	**0%**
Projects Previously Funded but not yet Complete			**$ -**	**$ 1,197,423**	**$ 1,197,423**	**0%**
TOTAL 2026			**$ 660,521**	**$ 4,655,161**	**$ 3,994,641**	**14%**

[2] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

Att. Table 4-3: 2027 Capital Budget Details – Redwood Valley District[3]

2027	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
1	132044	RDV 2027 Flowmeter Replacement	$ -	$ 107,120	$ 107,120	0%
2	132678	RDV 2025 Carbon Changeout	$ 70,955	$ 78,051	$ 7,096	91%
3	132679	RDV 2027 Carbon Changeouts	$ 70,955	$ 78,051	$ 7,096	91%
4	132786	LUC 2027 Full SCADA system	$ 26,355	$ 28,990	$ 2,635	91%
5	133256	NOH 201-A Pump Replacement	$ 31,619	$ 47,002	$ 15,382	67%
6	133259	COS 007-T4 Cathodic Protection	$ 17,520	$ 17,520	$ -	100%
7	133260	LUC PRV Install 17th & Country Club	$ -	$ 977,415	$ 977,415	0%
8	133261	LUC Portable Generator	$ 10,189	$ 17,630	$ 7,442	58%
9	133266	NOH 201 Plant Re-Design	$ -	$ 426,246	$ 426,246	0%
10	133268	COS 004 Station Rebuild	$ 1,282,281	$ 1,471,949	$ 189,668	87%
11	133269	COS Potable Reuse Study	$ -	$ 204,768	$ 204,768	0%
12	133271	HKN 001 Station Rebuild Constr	$ 1,308,518	$ 1,308,518	$ -	100%
13	133489	RDV 2027 Tank Improvements	$ 22,159	$ 246,573	$ 224,413	9%
14	133632	RDV 2027 AMI INITIATIVE-METERS	$ 248,750	$ 497,499	$ 248,750	50%

[3] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs. CWS's RO model shows the incorrect direct project cost for the COS 004 Station Rebuild (PID 133268) project. CWS states that $1,471,948.52 is the correct direct project cost for PID 133268.

2027	Project #	Project Description	Cal Advocates Recommendation	CWS Proposed	CWS > Cal Advocates	Cal Advocates / CWS
15	133799	COS 007 New Access Driveway	$ 583,903	$ 637,964	$ 54,061	92%
16	133836	LUC Intake Extension (Design)	$ -	$ 283,434	$ 283,434	0%
17	146MRP27	RDV 2027 Main Replacement Program	$ 162,173	$ 1,156,787	$ 994,613	14%
Specifics Total			**$ 3,835,377**	**$ 7,585,516**	**$ 3,750,139**	**51%**
Non-Specific			**$ -**	**$ 353,900**	**$ 353,900**	**0%**
Unscheduled-RDV			**$ -**	**$ 231,587**	**$ 231,587**	**0%**
Unscheduled-LUC			**$ -**	**$ 101,953**	**$ 101,953**	**0%**
Projects Previously Funded but not yet Complete			**$ -**	**$ 675,629**	**$ 675,629**	**0%**
TOTAL 2027			**$ 3,835,377**	**$ 8,948,585**	**$ 5,113,208**	**43%**

Attachment 4-2:
Redwood Valley District Capital Budget Comparison:
CWS Proposed, Cal Advocates Estimates,
and CWS Recorded Expenditures

Att. Table 4-4: Redwood Valley District Capital Budget Comparison: CWS Proposed, Cal Advocates Estimates, and CWS Recorded Expenditures[1]

Redwood Valley ($000)	2025	2026	2027	Annual Average	% of Recorded
2018-2023 Recorded	--	--	--	$ 1,984.0	100%
Cal Advocates	$ 272.9	$ 660.5	$ 3,835.4	$ 1,589.6	80%
CWS	$ 2,806.9	$ 4,655.2	$ 8,948.6	$ 5,470.2	276%

[1] CWS RO model file "Y_CH07_RO_RB_SD_Rec PLT," tab "PLT RPT WS-2."

Attachment 4-3:
CWS Response to Public Advocates Office Data Request JMI-013 (Station Rebuild – Redwood Valley)

RESPONSE TO DATA REQUEST

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

To: **Public Advocates Office**

Edward Scher Project Lead	(415) 815-7027 edward.scher@cpuc.ca.gov
Emily Fisher Attorney	(415) 703-1327 emily.fisher@cpuc.ca.gov
Megan Delaporta Attorney	(415) 703-1319 megan.delaporta@cpuc.ca.gov
Syreeta Gibbs Project Oversight Supervisor	(415) 703-1622 syreeta.gibbs@cpuc.ca.gov
Justin Menda Utilities Engineer	(415) 703-2170 justin.menda@cpuc.ca.gov

From: **California Water Service**

Natalie D. Wales Director, Rates	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	(408) 367-8230 palexander@calwater.com
Melody Singh Manager, Revenue	(916) 329-1856 msingh@calwater.com

Date: **October 3, 2024** Re: **JMI-013** Subj: **Station Rebuild – Redwood Valley**	Request Received from CPUC: **September 26, 2024** Requested Due Date: **October 3, 2024**

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Attachment #1 – JMI-013 Attachment 1**

Data Requests and Responses

Station Rebuild (Redwood Valley)

1. Please refer to the Capital Project Cost Estimate for the Coast Springs (COS) 4 Station Rebuild project, project identification (PID) 133268, shown in the Bay Area Region Capital Project Justification, pp. 244-245.

   a. The cost estimate shows two identical line items labeled "electrical installation 100-200 amp (A), outdoor panelboard."[1] If Cal Water listed the panelboard installation item twice to reflect two separate and different costs of the project, explain how the two installations differ in scope or are otherwise distinguishable. If this item was duplicated in error, please confirm.
   Response: This line item was duplicated by error.

   b. The cost estimate shows two identical line items labeled "SCADA SCADA pack."[2] If Cal Water listed the "SCADA SCADA pack" item twice to reflect two separate and different costs of the project, please explain how the two items differ in scope or are otherwise distinguishable. If this item was duplicated in error, please confirm.
   Response: This line item was duplicated by error.

   c. Does the line item labeled "storage tank – bolted steel (stl)" indicate that Cal Water plans to construct a tank as part of PID 133268?[3] If Cal Water plans to construct a bolted steel tank as part of PID 133268, please indicate where Cal Water discusses the need for this tank in Project Justification books or other supporting documents.
   Response: The preliminary scope for this project involved construction of a small tank to function as a wet well. Ultimately it was decided that the station can be constructed without the tank. Therefore, Cal Water does not plan to construct this storage tank at Station 4.

   d. The cost basis for the "stilt foundation" line item is blank.[4] Please describe how the cost for the "stilt foundation" line item was calculated, including all supporting documentation and vendor costs.
   Response: Please see JMI-013 Attachment 1.

   e. Please indicate whether the line item "booster pump 7.5 horsepower (hp)" is for an additional pump at Station 4 or replacement of an existing pump.[5] If Cal Water intends to replace an existing pump, please indicate which Station 4 pump Cal Water plans to replace as part of PID 133268.
   Response: Station 4 is the largest source of supply for this system. If the existing single booster pump fails, Cal Water will not be able to meet the system's water demands throughout the year. Accordingly, Cal Water plans

[1] Bay Area Region Capital Project Justification, p. 244.
[2] Bay Area Region Capital Project Justification, p. 245.
[3] Bay Area Region Capital Project Justification, p. 245.
[4] Bay Area Region Capital Project Justification, p. 245.
[5] Bay Area Region Capital Project Justification, p. 244.

Attachment 4-4:
PID 133268 Direct Cost Estimate

Att. Table 4-5: PID 133268 Direct Cost Estimate[1]

		Unit Cost		Total	
Item	**QTY**	**CWS**	**Cal Advocates**	**CWS**	**Cal Advocates**
Block Building New Building < 1000 SF	525	$ 555.00	$ 555.00	$ 291,375.00	$ 291,375.00
Booster Pump 7.5 HP	1	$ 42,729.00	$ 42,729.00	$ 42,729.00	$ 42,729.00
Capital Budget Technician	4	$ 108.96	$ 108.96	$ 435.84	$ 435.84
CEQA Constultant Initial Study	1	$ 36,209.00	$ 36,209.00	$ 36,209.00	$ 36,209.00
City Permit Fee Building Permit	1	$ 9,808.00	$ 9,808.00	$ 9,808.00	$ 9,808.00
City Permit Fee CUP Permit	1	$ 19,663.00	$ 19,663.00	$ 19,663.00	$ 19,663.00
Civil Engineer	193.2	$ 139.41	$ 139.41	$ 26,934.01	$ 26,934.01
Cost Engineer	52	$ 139.41	$ 139.41	$ 7,249.32	$ 7,249.32
Demolition	1	$ 16,000.00	$ 16,000.00	$ 16,000.00	$ 16,000.00
District Field Staff	81.2	$ 88.12	$ 88.12	$ 7,155.34	$ 7,155.34
District Superintendent	114.6	$ 115.92	$ 115.92	$ 13,284.43	$ 13,284.43
Electric Panelboard 200 AMP	1	$ 41,931.00	$ 41,931.00	$ 41,931.00	$ 41,931.00
Electrical Engineer	503.2	$ 139.41	$ 139.41	$ 70,151.11	$ 70,151.11
Electrical Installation 100-200 A, Outdoor Panelboard	1	$ 126,947.00	$ 126,947.00	$ 126,947.00	$ 126,947.00
Electrical Installation 100-200 A, Outdoor Panelboard	1	$ 126,947.00	$ -	$ 126,947.00	$ -
Electrical Installation, Pump Upgrade	1	$ 30,174.00	$ 30,174.00	$ 30,174.00	$ 30,174.00
Electrical Installation, RTU	1	$ 12,382.00	$ 12,382.00	$ 12,382.00	$ 12,382.00
Electrical Installation, Utility Cost	1	$ 28,927.00	$ 28,927.00	$ 28,927.00	$ 28,927.00
EMT	83.3	$ 112.12	$ 112.12	$ 9,339.60	$ 9,339.60
Environmental PM	96	$ 139.41	$ 139.41	$ 13,383.36	$ 13,383.36
Fence and Gate 6" H Chain Link	400	$ 80.00	$ -	$ 32,000.00	$ -
Flowmeter 6" Magmeter	1	$ 5,829.00	$ 5,829.00	$ 5,829.00	$ 5,829.00
Geotech Report 2 Borings	1	$ 8,844.00	$ 8,844.00	$ 8,844.00	$ 8,844.00
Hydraulic Enclore	1	$ 11,909.00	$ 11,909.00	$ 11,909.00	$ 11,909.00
Metering Panel Meter Panel, 100-200 A	1	$ 19,662.00	$ 19,662.00	$ 19,662.00	$ 19,662.00
On-Site Grading Encave/Embank, Tank Site	1	$ 41,450.00	$ 41,450.00	$ 41,450.00	$ 41,450.00
Project Manager	397.2	$ 139.41	$ 139.41	$ 55,373.65	$ 55,373.65
SCADA RTU Panel/Radio Panel	1	$ 8,740.00	$ 8,740.00	$ 8,740.00	$ 8,740.00
SCADA SCADA Antenna	1	$ 8,185.00	$ 8,185.00	$ 8,185.00	$ 8,185.00
SCADA SCADA Pack	1	$ 3,194.00	$ 3,194.00	$ 3,194.00	$ 3,194.00
SCADA SCADA Pack	1	$ 3,194.00	$ -	$ 3,194.00	$ -
SCADA Technician	64.1	$ 108.96	$ 108.96	$ 6,984.34	$ 6,984.34
Site Survey Topography with Legal Descriptions	1	$ 21,156.00	$ 21,156.00	$ 21,156.00	$ 21,156.00
Station Piping Existing Station, New Well	1	$ 46,759.00	$ 46,759.00	$ 46,759.00	$ 46,759.00
Stilt Foundation	1	$ 103,000.00	$ 103,000.00	$ 103,000.00	$ 103,000.00
Storage Tank - Bolted Stl 50K Gal	5000	$ 2.79	$ -	$ 13,950.00	$ -
Structural Eng Design for Block Building	1	$ 7,149.00	$ 7,149.00	$ 7,149.00	$ 7,149.00
Technician	350.4	$ 108.96	$ 108.96	$ 38,179.58	$ 38,179.58
Subtotal				$ 1,366,583.58	$1,190,492.59
Escalation		7.71%		$ 105,364.94	$ 91,788.15
Direct Cost				$ 1,471,948.52	$1,282,280.74

[1] CWS Bay Area Region 2024 GRC PJ Book at 244-245. CWS's RO model and capital project cost estimate show the incorrect direct project cost for PID 133268. CWS states in response to Public Advocates Office Data Request JMI-016 (RO Model 2) that $1,471,948.52 is the correct direct project cost for PID 133268.

Attachment 4-5:
CWS Response to Public Advocates Office Data Request JMI-010 (THM – Lucerne), Attachment 1

Sample Point Code	Sample Point Description	Result Paramlist	Parameter	Sampled Date	DLR Result	Units	DLR	MRL	MCL
LUC-D-006	6963 Panoramic Drive	524.2 THM	BDCM	08/29/2023	5.5	ug/L	1.	0.5	80.
LUC-D-006	6963 Panoramic Drive	524.2 THM	DBCM	08/29/2023	2.2	ug/L	1.	0.5	80.
LUC-D-006	6963 Panoramic Drive	524.2 THM	TBM	08/29/2023	ND	ug/L	1.	0.5	80.
LUC-D-006	6963 Panoramic Drive	524.2 THM	TCM	08/29/2023	27	ug/L	1.	0.5	80.
LUC-D-006	6963 Panoramic Drive	524.2 THM	TTHM	08/29/2023	35	ug/L	N/A		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM	BDCM	11/13/2023	4.7	ug/L	1.	0.5	80.
LUC-D-006	6963 Panoramic Drive	524.2 THM	DBCM	11/13/2023	2.6	ug/L	1.	0.5	80.
LUC-D-006	6963 Panoramic Drive	524.2 THM	TBM	11/13/2023	ND	ug/L	1.	0.5	80.
LUC-D-006	6963 Panoramic Drive	524.2 THM	TCM	11/13/2023	9.7	ug/L	1.	0.5	80.
LUC-D-006	6963 Panoramic Drive	524.2 THM	TTHM	11/13/2023	17	ug/L	N/A		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	BDCM	02/12/2024	5.7	ug/L	1.		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	DBCM	02/12/2024	2.1	ug/L	1.		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	TBM	02/12/2024	ND	ug/L	1.		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	TCM	02/12/2024	16	ug/L	1.		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	TTHM	02/12/2024	24	ug/L	N/A		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	BDCM	05/13/2024	8.7	ug/L	1.		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	DBCM	05/13/2024	2.8	ug/L	1.		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	TBM	05/13/2024	ND	ug/L	1.		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	TCM	05/13/2024	35	ug/L	1.		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	TTHM	05/13/2024	46	ug/L	N/A		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	BDCM	08/13/2024	4.8	ug/L	1.		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	DBCM	08/13/2024	1.3	ug/L	1.		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	TBM	08/13/2024	ND	ug/L	1.		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	TCM	08/13/2024	29	ug/L	1.		80.
LUC-D-006	6963 Panoramic Drive	524.2 THM-CLab	TTHM	08/13/2024	35	ug/L	N/A		80.

Attachment 4-6:
Previously Funded but Not in Service Projects – Redwood Valley District

Att. Table 4-6: Previously Funded but Not in Service Projects – Redwood Valley District[1]

Year	Description	Work Order #	2025	2026	2027
2026	RDV COS 7 New Generator	00123711	$ -	$ 379,046.08	$ -
2026	ARM 001 New Genset	00124333	$ -	$ 252,104.11	$ -
2025	Redwood Valley WSFMP	00124266	$ 125,078.14	$ -	$ -
2026	LUC Field Yard Land Acquisition	00125118	$ -	$ 133,143.46	$ -
2026	COS Study - New Access Driveway	00123712	$ -	$ 118,034.60	$ -
2025	CSPR Sta 8 - Spray Aeration Sys	00116925	$ 11,067.26	$ -	$ -
2025	ARM-NOH AMI Meters	00117876	$ 650,000.00	$ -	$ -
2026	RDV HKN Sta 1 - Upgrade - Design	00123623	$ -	$ 217,195.78	$ -
2027	RDV COS- Design and Permit New Well	00123714	$ -	$ -	$ 675,629.00
2025	RDV 2023 Vehicle Replacement Progrm	00123770	$ 104,397.67	$ -	$ -
2026	RDV 2024 Flowmeter Replacement	00124088	$ -	$ 97,899.28	$ -
2025	LUC 003-T1 - CP Upgrade	00124546	$ 15,348.52	$ -	$ -
Direct Total			**$ 905,891.59**	**$ 1,197,423.32**	**$ 675,629.00**

[1] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Costs shown are direct project costs.

ATTACHMENT 4-7:
A.21-07-002, Capital Project Justification--Physical Security and Other Matters, pp. 159 and 169

[CONFIDENTIAL]

LIST OF ATTACHMENTS FOR CHAPTER 5

	Attachment #	Description
1	Attachment 5-1	Meter Inventory Tables
2	Attachment 5-2	Revised Meter Replacement Budget Direct Cost Estimates

Attachment 5-1:
Meter Inventory Tables

Att. Table 5-1: 3” Meters— Antelope Valley District[1]

District	ID	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2027)
Antelope Valley	6413779292	3	INDUSTRIAL	2006	22

Att. Table 5-2: 8” Meters— Dominguez District[2]

District	ID	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2027)
Dominguez	606092340	8	COMMERCIAL	2023	5
Dominguez	1735400000	8	INDUSTRIAL	2012	16
Dominguez	1735400000	8	INDUSTRIAL	2012	16
Dominguez	1868500000	8	INDUSTRIAL	2021	7
Dominguez	1881522222	8	COMMERCIAL	2001	27
Dominguez	2218161651	8	INDUSTRIAL	2022	6
Dominguez	2362350643	8	COMMERCIAL	2011	17
Dominguez	2362350643	8	COMMERCIAL	2011	17
Dominguez	2369974591	8	INDUSTRIAL	2012	16
Dominguez	2868500000	8	INDUSTRIAL	2001	27
Dominguez	3656715914	8	RESIDENTIAL	2016	12
Dominguez	3768500000	8	COMMERCIAL	2018	10
Dominguez	3768500000	8	COMMERCIAL	2018	10
Dominguez	3796357049	8	RESIDENTIAL	2009	19
Dominguez	3796357049	8	RESIDENTIAL	2009	19
Dominguez	4134049150	8	RESIDENTIAL	2019	9
Dominguez	4545280783	8	RESIDENTIAL	2018	10
Dominguez	4566313574	8	COMMERCIAL	2020	8
Dominguez	5868500000	8	INDUSTRIAL	2003	25
Dominguez	5868500000	8	INDUSTRIAL	2003	25
Dominguez	6868500000	8	INDUSTRIAL	2001	27
Dominguez	6868500000	8	INDUSTRIAL	2001	27
Dominguez	7051168146	8	COMMERCIAL	2018	10
Dominguez	7554071803	8	COMMERCIAL	2006	22
Dominguez	7554071803	8	COMMERCIAL	2006	22
Dominguez	7786666977	8	RESIDENTIAL	2016	12
Dominguez	7857450510	8	INDUSTRIAL	2022	6
Dominguez	7914433883	8	RESIDENTIAL	2018	10
Dominguez	8322946838	8	INDUSTRIAL	2022	6
Dominguez	8494265578	8	RESIDENTIAL	2020	8
Dominguez	9210325776	8	RESIDENTIAL	2016	12

[1] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

[2] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

Att. Table 5-3: 6" Meters— East Los Angeles District[3]

District	ID	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2027)
East Los Angeles	1963477777	6	COMMERCIAL	2022	6
East Los Angeles	1963477777	6	COMMERCIAL	2022	6
East Los Angeles	2085647248	6	RESIDENTIAL	2022	6
East Los Angeles	2656477777	6	INDUSTRIAL	2018	10
East Los Angeles	2656477777	6	INDUSTRIAL	2018	10
East Los Angeles	2904477777	6	COMMERCIAL	2010	18
East Los Angeles	3919277777	6	COMMERCIAL	2017	11
East Los Angeles	3931712484	6	COMMERCIAL	2016	12
East Los Angeles	4094477777	6	COMMERCIAL	2003	25
East Los Angeles	4094477777	6	COMMERCIAL	2003	25
East Los Angeles	4338277777	6	COMMERCIAL	2023	5
East Los Angeles	4338277777	6	COMMERCIAL	2023	5
East Los Angeles	4906477777	6	COMMERCIAL	2016	12
East Los Angeles	4906477777	6	COMMERCIAL	2016	12
East Los Angeles	4963477777	6	COMMERCIAL	2003	25
East Los Angeles	4963477777	6	COMMERCIAL	2003	25
East Los Angeles	5094477777	6	COMMERCIAL	2018	10
East Los Angeles	5915477777	6	INDUSTRIAL	2017	11
East Los Angeles	5915477777	6	INDUSTRIAL	2017	11
East Los Angeles	6835477777	6	COMMERCIAL	2017	11
East Los Angeles	6835477777	6	COMMERCIAL	2017	11
East Los Angeles	7215477777	6	COMMERCIAL	2009	19
East Los Angeles	7215477777	6	COMMERCIAL	2009	19
East Los Angeles	7504463376	6	COMMERCIAL	2012	16
East Los Angeles	7608377777	6	COMMERCIAL	2017	11
East Los Angeles	8205477777	6	INDUSTRIAL	2014	14
East Los Angeles	8205477777	6	INDUSTRIAL	2014	14
East Los Angeles	8553277777	6	COMMERCIAL	2017	11
East Los Angeles	8553277777	6	COMMERCIAL	2017	11
East Los Angeles	9157277777	6	INDUSTRIAL	2014	14
East Los Angeles	9157277777	6	INDUSTRIAL	2014	14
East Los Angeles	9694477777	6	COMMERCIAL	2009	19
East Los Angeles	9694477777	6	COMMERCIAL	2009	19
East Los Angeles	9721477777	6	COMMERCIAL	2020	8
East Los Angeles	9721477777	6	COMMERCIAL	2020	8
East Los Angeles	VIRTUAL_	6		2017	11
East Los Angeles	VIRTUAL_	6		2017	11

[3] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

Att. Table 5-4: 8” Meters— Hermosa Redondo District[4]

District	ID	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2027)
Hermosa Redondo	137538751	8	INDUSTRIAL	2020	8
Hermosa Redondo	4309323484	8	INDUSTRIAL	2008	20
Hermosa Redondo	4309323484	8	INDUSTRIAL	2008	20
Hermosa Redondo	5753079793	8	COMMERCIAL	2014	14
Hermosa Redondo	8765371870	8	INDUSTRIAL	2019	9
Hermosa Redondo	9993889961	8	INDUSTRIAL	2023	5
Hermosa Redondo	9993889961	8	INDUSTRIAL	2023	5

Att. Table 5-5: 6” Meters— King City District[5]

District	ID	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2027)
King City	3340266666	6	COMMERCIAL	2022	6
King City	9386834833	6	COMMERCIAL	2016	12

Att. Table 5-6: 6” Meters— Marysville District[6]

District	ID	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2027)
Marysville	n/a				

Att. Table 5-7: 6” Meters— Oroville District[7]

District	ID	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2027)
Oroville	4666295448	6	COMMERCIAL	2019	9
Oroville	6960459498	6	COMMERCIAL	2018	10
Oroville	7288477777	6	RESIDENTIAL	2003	25
Oroville	7288477777	6	RESIDENTIAL	2003	25
Oroville	8639477777	6	COMMERCIAL	2018	10
Oroville	8639477777	6	COMMERCIAL	2018	10
Oroville	8720007164	6	INDUSTRIAL	2019	9
Oroville	VIRTUAL_	6		2018	10

[4] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

[5] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

[6] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

[7] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

Att. Table 5-8: 8” Meters— Palos Verdes District[8]

District	ID	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2027)
Palos Verdes	3537345221	8	COMMERCIAL	2015	13
Palos Verdes	6423589522	8	COMMERCIAL	2007	21
Palos Verdes	6423589522	8	COMMERCIAL	2007	21
Palos Verdes	8111611111	8	COMMERCIAL	2015	13
Palos Verdes	8111611111	8	COMMERCIAL	2015	13
Palos Verdes	9192322222	8	COMMERCIAL	2015	13
Palos Verdes	9192322222	8	COMMERCIAL	2015	13

[8] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

Att. Table5-9: 6” Meters— Salinas District[9]

District	ID	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2027)
Salinas	1053080565	6	INDUSTRIAL	2019	9
Salinas	1114366666	6	INDUSTRIAL	2008	20
Salinas	1114366666	6	INDUSTRIAL	2008	20
Salinas	1468350398	6	RESIDENTIAL	2011	17
Salinas	2487266666	6	COMMERCIAL	2014	14
Salinas	2487266666	6	COMMERCIAL	2014	14
Salinas	3074316399	6	RESIDENTIAL	2013	15
Salinas	3122366666	6	COMMERCIAL	2017	11
Salinas	3122366666	6	COMMERCIAL	2017	11
Salinas	3137904232	6	RESIDENTIAL	2012	16
Salinas	3777266666	6	INDUSTRIAL	2013	15
Salinas	3777266666	6	INDUSTRIAL	2013	15
Salinas	3787366666	6	COMMERCIAL	2010	18
Salinas	3787366666	6	COMMERCIAL	2010	18
Salinas	3945385637	6	COMMERCIAL	2014	14
Salinas	4136014920	6	RESIDENTIAL	2021	7
Salinas	4283466666	6	COMMERCIAL	2012	16
Salinas	4283466666	6	COMMERCIAL	2012	16
Salinas	4846266666	6	COMMERCIAL	2015	13
Salinas	4846266666	6	COMMERCIAL	2015	13
Salinas	6256172513	6	INDUSTRIAL	2014	14
Salinas	6852466666	6	COMMERCIAL	2012	16
Salinas	6852466666	6	COMMERCIAL	2012	16
Salinas	7357266666	6	COMMERCIAL	2003	25
Salinas	8439142648	6	RESIDENTIAL	2015	13
Salinas	8513136261	6	COMMERCIAL	2016	12
Salinas	8787366666	6	COMMERCIAL	2003	25
Salinas	9185193729	6	RESIDENTIAL	2011	17
Salinas	VIRTUAL_	6		2017	11
Salinas	VIRTUAL_	6		2017	11

[9] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

Att. Table 5-10: 6” Meters— Selma District[10]

District	ID	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2027)
Selma	5407027913	6	RESIDENTIAL	2012	16
Selma	7923566666	6	RESIDENTIAL	2017	11
Selma	7923566666	6	RESIDENTIAL	2017	11
Selma	9040566666	6	RESIDENTIAL	2019	9
Selma	9040566666	6	RESIDENTIAL	2019	9
Selma	9831486849	6	RESIDENTIAL	2012	16
Selma	9831486849	6	RESIDENTIAL	2012	16

Att. Table 5-11: 6” Meters— Westlake District[11]

District	ID	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2027)
Westlake	380048627	6	IRRIGATION	2005	23
Westlake	3392036330	6	COMMERCIAL	2022	6
Westlake	4811622222	6	COMMERCIAL	2017	11
Westlake	4811622222	6	COMMERCIAL	2017	11
Westlake	9805833097	6	COMMERCIAL	2021	7
Westlake	VIRTUAL_	6		2017	11
Westlake	VIRTUAL_	6		2017	11

Att. Table 5-12: 6” Meters— Willows District[12]

District	ID	Meter Size (in.)	Customer Type	Installation Year	Meter Age (2027)
Willows	5781577777	4	COMMERCIAL	2003	25
Willows	6831577777	4	COMMERCIAL	2013	15
Willows	6831577777	4	COMMERCIAL	2013	15

[10] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

[11] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

[12] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 1 Meter Replacement.

Attachment 5-2:
Revised Meter Replacement Budget Direct Cost Estimates

Att. Table 5-13: 2026 Direct Cost Comparison— AVD0900[1]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	68	68	$ 120.81	$ 8,154.35	$ 8,154.35
1" Meter Install	[EA]	3	3	$ 216.00	$ 684.01	$ 684.01
1.5" Meter Install	[EA]	0	0	$ 605.80	$ -	$ -
2 Meter Install	[EA]	1	1	$ 752.80	$ 501.87	$ 501.87
3" Meter Install	[EA]	1	0	$ 3,855.08	$ 3,855.08	$ -
4" Meter Install	[EA]	0	0	$ 7,113.92	$ -	$ -
6" Meter Install	[EA]	0	0	$11,520.75	$ -	$ -
8" Meter Install	[EA]	0	0	$11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$17,337.98	$ -	$ -
Subtotal					$ 13,195.31	$ 9,340.23
Escalation				7.69%	$ 1,014.60	$ 718.18
Direct Cost					$ 14,209.91	$ 10,058.41

[1] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 3 2026 Meter Replacement Cost Estimates.

Att. Table 5-14: 2025 Direct Cost Comparison— DOM0900[2]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	3118	3118	$ 120.81	$ 376,690.62	$ 376,690.62
1" Meter Install	[EA]	85	85	$ 216.00	$ 18,252.37	$ 18,252.37
1.5" Meter Install	[EA]	117	117	$ 605.80	$ 70,575.78	$ 70,575.78
2 Meter Install	[EA]	198	198	$ 752.80	$ 149,306.16	$ 149,306.16
3" Meter Install	[EA]	8	8	$ 3,855.08	$ 30,840.64	$ 30,840.64
4" Meter Install	[EA]	3	3	$ 7,113.92	$ 21,341.77	$ 21,341.77
6" Meter Install	[EA]	2	2	$11,520.75	$ 23,041.51	$ 23,041.51
8" Meter Install	[EA]	11	8	$11,481.03	$ 126,291.31	$ 91,848.23
10"> Meter Install	[EA]	1	1	$17,337.98	$ 17,337.98	$ 17,337.98
Subtotal					$ 833,678.13	$ 799,235.05
Escalation				5.06%	$ 42,204.96	$ 40,461.27
Direct Cost					$ 875,883.09	$ 839,696.32

[2] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 2 2025 Meter Replacement Cost Estimates.

Att. Table 5-15: 2026 Direct Cost Comparison— DOM0900[3]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	3118	3118	$120.81	$ 376,690.62	$ 376,690.62
1" Meter Install	[EA]	85	85	$216.00	$ 18,252.37	$ 18,252.37
1.5" Meter Install	[EA]	117	117	$605.80	$ 70,575.78	$ 70,575.78
2 Meter Install	[EA]	198	198	$752.80	$ 149,306.16	$ 149,306.16
3" Meter Install	[EA]	8	8	$3,855.08	$ 30,840.64	$ 30,840.64
4" Meter Install	[EA]	3	3	$7,113.92	$ 21,341.77	$ 21,341.77
6" Meter Install	[EA]	2	2	$11,520.75	$ 23,041.51	$ 23,041.51
8" Meter Install	[EA]	11	0	$11,481.03	$ 126,291.31	$ -
10"> Meter Install	[EA]	1	1	$17,337.98	$ 17,337.98	$ 17,337.98
Subtotal					$ 833,678.13	$ 707,386.82
Escalation				7.69%	$ 64,102.03	$ 54,391.41
Direct Cost					$ 897,780.16	$ 761,778.23

[3] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 3 2026 Meter Replacement Cost Estimates.

Att. Table 5-16: 2027 Direct Cost Comparison— DOM0900[4]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	3118	3118	$120.81	$ 376,690.62	$ 376,690.62
1" Meter Install	[EA]	85	85	$216.00	$ 18,252.37	$ 18,252.37
1.5" Meter Install	[EA]	117	117	$605.80	$ 70,575.78	$ 70,575.78
2 Meter Install	[EA]	198	198	$752.80	$ 149,306.16	$ 149,306.16
3" Meter Install	[EA]	8	8	$3,855.08	$ 30,840.64	$ 30,840.64
4" Meter Install	[EA]	3	3	$7,113.92	$ 21,341.77	$ 21,341.77
6" Meter Install	[EA]	2	2	$11,520.75	$ 23,041.51	$ 23,041.51
8" Meter Install	[EA]	11	0	$11,481.03	$ 126,291.31	$ -
10"> Meter Install	[EA]	1	1	$17,337.98	$ 17,337.98	$ 17,337.98
Subtotal					$ 833,678.13	$ 707,386.82
Escalation				10.38%	$ 86,546.54	$ 73,435.87
Direct Cost					$ 920,224.67	$ 780,822.69

[4] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 4 2027 Meter Replacement Cost Estimates.

Att. Table 5-17: 2027 Direct Cost Comparison— ELA0900[5]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	580	580	$ 120.81	$ 70,006.59	$ 70,006.59
1" Meter Install	[EA]	122	122	$ 216.00	$ 26,424.54	$ 26,424.54
1.5" Meter Install	[EA]	31	31	$ 605.80	$ 18,981.76	$ 18,981.76
2 Meter Install	[EA]	58	58	$ 752.80	$ 43,662.64	$ 43,662.64
3" Meter Install	[EA]	8	8	$ 3,855.08	$ 30,840.64	$ 30,840.64
4" Meter Install	[EA]	3	3	$ 7,113.92	$ 21,341.77	$ 21,341.77
6" Meter Install	[EA]	2	0	$ 11,520.75	$ 23,041.51	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 234,299.43	$ 211,257.93
Escalation				10.38%	$ 24,323.30	$ 21,931.30
Direct Cost					$ 258,622.73	$ 233,189.22

[5] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 4 2027 Meter Replacement Cost Estimates.

Att. Table 5-18: 2025 Direct Cost Comparison— HRD0900[6]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	595	595	$120.81	$ 71,818.67	$ 71,818.67
1" Meter Install	[EA]	434	434	$216.00	$ 93,781.91	$ 93,781.91
1.5" Meter Install	[EA]	145	145	$605.80	$ 87,639.17	$ 87,639.17
2 Meter Install	[EA]	76	76	$752.80	$ 57,464.05	$ 57,464.05
3" Meter Install	[EA]	6	6	$3,855.08	$ 23,130.48	$ 23,130.48
4" Meter Install	[EA]	2	2	$7,113.92	$ 14,227.84	$ 14,227.84
6" Meter Install	[EA]	1	1	$11,520.75	$ 11,520.75	$ 11,520.75
8" Meter Install	[EA]	10	0	$11,481.03	$ 114,810.28	$ -
10"> Meter Install	[EA]	0	0	$17,337.98	$ -	$ -
Subtotal					$ 474,393.15	$ 359,582.87
Escalation				5.06%	$ 24,016.15	$ 18,203.88
Direct Cost					$ 498,409.30	$ 377,786.75

[6] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 2 2025 Meter Replacement Cost Estimates.

Att. Table 5-19: 2026 Direct Cost Comparison— HRD0900[7]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	595	595	$ 120.81	$ 71,818.67	$ 71,818.67
1" Meter Install	[EA]	434	434	$ 216.00	$ 93,781.91	$ 93,781.91
1.5" Meter Install	[EA]	145	145	$ 605.80	$ 87,639.17	$ 87,639.17
2 Meter Install	[EA]	76	76	$ 752.80	$ 57,464.05	$ 57,464.05
3" Meter Install	[EA]	6	6	$ 3,855.08	$ 23,130.48	$ 23,130.48
4" Meter Install	[EA]	2	2	$ 7,113.92	$ 14,227.84	$ 14,227.84
6" Meter Install	[EA]	1	1	$ 11,520.75	$ 11,520.75	$ 11,520.75
8" Meter Install	[EA]	10	0	$ 11,481.03	$ 114,810.28	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 474,393.15	$ 359,582.87
Escalation				7.69%	$ 36,476.39	$ 27,648.55
Direct Cost					$ 510,869.54	$ 387,231.42

[7] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 3 2026 Meter Replacement Cost Estimates.

Att. Table 5-20: 2027 Direct Cost Comparison— HRD0900[8]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	595	595	$ 120.81	$ 71,818.67	$ 71,818.67
1" Meter Install	[EA]	434	434	$ 216.00	$ 93,781.91	$ 93,781.91
1.5" Meter Install	[EA]	145	145	$ 605.80	$ 87,639.17	$ 87,639.17
2 Meter Install	[EA]	76	76	$ 752.80	$ 57,464.05	$ 57,464.05
3" Meter Install	[EA]	6	6	$ 3,855.08	$ 23,130.48	$ 23,130.48
4" Meter Install	[EA]	2	2	$ 7,113.92	$ 14,227.84	$ 14,227.84
6" Meter Install	[EA]	1	1	$ 11,520.75	$ 11,520.75	$ 11,520.75
8" Meter Install	[EA]	10	2	$ 11,481.03	$ 114,810.28	$ 22,962.06
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$474,393.15	$382,544.92
Escalation				10.38%	$ 49,248.12	$ 39,713.09
Direct Cost					$ 523,641.27	$ 422,258.02

[8] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 4 2027 Meter Replacement Cost Estimates.

Att. Table 5-21: 2025 Direct Cost Comparison— KCD0900[9]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	63	63	$ 120.81	$ 7,620.79	$ 7,620.79
1" Meter Install	[EA]	26	26	$ 216.00	$ 5,634.11	$ 5,634.11
1.5" Meter Install	[EA]	2	2	$ 605.80	$ 1,363.05	$ 1,363.05
2 Meter Install	[EA]	5	5	$ 752.80	$ 3,638.55	$ 3,638.55
3" Meter Install	[EA]	1	1	$ 3,855.08	$ 3,855.08	$ 3,855.08
4" Meter Install	[EA]	1	1	$ 7,113.92	$ 7,113.92	$ 7,113.92
6" Meter Install	[EA]	1	0	$ 11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 40,746.27	$ 29,225.51
Escalation				5.06%	$ 2,062.78	$ 1,479.54
Direct Cost					$ 42,809.05	$ 30,705.05

[9] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 2 2025 Meter Replacement Cost Estimates.

Att. Table 5-22: 2026 Direct Cost Comparison— KCD0900[10]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	63	63	$ 120.81	$ 7,620.79	$ 7,620.79
1" Meter Install	[EA]	26	26	$ 216.00	$ 5,634.11	$ 5,634.11
1.5" Meter Install	[EA]	2	2	$ 605.80	$ 1,363.05	$ 1,363.05
2 Meter Install	[EA]	5	5	$ 752.80	$ 3,638.55	$ 3,638.55
3" Meter Install	[EA]	1	1	$ 3,855.08	$ 3,855.08	$ 3,855.08
4" Meter Install	[EA]	1	1	$ 7,113.92	$ 7,113.92	$ 7,113.92
6" Meter Install	[EA]	1	0	$ 11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 40,746.27	$ 29,225.51
Escalation				7.69%	$ 3,133.01	$ 2,247.17
Direct Cost					$ 43,879.27	$ 31,472.68

[10] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 3 2026 Meter Replacement Cost Estimates.

Att. Table 5-23: 2027 Direct Cost Comparison— KCD0900[11]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	63	63	$120.81	$ 7,620.79	$ 7,620.79
1" Meter Install	[EA]	26	26	$216.00	$ 5,634.11	$ 5,634.11
1.5" Meter Install	[EA]	2	2	$605.80	$ 1,363.05	$ 1,363.05
2 Meter Install	[EA]	5	5	$752.80	$ 3,638.55	$ 3,638.55
3" Meter Install	[EA]	1	1	$3,855.08	$ 3,855.08	$ 3,855.08
4" Meter Install	[EA]	1	1	$7,113.92	$ 7,113.92	$ 7,113.92
6" Meter Install	[EA]	1	0	$11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$17,337.98	$ -	$ -
Subtotal					$ 40,746.27	$ 29,225.51
Escalation				10.38%	$ 4,229.99	$ 3,033.99
Direct Cost					$ 44,976.25	$ 32,259.50

[11] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 4 2027 Meter Replacement Cost Estimates.

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	63	63	$120.81	$ 7,620.79	$ 7,620.79
1" Meter Install	[EA]	26	26	$216.00	$ 5,634.11	$ 5,634.11
1.5" Meter Install	[EA]	2	2	$605.80	$ 1,363.05	$ 1,363.05
2 Meter Install	[EA]	5	5	$752.80	$ 3,638.55	$ 3,638.55
3" Meter Install	[EA]	1	1	$3,855.08	$ 3,855.08	$ 3,855.08
4" Meter Install	[EA]	1	1	$7,113.92	$ 7,113.92	$ 7,113.92
6" Meter Install	[EA]	1	0	$11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$17,337.98	$ -	$ -
Subtotal					$ 40,746.27	$ 29,225.51
Escalation				10.38%	$ 4,229.99	$ 3,033.99
Direct Cost					$ 44,976.25	$ 32,259.50

Att. Table 5-24: 2025 Direct Cost Comparison— MRL0900[12]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	14	14	$ 120.81	$ 1,651.00	$ 1,651.00
1" Meter Install	[EA]	8	8	$ 216.00	$ 1,656.03	$ 1,656.03
1.5" Meter Install	[EA]	5	5	$ 605.80	$ 3,230.94	$ 3,230.94
2 Meter Install	[EA]	12	12	$ 752.80	$ 9,033.65	$ 9,033.65
3" Meter Install	[EA]	1	1	$ 3,855.08	$ 3,855.08	$ 3,855.08
4" Meter Install	[EA]	1	1	$ 7,113.92	$ 7,113.92	$ 7,113.92
6" Meter Install	[EA]	1	0	$ 11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 38,061.38	$ 26,540.63
Escalation				5.06%	$ 1,926.86	$ 1,343.62
Direct Cost					$ 39,988.24	$ 27,884.25

[12] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 2 2025 Meter Replacement Cost Estimates.

Att. Table 5-25: 2026 Direct Cost Comparison— MRL0900[13]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	14	14	$ 120.81	$ 1,651.00	$ 1,651.00
1" Meter Install	[EA]	8	8	$ 216.00	$ 1,656.03	$ 1,656.03
1.5" Meter Install	[EA]	5	5	$ 605.80	$ 3,230.94	$ 3,230.94
2 Meter Install	[EA]	12	12	$ 752.80	$ 9,033.65	$ 9,033.65
3" Meter Install	[EA]	1	1	$ 3,855.08	$ 3,855.08	$ 3,855.08
4" Meter Install	[EA]	1	1	$ 7,113.92	$ 7,113.92	$ 7,113.92
6" Meter Install	[EA]	1	0	$ 11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 38,061.38	$ 26,540.63
Escalation				7.69%	$ 2,926.56	$ 2,040.73
Direct Cost					$ 40,987.94	$ 28,581.35

[13] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 3 2026 Meter Replacement Cost Estimates.

Att. Table 5-26: 2027 Direct Cost Comparison— MRL0900[14]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	14	14	$ 120.81	$ 1,651.00	$ 1,651.00
1" Meter Install	[EA]	8	8	$ 216.00	$ 1,656.03	$ 1,656.03
1.5" Meter Install	[EA]	5	5	$ 605.80	$ 3,230.94	$ 3,230.94
2 Meter Install	[EA]	12	12	$ 752.80	$ 9,033.65	$ 9,033.65
3" Meter Install	[EA]	1	1	$ 3,855.08	$ 3,855.08	$ 3,855.08
4" Meter Install	[EA]	1	1	$ 7,113.92	$ 7,113.92	$ 7,113.92
6" Meter Install	[EA]	1	0	$ 11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 38,061.38	$ 26,540.63
Escalation				10.38%	$ 3,951.26	$ 2,755.26
Direct Cost					$ 42,012.64	$ 29,295.89

[14] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 4 2027 Meter Replacement Cost Estimates.

Att. Table 5-27: 2027 Direct Cost Comparison— ORO0900[15]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	67	67	$ 120.81	$ 8,073.81	$ 8,073.81
1" Meter Install	[EA]	8	8	$ 216.00	$ 1,620.03	$ 1,620.03
1.5" Meter Install	[EA]	2	2	$ 605.80	$ 1,312.57	$ 1,312.57
2 Meter Install	[EA]	10	10	$ 752.80	$ 7,151.64	$ 7,151.64
3" Meter Install	[EA]	2	2	$ 3,855.08	$ 7,710.16	$ 7,710.16
4" Meter Install	[EA]	1	1	$ 7,113.92	$ 7,113.92	$ 7,113.92
6" Meter Install	[EA]	1	0	$ 11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 44,502.89	$ 32,982.13
Escalation				10.38%	$ 4,619.97	$ 3,423.97
Direct Cost					$ 49,122.86	$ 36,406.10

[15] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 4 2027 Meter Replacement Cost Estimates.

Att. Table 5-28: 2025 Direct Cost Comparison— PVD0900[16]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	968	968	$ 120.81	$ 116,899.13	$ 116,899.13
1" Meter Install	[EA]	253	253	$ 216.00	$ 54,577.11	$ 54,577.11
1.5" Meter Install	[EA]	175	175	$ 605.80	$ 106,116.09	$ 106,116.09
2 Meter Install	[EA]	87	87	$ 752.80	$ 65,117.56	$ 65,117.56
3" Meter Install	[EA]	4	4	$ 3,855.08	$ 15,420.32	$ 15,420.32
4" Meter Install	[EA]	2	2	$ 7,113.92	$ 14,227.84	$ 14,227.84
6" Meter Install	[EA]	1	1	$ 11,520.75	$ 11,520.75	$ 11,520.75
8" Meter Install	[EA]	5	0	$ 11,481.03	$ 57,405.14	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 441,283.94	$ 383,878.80
Escalation				5.06%	$ 22,340.00	$ 19,433.86
Direct Cost					$ 463,623.94	$ 403,312.67

[16] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 2 2025 Meter Replacement Cost Estimates.

Att. Table 5-29: 2026 Direct Cost Comparison— PVD0900[17]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	968	968	$ 120.81	$ 116,899.13	$ 116,899.13
1" Meter Install	[EA]	253	253	$ 216.00	$ 54,577.11	$ 54,577.11
1.5" Meter Install	[EA]	175	175	$ 605.80	$ 106,116.09	$ 106,116.09
2 Meter Install	[EA]	87	87	$ 752.80	$ 65,117.56	$ 65,117.56
3" Meter Install	[EA]	4	4	$ 3,855.08	$ 15,420.32	$ 15,420.32
4" Meter Install	[EA]	2	2	$ 7,113.92	$ 14,227.84	$ 14,227.84
6" Meter Install	[EA]	1	1	$ 11,520.75	$ 11,520.75	$ 11,520.75
8" Meter Install	[EA]	5	2	$ 11,481.03	$ 57,405.14	$ 22,962.06
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 441,283.94	$ 406,840.86
Escalation				7.69%	$ 33,930.60	$ 31,282.25
Direct Cost					$ 475,214.54	$ 438,123.11

[17] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 3 2026 Meter Replacement Cost Estimates.

Att. Table 5-30: 2027 Direct Cost Comparison— SLN0900[18]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	319	319	$ 120.81	$ 38,567.05	$ 38,567.05
1" Meter Install	[EA]	490	490	$ 216.00	$ 105,788.15	$ 105,788.15
1.5" Meter Install	[EA]	29	29	$ 605.80	$ 17,770.15	$ 17,770.15
2 Meter Install	[EA]	51	51	$ 752.80	$ 38,518.48	$ 38,518.48
3" Meter Install	[EA]	7	7	$ 3,855.08	$ 26,985.56	$ 26,985.56
4" Meter Install	[EA]	3	3	$ 7,113.92	$ 21,341.77	$ 21,341.77
6" Meter Install	[EA]	1	0	$ 11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 260,491.91	$ 248,971.15
Escalation				10.38%	$ 27,042.42	$ 25,846.42
Direct Cost					$ 287,534.32	$ 274,817.57

[18] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 4 2027 Meter Replacement Cost Estimates.

Att. Table 5-31: 2025 Direct Cost Comparison— SEL0900[19]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	85	85	$ 120.81	$ 10,208.04	$ 10,208.04
1" Meter Install	[EA]	16	16	$ 216.00	$ 3,528.07	$ 3,528.07
1.5" Meter Install	[EA]	8	8	$ 605.80	$ 4,644.47	$ 4,644.47
2 Meter Install	[EA]	11	11	$ 752.80	$ 8,280.85	$ 8,280.85
3" Meter Install	[EA]	2	2	$ 3,855.08	$ 7,710.16	$ 7,710.16
4" Meter Install	[EA]	1	1	$ 7,113.92	$ 7,113.92	$ 7,113.92
6" Meter Install	[EA]	1	0	$ 11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 53,006.26	$ 41,485.51
Escalation				5.06%	$ 2,683.44	$ 2,100.20
Direct Cost					$ 55,689.70	$ 43,585.71

[19] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 2 2025 Meter Replacement Cost Estimates.

Att. Table 5-32: 2026 Direct Cost Comparison— SEL0900[20]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	85	85	$ 120.81	$ 10,208.04	$ 10,208.04
1" Meter Install	[EA]	16	16	$ 216.00	$ 3,528.07	$ 3,528.07
1.5" Meter Install	[EA]	8	8	$ 605.80	$ 4,644.47	$ 4,644.47
2 Meter Install	[EA]	11	11	$ 752.80	$ 8,280.85	$ 8,280.85
3" Meter Install	[EA]	2	2	$ 3,855.08	$ 7,710.16	$ 7,710.16
4" Meter Install	[EA]	1	1	$ 7,113.92	$ 7,113.92	$ 7,113.92
6" Meter Install	[EA]	1	0	$ 11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 53,006.26	$ 41,485.51
Escalation				7.69%	$ 4,075.68	$ 3,189.85
Direct Cost					$ 57,081.94	$ 44,675.35

[20] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 3 2026 Meter Replacement Cost Estimates.

Att. Table 5-33: 2027 Direct Cost Comparison— SEL0900[21]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	85	85	$ 120.81	$ 10,208.04	$ 10,208.04
1" Meter Install	[EA]	16	16	$ 216.00	$ 3,528.07	$ 3,528.07
1.5" Meter Install	[EA]	8	8	$ 605.80	$ 4,644.47	$ 4,644.47
2 Meter Install	[EA]	11	11	$ 752.80	$ 8,280.85	$ 8,280.85
3" Meter Install	[EA]	2	2	$ 3,855.08	$ 7,710.16	$ 7,710.16
4" Meter Install	[EA]	1	1	$ 7,113.92	$ 7,113.92	$ 7,113.92
6" Meter Install	[EA]	1	0	$ 11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 53,006.26	$ 41,485.51
Escalation				10.38%	$ 5,502.73	$ 4,306.73
Direct Cost					$ 58,508.99	$ 45,792.24

[21] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 4 2027 Meter Replacement Cost Estimates.

Att. Table 5-34: 2026 Direct Cost Comparison— WLK0900[22]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	94	94	$ 120.81	$ 11,335.55	$ 11,335.55
1" Meter Install	[EA]	20	20	$ 216.00	$ 4,320.09	$ 4,320.09
1.5" Meter Install	[EA]	37	37	$ 605.80	$ 22,212.69	$ 22,212.69
2 Meter Install	[EA]	54	54	$ 752.80	$ 40,902.36	$ 40,902.36
3" Meter Install	[EA]	2	2	$ 3,855.08	$ 7,710.16	$ 7,710.16
4" Meter Install	[EA]	1	1	$ 7,113.92	$ 7,113.92	$ 7,113.92
6" Meter Install	[EA]	1	0	$ 11,520.75	$ 11,520.75	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 105,115.52	$ 93,594.77
Escalation				7.69%	$ 8,082.40	$ 7,196.56
Direct Cost					$ 113,197.92	$ 100,791.33

[22] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 3 2026 Meter Replacement Cost Estimates.

Att. Table 5-35: 2026 Direct Cost Comparison— WIL0900[23]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	43	43	$ 120.81	$ 5,214.76	$ 5,214.76
1" Meter Install	[EA]	8	8	$ 216.00	$ 1,692.03	$ 1,692.03
1.5" Meter Install	[EA]	5	5	$ 605.80	$ 2,726.10	$ 2,726.10
2 Meter Install	[EA]	6	6	$ 752.80	$ 4,516.82	$ 4,516.82
3" Meter Install	[EA]	1	1	$ 3,855.08	$ 3,855.08	$ 3,855.08
4" Meter Install	[EA]	1	0	$ 7,113.92	$ 7,113.92	$ -
6" Meter Install	[EA]	0	0	$ 11,520.75	$ -	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 25,118.72	$ 18,004.80
Escalation				7.69%	$ 1,931.39	$ 1,384.40
Direct Cost					$ 27,050.11	$ 19,389.20

[23] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 3 2026 Meter Replacement Cost Estimates.

Att. Table 5-36: 2027 Direct Cost Comparison— WIL0900[24]

Item	Units	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
5/8" Meter Install	[EA]	43	43	$ 120.81	$ 5,214.76	$ 5,214.76
1" Meter Install	[EA]	8	8	$ 216.00	$ 1,692.03	$ 1,692.03
1.5" Meter Install	[EA]	5	5	$ 605.80	$ 2,726.10	$ 2,726.10
2 Meter Install	[EA]	6	6	$ 752.80	$ 4,516.82	$ 4,516.82
3" Meter Install	[EA]	1	1	$ 3,855.08	$ 3,855.08	$ 3,855.08
4" Meter Install	[EA]	1	0	$ 7,113.92	$ 7,113.92	$ -
6" Meter Install	[EA]	0	0	$ 11,520.75	$ -	$ -
8" Meter Install	[EA]	0	0	$ 11,481.03	$ -	$ -
10"> Meter Install	[EA]	0	0	$ 17,337.98	$ -	$ -
Subtotal					$ 25,118.72	$ 18,004.80
Escalation				10.38%	$ 2,607.65	$ 1,869.13
Direct Cost					$ 27,726.37	$ 19,873.93

[24] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 4 2027 Meter Replacement Cost Estimates.

LIST OF ATTACHMENTS FOR CHAPTER 6

	Attachment #	Description
1	Attachment 6-1	Flowmeter Replacement Program – Flowmeter List
2	Attachment 6-2	Missing Calibration Forms List
3	Attachment 6-3	Calibration Forms

Attachment 6-1:
Flowmeter Replacement Program – Flowmeter List

Att. Table 6-1: Flowmeter Replacement Program – Flowmeter List[1]

District	Flowmeter	Year Installed	Planned Replacement Year
Bayshore	SSF-006	2006	2026
Bayshore	SM-017	2001	2026
Bayshore	SM-022	2001	2026
Bayshore	SC-123	Unknown	2026
Bayshore	SSF D and Hill	Unknown	2026
Bayshore	SSF Washington and Sullivan	Unknown	2026
Bakersfield	BK-010	2010	2026
Bakersfield	BK-068	Unknown	2026
Bakersfield	BK-081	2010	2026
Bakersfield	BK-146-04	Unknown	2026
Bakersfield	BK-116	Unknown	2026
Bakersfield	BK-045-H	Unknown	2026
Bakersfield	BK-045-I	Unknown	2026
Bakersfield	KCWA-12	Unknown	2026
Bakersfield	NW-1	Unknown	2026
Bakersfield	NW-9	Unknown	2026
Bakersfield	BK186	Unknown	2026
Chico	CH-066	1990	2025
Chico	CH-080	Unknown	2025
Chico	CH-079	2010	2025
Chico	CH-050	2019	2026
Chico	CH-011	Unknown	2026

[1] CWS Response to A2407003 Cal Advocates DR JMI-003 (Flowmeter Replacement).

District	Flowmeter	Year Installed	Planned Replacement Year
Chico	CH-016	Unknown	2026
Chico	CH-059	Unknown	2026
Chico	CH-005	2019	2027
Chico	CH-073	2017	2027
Chico	CH-040	Unknown	2027
Chico	CH-047	Unknown	2027
Dom	Seplulveda Interconnect	Unknown	2027
ELA	6”Bypass flow Station 40	Unknown	2025
ELA	CB 14 Valve 1	Unknown	2026
ELA	CB 14 Valve 2	Unknown	2027
HR	27-C	1996	2026
HR	WB-5	Unknown	2026
HR	HR-005	2001	2027
HR	Fill from WB	Unknown	2027
KRV	KERV-001	Unknown	2025
KRV	MSHA-006	Unknown	2025
KRV	KERV-001 AP-4	Unknown	2026
KRV	SOLA-001	Unknown	2026
KRV	ARDN-011	Unknown	2027
KRV	ARDN-001	Unknown	2027
LIV	LIV-032	2003	2025
LIV	LIV-015	1992	2025
LIV	LIV-010	Unknown	2026
LIV	LIV-10 From Zone 7	Unknown	2026
MRL	MRL-011	1998	2026
PV	PV-004	Unknown	2026
PV	PV-022	Unknown	2027
RDV	LUC Plant Flow 1	Unknown	2026
RDV	LUC Plant Flow 2	Unknown	2027
STK	STK-036 Backwash Flow	Unknown	2025
STK	STK-085	Unknown	2025
STK	STK-076 Backwash Flow	2000	2025
STK	STK-068	2000	2026
STK	STK-085	2014	2026
STK	STK-065	2005	2026
STK	STK-080	1992	2027
STK	STK-001	2005	2027
STK	STK-061	Unknown	2027
VIS	VIS-015	Unknown	2027
VIS	VIS-025	Unknown	2027
VIS	VIS-031	Unknown	2027
VIS	VIS-301	Unknown	2027

Attachment 6-2:
Missing Calibration Forms List

District	Flowmeter
Bayshore	SSF-006
Bayshore	SM-017
Bayshore	SM-022
Bayshore	SC-123
Bayshore	SSF D and Hill
Bayshore	SSF Washington and Sullivan
Bakersfield	BK-081
Bakersfield	BK-045-H
Bakersfield	BK-045-I
Bakersfield	NW-1
Bakersfield	NW-9
Bakersfield	BK186
Chico	CH-079
Chico	CH-016
Chico	CH-059
Chico	CH-040
Chico	CH-047
Dom	Seplulveda Interconnect
ELA	6”Bypass flow Station 40
ELA	CB 14 Valve 1
ELA	CB 14 Valve 2
HR	WB-5
HR	Fill from WB
KRV	KERV-001
KRV	MSHA-006
KRV	KERV-001 AP-4
KRV	SOLA-001
KRV	ARDN-011
KRV	ARDN-001
LIV	LIV-015
LIV	LIV-10 From Zone 7
PV	PV-004
PV	PV-022
STK	STK-085
STK	STK-001
STK	STK-061

Attachment 6-3:
Calibration Forms

Craft	Asset Type	Period	Work Type	Policy Name
EMT	FLOW METER	1 YR	PM	Inspect and Calibrate Production Flow Meter

CMMS WO #	District #	Station #	Maximo Asset #	Date	Print Your Name
648229	101	146-04	131527	8/9/22	Clarence Patrick

K Factor (Data Industrial Only)	Offset (Data Industrial Only)	Size "	Type	Manufacturer	Flow Range
23.7	4.09	12	3100	Data Industrial	0 - 3000

Job Safety and Job Preparation Notes

1. Notify Production Supervisor that pump will be operating for this PM.
2. For insertion type flow meters, obtain K factor and offset before performing the calibration. This requires knowledge of pipe material, inside diameter, outside diameter, etc.
3. Refer to Panametrics Operation Manual for correct test equipment setup.
4. Never use the test meter on downward flowing water--the sensors can be damaged from the turbulence.

Check Off Information	Y	N		
1. Enter time field work was started. (Note 1)			12:30 PM Start Time	
2. Is the meter asset information correct? (Note 2)	☑	☐	If no, provide changes/corrections in "Corrective Recommendations" section.	
3. Is pipe section adequate? (Note 3)	☐	☑	If no, document before and after lengths and continue test.	
4. Is test section straight and proper length? (Note 4) Install the test meter in an appropriate test segment.	☐	☑	If no, document before and after lengths and continue test.	
5. Record initial production meter and test meter flow rates. Calculate variance and record. (Note 5) Is flow meter within desired variance?	☑	☐	1415 GPM Production Meter	1405 GPM Test Meter / 1% Variance %
			If no, calibrate the flow meter and record new production flow rate	____ GPM Post-Calibration Flow
6. Is there is an associated flow monitor?	☑	☐	If yes, perform a self-calibration per Operation Manual.	
7. Is SCADA system reading the correct instrument input and is properly scaled? Record SCADA reading.	☑	☐	If no, see Note 7. 12:40	1424 SCADA Reading
8. Enter the time the field work was finished.			3:30PM Finish Time	
9. Update Maximo WO. Change WO status to REVW and scan/email this form to lvillanueva@calwater.com				

Notes

1. Only include time spent performing the calibration and associated SCADA scaling adjustment (Steps 1 to 8).
2. See asset list provided as attachment to this work order.
3. For production meter, verify you have 10 times diameter upstream and 5 times diameter downstream.
4. For test meter, verify you have 6 times diameter upstream and 3 times diameter downstream. If not, use 2/3 and 1/3 of available length.
5. Variance = (Production Meter Reading - Test Meter Reading) / Test Meter Reading [Use absolute value]
   If you have an adequate section (Step 3), variance must be within 2%. If not, variance must be within 5%.
7. If SCADA scaling reading is different from calibrated flow meter reading, notify Production Supervisor and perform adjustment or coordinate with SCADA Tech.

Corrective Action Taken

☐ Check box if flow meter calibrated

☐ Check box if flow monitor calibrated

Notes & Additional Documentation:

Craft	Asset Type	Period	Work Type	Policy Name
EMT	FLOW METER	1 YR	PM	Test & calibrate production, booster, wholesale & emsecss flow meters

CMMS WO #	District #	Station #	Maximo Asset #	Date	Print Your Name
748731	250	012	105448	5-30-24	J. Catherman

K Factor (Data Industrial Only)	Offset (Data Industrial Only)	Size "	Type	Manufacturer	Flow Range
N/A	N/A	8	Turbine	McCrometer	N/A

Job Safety and Job Preparation Notes

1. Ensure pump production will be occurring during scheduled PM time.
2. For insertion type flow meters, obtain K factor and offset before performing the calibration. This requires knowledge of pipe material, inside diameter, outside diameter, etc.
3. Refer to Parametrics Operation Manual for correct test equipment setup.
4. Never use the test meter on downward flowing water--the sensors can be damaged from the turbulence.

Check Off Information

	Y	N	
1. Enter time test work was started. (Note 1)			Start Time
2. Is the meter asset information correct? (Note 2)	☒	☐	If no, provide changes/corrections in "Corrective Recommendations" section.
3. Is pipe section adequate? (Note 3)	☒	☐	If no, document before and after lengths and continue test.
4. Is test section straight and proper length? (Note 4) Install the test meter in an appropriate test segment.	☒	☐	If no, document before and after lengths and continue test.
5. Record initial production meter and test meter flow rates. Calculate variance and record. (Note 5)			790 Production Meter; 787 Test Meter; .4 % Variance %
Is flow meter within desired variance?	☒	☐	If no, calibrate the flow meter. Post-Calibration
6. Is there is an associated flow monitor?	☐	☒	If yes, perform a self-calibration per Operation Manual.
7. Is SCADA system reading the correct instrument input and is properly scaled? Record SCADA reading.	☐	☒	If no, see Note 7. SCADA Reading
8. Enter the time the field work was finished. 8. Update Maximo WO. Change WO status to REVW and commonet the form to supervisor			Finish Time

Notes

1. Only include time spent performing the calibration and associated SCADA scaling adjustment (Steps 1 to 8).
2. See asset list provided as attachment to this work order.
3. For production meter, verify you have 10 times diameter upstream and 5 times diameter downstream.
4. For test meter, verify you have 5 times diameter upstream and 3 times diameter downstream. If not, use 2/3 and 1/3 of available length.
5. Variance = (Production Meter Reading /Test Meter Reading) - 1 | x 100% [Use absolute value]
   If you have an adequate section (Step 3), variance must be within 2%. If not, variance must be within 5%.
7. If SCADA scaling reading is different from calibrated flow meter reading, notify Production Supervisor and perform adjustment or coordinate with SCADA Tech.

Corrective Action Taken

- ☐ Check box if flow meter calibrated
- ☐ Check box if flow monitor calibrated
- ☐ Check box if SCADA scaling performed

Notes & Additional Documentation: Transducer Spacing 9.16"
McCrometer #L0235-00 S/N 82-8-114
Pipe test section 54" down stream of check valve
Pipe Circ. 28.19" Pipe OD 8.96" Pipe Thickness .38"

Corrective Recommendations

Employee Signature and Date 5-30-24

District Management Signature and Date

PO 140823

Craft	Asset Type	Period	Work Type	Policy Name
EMT	FLOW METER	1 YR	PM	Test & calibrate production, booster, wholesaler & process flow meters

CMMS WO #	District #	Station #	Maximo Asset #	Date	Print Your Name
584281	101	116-E	139426	7/20/21	Clarence Patrick

K Factor (Data Industrial Only)	Offset (Data Industrial Only)	Size "	Type	Manufacturer	Flow Range
N/A	N/A	12	pulse	Data Ind	0-4K

Job Safety and Job Preparation Notes

1. Ensure pump production will be occurring during scheduled PM time.
2. For insertion type flow meters, obtain K factor and offset before performing the calibration. This requires knowledge of pipe material, inside diameter, outside diameter, etc.
3. Refer to Panametrics Operation Manual for correct test equipment setup.
4. Never use the test meter on downward flowing water–the sensors can be damaged from the turbulence.

Check Off Information — Y N

1. Enter time field work was started. (Note 1) — 9:00 AM Start Time
2. Is the meter asset information correct? (Note 2) — ☐ ☒ (N) — If no, provide changes/corrections in "Corrective Recommendations" section.
3. Is pipe section adequate? (Note 3) — ☐ ☒ (N) — If no, document before and after lengths and continue test.
4. Is test section straight and proper length? (Note 4) Install the test meter in an appropriate test segment. — ☐ ☒ (N) — If no, document before and after lengths and continue test.
5. Record initial production meter and test meter flow rates. Calculate variance and record. (Note 5) Is flow meter within desired variance? — ☒ (Y) ☐ — If no, calibrate the flow meter. — 1603 Production Meter; 1602 Test Meter; ____ Variance %; ____ Post-Calibration
6. Is there is an associated flow monitor? — ☒ (Y) ☐ — If yes, perform a self-calibration per Operation Manual.
7. Is SCADA system reading the correct instrument input and is properly scaled? Record SCADA reading. — ☒ (Y) ☐ — If no, see Note 7. — 1603 SCADA Reading
8. Enter the time the field work was finished. — 11:00 AM Finish Time
9. Update Maximo WO. Change WO status to REVW and scan/email this form to supervisor.

Notes

1. Only include time spent performing the calibration and associated SCADA scaling adjustment (Steps 1 to 8).
2. See asset list provided as attachment to this work order.
3. For production meter, verify you have 10 times diameter upstream and 5 times diameter downstream.
4. For test meter, verify you have 5 times diameter upstream and 3 times diameter downstream. If not, use 2/3 and 1/3 of available length.
5. Variance = (Production Meter Reading /Test Meter Reading) - 1) x 100% [Use absolute value]
   If you have an adequate section (Step 3), variance must be within 2%. If not, variance must be within 5%.
7. If SCADA scaling reading is different from calibrated flow meter reading, notify Production Supervisor and perform adjustment or coordinate with SCADA Tech.

Corrective Action Taken

- ☐ Check box if flow meter calibrated
- ☐ Check box if flow monitor calibrated
- ☐ Check box if SCADA scaling performed

Notes & Additional Documentation:
Data Industrial change Meter:
900TA, volt 110, serial 021131
* Both Boosters D & E share same flow meter

Corrective Recommendations

Clarence Patrick 7/20/21

Craft	Asset Type	Period	Work Type	Policy Name
EMT	FLOW METER	1 YR	PM	Inspect and Calibrate Production Flow Meter

CMMS WO #	District #	Station #	Maximo Asset #	Date	Print Your Name
670797	104	080	138987	7/28/23	Andy Roberts

K Factor (Data Industrial Only)	Offset (Data Industrial Only)	Size "	Type	Manufacturer	Flow Range
57.531	.309	10"	insertion	Data Ind	1500

Job Safety and Job Preparation Notes

1. Notify Production Supervisor that pump will be operating for this PM.
2. For insertion type flow meters, obtain K factor and offset before performing the calibration. This requires knowledge of pipe material, inside diameter, outside diameter, etc.
3. Refer to Parametrics Operation Manual for correct test equipment setup.
4. Never use the test meter on downward flowing water–the sensors can be damaged from the turbulence.

Check Off Information

	Y	N	
1. Enter time field work was started (Note 1)			2:20 Start Time
2. Is the meter asset information correct? (Note 2)	☐	☐	If no, provide changes/corrections in "Corrective Recommendations" section.
3. Is pipe section adequate? (Note 3)	☐	☐	If no, document before and after lengths and continue test.
4. Is test section straight and proper length? (Note 4) Install the test meter in an appropriate test segment.	☐	☐	If no, document before and after lengths and continue test.
5. Record initial production meter and test meter flow rates. Calculate variance and record. (Note 5)			610.8 GPM Production Meter; 609.4 GPM Test Meter; .229 Variance %
Is flow meter within desired variance?	☐	☐	If no, calibrate the flow meter and record new production flow rate ____ GPM Post-Calibration Flow
6. Is there is an associated flow monitor?	☐	☐	If yes, perform a self-calibration per Operation Manual.
7. Is SCADA system reading the correct instrument input and is properly scaled? Record SCADA reading.	☐	☐	If no, see Note 7. 615.9 SCADA Reading
8. Enter the time the field work was finished.			3:17 Finish Time
9. Update Maximo WO. Change WO status to REVW and scan/email this form to Milanuevo@calwater.com			

Notes

1. Only include time spent performing the calibration and associated SCADA scaling adjustment (Steps 1 to 8).
2. See asset list provided as attachment to this work order.
3. For production meter, verify you have 10 times diameter upstream and 5 times diameter downstream.
4. For test meter, verify you have 6 times diameter upstream and 3 times diameter downstream. If not, use 2/3 and 1/3 of available length.
5. Variance = (Production Meter Reading - Test Meter Reading) / Test Meter Reading. [Use absolute value]
   If you have an adequate section (Step 3), variance must be within 2%. If not, variance must be within 5%.
7. If SCADA scaling reading is different from calibrated flow meter reading, notify Production Supervisor and perform adjustment or coordinate with SCADA Tech.

Corrective Action Taken

- ☐ Check box if flow meter calibrated
- ☐ Check box if flow monitor calibrated
- ☐ Check box if SCADA scaling performed

Notes & Additional Documentation:

Corrective Recommendations

Craft	Asset Type	Period	Work Type	Policy Name
EMT	FLOW METER	1 YR	PM	Inspect and Calibrate Production Flow Meter

CMMS WO #	District #	Station #	Maximo Asset #	Date	Print Your Name
475087	164	011	136597	5/6/19	Andy Roberts

K Factor (Data Industrial Only)	Offset (Data Industrial Only)	Size "	Type	Manufacturer	Flow Range
37	-.281	8	Insertion	Data Ind	0-1000

Job Safety and Job Preparation Notes

1. Notify Production Supervisor that pump will be operating for this PM.
2. For insertion type flow meters, obtain K factor and offset before performing the calibration. This requires knowledge of pipe material, inside diameter, outside diameter, etc.
3. Refer to Panametrics Operation Manual for correct test equipment setup.
4. Never use the test meter on downward flowing water--the sensors can be damaged from the turbulence.

Check Off Information	Y	N	
1. Enter time field work was started. (Note 1)			12:30 Start Time
2. Is the meter asset information correct? (Note 2)	☑	☐	If no, provide changes/corrections in "Corrective Recommendations" section.
3. Is pipe section adequate? (Note 3)	☑	☐	If no, document before and after lengths and continue test.
4. Is test section straight and proper length? (Note 4) Install the test meter in an appropriate test segment.	☐	☑	If no, document 30" before and 23" after lengths and continue test.
5. Record initial production meter and test meter flow rates. Calculate variance and record. (Note 5)			529.2 GPM Production Meter; 527.6 GPM Test Meter; .302 Variance %
Is flow meter within desired variance?	☒	☐	If no, calibrate the flow meter and record new production flow rate ✓ GPM Post-Calibration Flow
6. Is there is an associated flow monitor?	☑	☐	If yes, perform a self-calibration per Operation Manual.
7. Is SCADA system reading the correct instrument input and is properly scaled? Record SCADA reading.	☑	☐	If no, see Note 7. 524.9 SCADA Reading
8. Enter the time the field work was finished.			3:30 Finish Time
9. Update Maximo WO. Change WO status to REVW and scan/email this form to Millanueva@calwater.com			

Notes

1. Only include time spent performing the calibration and associated SCADA scaling adjustment (Steps 1 to 8).
2. See asset list provided as attachment to this work order.
3. For production meter, verify you have 10 times diameter upstream and 5 times diameter downstream.
4. For test meter, verify you have 6 times diameter upstream and 3 times diameter downstream. If not, use 2/3 and 1/3 of available length.
5. Variance = (Production Meter Reading - Test Meter Reading) / Test Meter Reading [Use absolute value]
   If you have an adequate section (Step 3), variance must be within 2%. If not, variance must be within 5%.
7. If SCADA scaling reading is different from calibrated flow meter reading, notify Production Supervisor and perform adjustment or coordinate with SCADA Tech.

Corrective Action Taken	Notes & Additional Documentation:
☐ Check box if flow meter calibrated	
☐ Check box if flow monitor calibrated	
☐ Check box if SCADA scaling performed	

Corrective Recommendations

Employee Signature and Date 5/6/19

District Management Signature and Date 6/7/19

FO 150305

12" GV FLOW

Craft	Asset Type	Period	Work Type	Policy Name
EMT	FLOW METER	1 YR	PM	Inspect and Calibrate Production Flow Meter

CMMS WO #	District #	Station #	Maximo Asset #	Date	Print Your Name
721451	147	001	133456	1/18/24	DREW SNODGRASS

K Factor (Data Industrial Only)	Offset (Data Industrial Only)	Size "	Type	Manufacturer	Flow Range
—	—	6	MAGNETIC	ABB	0–1000

Job Safety and Job Preparation Notes

1. Notify Production Supervisor that pump will be operating for this PM.
2. For insertion type flow meters, obtain K factor and offset before performing the calibration. This requires knowledge of pipe material, inside diameter, outside diameter, etc.
3. Refer to Panametrics Operation Manual for correct test equipment setup.
4. Never use the test meter on downward flowing water–the sensors can be damaged from the turbulence.

Check Off Information

	Y	N	
1. Enter time field work was started. (Note 1)			11:37A Start Time
2. Is the meter asset information correct? (Note 2)	☒	☐	If no, provide changes/corrections in "Corrective Recommendations" section.
3. Is pipe section adequate? (Note 3)	☒	☐	If no, document before and after lengths and continue test.
4. Is test section straight and proper length? (Note 4) Install the test meter in an appropriate test segment.	☒	☐	If no, document before and after lengths and continue test.
5. Record initial production meter and test meter flow rates. Calculate variance and record. (Note 5)			326 GPM Production Meter; 320 GPM Test Meter; 1.87 Variance %
Is flow meter within desired variance?	☒	☐	If no, calibrate the flow meter and record new production flow rate — GPM Post-Calibration Flow
6. Is there an associated flow monitor?	☒	☐	If yes, perform a self-calibration per Operation Manual.
7. Is SCADA system reading the correct instrument input and is properly scaled? Record SCADA reading.	☒	☐	If no, see Note 7. 326 SCADA Reading
8. Enter the time the field work was finished.			11:50A Finish Time
9. Update Maximo WO. Change WO status to REVW and scan/email this form to lillonueva@calwater.com			

Notes

1. Only include time spent performing the calibration and associated SCADA scaling adjustment (Steps 1 to 8).
2. See asset list provided as attachment to this work order.
3. For production meter, verify you have 10 times diameter upstream and 5 times diameter downstream.
4. For test meter, verify you have 6 times diameter upstream and 3 times diameter downstream. If not, use 2/3 and 1/3 of available length.
5. Variance = (Production Meter Reading - Test Meter Reading) / Test Meter Reading [Use absolute value]
   If you have an adequate section (Step 3), variance must be within 2%. If not, variance must be within 5%.
7. If SCADA scaling reading is different from calibrated flow meter reading, notify Production Supervisor and perform adjustment or coordinate with SCADA Tech.

Corrective Action Taken

- ☐ Check box if flow meter calibrated
- ☐ Check box if flow monitor calibrated
- ☐ Check box if SCADA scaling performed

Notes & Additional Documentation:
NONE

Corrective Recommendations

NONE

1/18/2024
Employee Signature and Date

District Management Signature and Date

FO 150305

Craft	Asset Type	Period	Work Type	Policy Name
EMT	FLOW METER	1 YR	PM	Test & calibrate production, booster, wholesaler & process flow meters

CMMS WO #	District #	Station #	Maximo Asset #	Date	Print Your Name
477710	119	085	132720	7/11/19	Steve Silva

K Factor (Data Industrial Only)	Offset (Data Industrial Only)	Size "	Type	Manufacturer	Flow Range
95.921	.341	12"	Insertion	Data Industrial	0-3000

Job Safety and Job Preparation Notes

1. Ensure pump production will be occurring during scheduled PM time.
2. For insertion type flow meters, obtain K factor and offset before performing the calibration. This requires knowledge of pipe material, inside diameter, outside diameter, etc.
3. Refer to Panametrics Operation Manual for correct test equipment setup.
4. Never use the test meter on downward flowing water--the sensors can be damaged from the turbulence.

Check Off Information	Y	N	
1. Enter time field work was started. (Note 1)			12:30 Start Time
2. Is the meter asset information correct? (Note 2)	X	☐	If no, provide changes/corrections in "Corrective Recommendations" section.
3. Is pipe section adequate? (Note 3)	☐	X	If no, document before and after lengths and continue test. 60" upstream, 15" downstream
4. Is test section straight and proper length? (Note 4) Install the test meter in an appropriate test segment.	☐	X	If no, document before and after lengths and continue test.
5. Record initial production meter and test meter flow rates. Calculate variance and record. (Note 6)			1,820 Production Meter; 1,833 Test Meter; 1% Variance %
Is flow meter within desired variance?	X	☐	If no, calibrate the flow meter. Post-Calibration
6. Is there is an associated flow monitor?	X	☐	If yes, perform a self-calibration per Operation Manual.
7. Is SCADA system reading the correct instrument input and is properly scaled? Record SCADA reading.	X	☐	If no, see Note 7. 1,837 SCADA Reading
8. Enter the time the field work was finished.			4:30 Finish Time
9. Update Maximo WO. Change WO status to REVW and scan/email this form to supervisor			

Notes

1. Only include time spent performing the calibration and associated SCADA scaling adjustment (Steps 1 to 8).
2. See asset list provided as attachment to this work order.
3. For production meter, verify you have 10 times diameter upstream and 5 times diameter downstream.
4. For test meter, verify you have 6 times diameter upstream and 3 times diameter downstream. If not, use 2/3 and 1/3 of available length.
5. Variance = (Production Meter Reading /Test Meter Reading) - 1) x 100% [Use absolute value]
   If you have an adequate section (Step 3), variance must be within 2%. If not, variance must be within 5%.
7. If SCADA scaling reading is different from calibrated flow meter reading, notify Production Supervisor and perform adjustment or coordinate with SCADA Tech.

Corrective Action Taken

- ☐ Check box if flow meter calibrated
- ☐ Check box if flow monitor calibrated
- ☐ Check box if SCADA scaling performed

Notes & Additional Documentation:

Station is still off-line. Throttled downstream valves to simulate system pressure.

Corrective Recommendations

none.

7-17-19
Employee Signature and Date

7/17/19
District Management Signature and Date

FO 140623

Craft	Asset Type	Period	Work Type	Policy Name
EMT	FLOW METER	1 YR	PM	Test & calibrate production, booster, wholesaler & process flow meters

CMMS WO #	District #	Station #	Maximo Asset #	Date	Print Your Name
738799	119	76	106154	1/23/24	Steve Silva

K Factor (Data Industrial Only)	Offset (Data Industrial Only)	Size "	Type	Manufacturer	Flow Range
69.069	.316	12	Insertion	Data Industrial	0-1500

Job Safety and Job Preparation Notes

1. Ensure pump production will be occurring during scheduled PM time.
2. For insertion type flow meters, obtain K factor and offset before performing the calibration. This requires knowledge of pipe material, inside diameter, outside diameter, etc.
3. Refer to Parametrics Operation Manual for correct test equipment setup.
4. Never use the test meter on downward flowing water--the sensors can be damaged from the turbulence.

Check Off Information	Y	N	
1. Enter time field work was started. (Note 1)			12:30 Start Time
2. Is the meter asset information correct? (Note 2)	X	☐	If no, provide changes/corrections in "Corrective Recommendations" section.
3. Is pipe section adequate? (Note 3)	X	☐	If no, document before and after lengths and continue test. 36" upstream 12" downstream
4. Is test section straight and proper length? (Note 4) Install the test meter in an appropriate test segment.	☐	X	If no, document before and after lengths and continue test.
5. Record initial production meter and test meter flow rates. Calculate variance and record. (Note 5)			865 Production Meter; 858 Test Meter; 0 Variance %
Is flow meter within desired variance?	X	☐	If no, calibrate the flow meter. Post-Calibration
6. Is there is an associated flow monitor?	X	☐	If yes, perform a self-calibration per Operation Manual.
7. Is SCADA system reading the correct instrument input and is properly scaled? Record SCADA reading.	X	☐	If no, see Note 7. 862 SCADA Reading
8. Enter the time the field work was finished.			14:30 Finish Time
9. Update Maximo WO. Change WO status to REVW and scan/email this form to supervisor			

Notes

1. Only include time spent performing the calibration and associated SCADA scaling adjustment (Steps 1 to 8).
2. See asset list provided as attachment to this work order.
3. For production meter, verify you have 10 times diameter upstream and 5 times diameter downstream.
4. For test meter, verify you have 6 times diameter upstream and 3 times diameter downstream. If not, use 2/3 and 1/3 of available length.
5. Variance = (Production Meter Reading /Test Meter Reading) - 1) x 100% [Use absolute value]
   If you have an adequate section (Step 3), variance must be within 2%. If not, variance must be within 5%.
7. If SCADA scaling reading is different from calibrated flow meter reading, notify Production Supervisor and perform adjustment or coordinate with SCADA Tech.

Corrective Action Taken	Notes & Additional Documentation:
☐ Check box if flow meter calibrated	
☐ Check box if flow monitor calibrated	
☐ Check box if SCADA scaling performed	

Corrective Recommendations

Steve Silva ##
Employee Signature and Date

District Management Signature and Date

FO 140623

Craft	Asset Type	Period	Work Type	Policy Name
EMT	FLOW METER	1 YR	PM	Test & calibrate production, booster, wholesaler & process flow meters

CMMS WO #	District #	Station #	Maximo Asset #	Date	Print Your Name
694918	119	68	101279	11/9/23	Steve Silva

K Factor (Data Industrial Only)	Offset (Data Industrial Only)	Size "	Type	Manufacturer	Flow Range
N/A	N/A	10"	DPT	Bristol	0-2000

Job Safety and Job Preparation Notes

1. Ensure pump production will be occurring during scheduled PM time.
2. For insertion type flow meters, obtain K factor and offset before performing the calibration. This requires knowledge of pipe material, inside diameter, outside diameter, etc.
3. Refer to Panametrics Operation Manual for correct test equipment setup.
4. Never use the test meter on downward flowing water--the sensors can be damaged from the turbulence.

Check Off Information	Y	N	
1. Enter time field work was started. (Note 1)			10:30 Start Time
2. Is the meter asset information correct? (Note 2)	X	☐	If no, provide changes/corrections in "Corrective Recommendations" section.
3. Is pipe section adequate? (Note 3)	X	☐	If no, document before and after lengths and continue test.
4. Is test section straight and proper length? (Note 4) Install the test meter in an appropriate test segment.	☐	X	If no, document before and after lengths and continue test. 12" up 24" down
5. Record initial production meter and test meter flow rates. Calculate variance and record. (Note 5)			1,810 Production Meter; 1,821 Test Meter; 1 Variance %
Is flow meter within desired variance?	X	☐	If no, calibrate the flow meter. Post-Calibration
6. Is there is an associated flow monitor?	☐	X	If yes, perform a self-calibration per Operation Manual.
7. Is SCADA system reading the correct instrument input and is properly scaled? Record SCADA reading.	X	☐	If no, see Note 7. 1,815 SCADA Reading
8. Enter the time the field work was finished.			2:30 Finish Time
9. Update Maximo WO. Change WO status to REVW and scan/email this form to supervisor			

Notes

1. Only include time spent performing the calibration and associated SCADA scaling adjustment (Steps 1 to 8).
2. See asset list provided as attachment to this work order.
3. For production meter, verify you have 10 times diameter upstream and 5 times diameter downstream.
4. For test meter, verify you have 6 times diameter upstream and 3 times diameter downstream. If not, use 2/3 and 1/3 of available length.
5. Variance = (Production Meter Reading /Test Meter Reading) - 1) x 100% [Use absolute value]
   If you have an adequate section (Step 3), variance must be within 2%. If not, variance must be within 5%.
7. If SCADA scaling reading is different from calibrated flow meter reading, notify Production Supervisor and perform adjustment or coordinate with SCADA Tech.

Corrective Action Taken	Notes & Additional Documentation:
☐ Check box if flow meter calibrated	DPT/Orifice plate flowmeter is accurate but antiquated.
☐ Check box if flow monitor calibrated	
☐ Check box if SCADA scaling performed	

Corrective Recommendations

Steve Silva ##

Employee Signature and Date

District Management Signature and Date

FO 140623

Craft	Asset Type	Period	Work Type	Policy Name
EMT	FLOW METER	1 YR	PM	Test & calibrate production, booster, wholesaler & process flow meters

CMMS WO #	District #	Station #	Maximo Asset #	Date	Print Your Name
776780	119	65A	140839	7/10/24	Steve Silva

K Factor (Data Industrial Only)	Offset (Data Industrial Only)	Size	Type	Manufacturer	Flow Range
97.576	.358	12"	Insertion	Data Industrial	0-2000

Job Safety and Job Preparation Notes

1. Ensure pump production will be occurring during scheduled PM time.
2. For insertion type flow meters, obtain K factor and offset before performing the calibration. This requires knowledge of pipe material, inside diameter, outside diameter, etc.
3. Refer to Panametrics Operation Manual for correct test equipment setup.
4. Never use the test meter on downward flowing water--the sensors can be damaged from the turbulence.

Check Off Information	Y	N		
1. Enter time field work was started. (Note 1)			13:30 Start Time	
2. Is the meter asset information correct? (Note 2)	X	☐	If no, provide changes/corrections in "Corrective Recommendations" section.	
3. Is pipe section adequate? (Note 3)	X	☐	If no, document before and after lengths and continue test.	
4. Is test section straight and proper length? (Note 4) Install the test meter in an appropriate test segment.	X	☐	If no, document before and after lengths and continue test.	24" up 12" down
5. Record initial production meter and test meter flow rates. Calculate variance and record. (Note 5)			815 Production Meter	810 Test Meter / 0 Variance %
Is flow meter within desired variance?	X	☐	If no, calibrate the flow meter.	Post-Calibration
6. Is there is an associated flow monitor?	X	☐	If yes, perform a self-calibration per Operation Manual.	
7. Is SCADA system reading the correct instrument input and is properly scaled? Record SCADA reading.	X	☐	If no, see Note 7.	812 SCADA Reading
8. Enter the time the field work was finished.				3:30 Finish Time
9. Update Maximo WO. Change WO status to REVW and scan/email this form to supervisor				

Notes

1. Only include time spent performing the calibration and associated SCADA scaling adjustment (Steps 1 to 8).
2. See asset list provided as attachment to this work order.
3. For production meter, verify you have 10 times diameter upstream and 5 times diameter downstream.
4. For test meter, verify you have 5 times diameter upstream and 3 times diameter downstream. If not, use 2/3 and 1/3 of available length.
5. Variance = (Production Meter Reading /Test Meter Reading) - 1) x 100% [Use absolute value]
   If you have an adequate section (Step 3), variance must be within 2%. If not, variance must be within 5%.
7. If SCADA scaling reading is different from calibrated flow meter reading, notify Production Supervisor and perform adjustment or coordinate with SCADA Tech.

Corrective Action Taken	Notes & Additional Documentation:
☐ Check box if flow meter calibrated	There is not a good section of pipe to set up
☐ Check box if flow monitor calibrated	my Panametrics flow meter.
☐ Check box if SCADA scaling performed	

Corrective Recommendations

Steve Silva 7-11-24

Employee Signature and Date

District Management Signature and Date

FO 140623

Craft	Asset Type	Period	Work Type	Policy Name
EMT	FLOW METER	1 YR	PM	Inspect and Calibrate Production Flow Meter

CMMS WO #	District #	Station #	Maximo Asset #	Date	Print Your Name
678820	120	25	142060	6/15/23	Anthony Perez

K Factor (Data Industrial Only)	Offset (Data Industrial Only)	Size "	Type	Manufacturer	Flow Range
		8	Insersion	Badger-FC-5000	0-2000 GPM

Job Safety and Job Preparation Notes

1. Notify Production Supervisor that pump will be operating for this PM.
2. For insertion type flow meters, obtain K factor and offset before performing the calibration. This requires knowledge of pipe material, inside diameter, outside diame x
3. Refer to Panametrics Operation Manual for correct test equipment setup.
4. Never use the test meter on downward flowing water--the sensors can be damaged from the turbulence.

Check Off Information	Y	N		
1. Enter time field work was started. (Note 1)			0:00 Start Time	
2. Is the meter asset information correct? (Note 2)	X	☐	If no, provide changes/corrections in "Corrective Recommendations" section.	
3. Is pipe section adequate? (Note 3)	☐	X	If no, document before and after lengths and continue test.	
4. Is test section straight and proper length? (Note 4) Install the test meter in an appropriate test segment.	☐	X	If no, document before and after lengths and continue test.	
5. Record initial production meter and test meter flow rates. Calculate variance and record. (Note 5)			274 GPM Production Meter	275 GPM GE Test Meter	.001 Variance %
Is flow meter within desired variance?	X	☐	If no, calibrate the flow meter and record new production flow rate	GPM Post-Calibration Flow
6. Is there is an associated flow monitor?	☐	X	If yes, perform a self-calibration per Operation Manual.	
7. Is SCADA system reading the correct instrument input and is properly scaled? Record SCADA reading.	☐	X	If no, see Note 7.	147 SCADA Reading
8. Enter the time the field work was finished.				0:00 Finish Time
9. Update Maximo WO. Change WO status to REVW and scan/email this form to Mlenuewa@calwater.com				

Notes

1. Only include time spent performing the calibration and associated SCADA scaling adjustment (Steps 1 to 8).
2. See asset list provided as attachment to this work order.
3. For production meter, verify you have 10 times diameter upstream and 5 times diameter downstream.
4. For test meter, verify you have 6 times diameter upstream and 3 times diameter downstream. If not, use 2/3 and 1/3 of available length.
5. Variance = (Production Meter Reading - Test Meter Reading) / Test Meter Reading. [Use absolute value]
   If you have an adequate section (Step 3), variance must be within 2%. If not, variance must be within 5%.
7. If SCADA scaling reading is different from calibrated flow meter reading, notify Production Supervisor and perform adjustment or coordinate with SCADA Tech.

Corrective Action Taken	Notes & Additional Documentation:
☐ Check box if flow meter calibrated	
☐ Check box if flow monitor calibrated	I got with SCADA Tech to rescale in PLC.
☐ Check box if SCADA scaling performed	

Corrective Recommendations

Employee Signature and Date

District Management Signature and Date

FO 150305

LIST OF ATTACHMENTS FOR CHAPTER 7

	Attachment #	Description
1	Attachment 7-1	CWS Response to A2407003 Cal Advocates DR JMI-014 (AMI 2)
2	Attachment 7-2	CWS Response to A2407003 Cal Advocates DR JMI-002 (AMI)
3	Attachment 7-3	CWS O&M Savings Included in RO Model
4	Attachment 7-4	2027 Meter Replacement due to GO 103-A
5	Attachment 7-5	2027 Capital Amount Contingent on Performance Standards

Attachment 7-1:
CWS Response to A2407003 Cal Advocates
DR JMI-014 (AMI 2)

RESPONSE TO DATA REQUEST

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

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Date: **Oct 18, 2024** Re: **JMI-014** Subj: **Advanced Metering Infrastructure 2**	Request Received from CPUC: **October 18, 2024** Requested Due Date: **October 25, 2024**

Comments:

- **Full response attached.**
- **Response provided by Rates.**
- **Supporting document contains Category 3 confidential information.**
- **This response refers to the following attachments included separately:**
  - **JMI-014 Attachment #1**
  - **CONFIDENTIAL JMI-014 Attachment #2 – AMI Model**
  - **JMI-014 Attachment #3**
  - **JMI-014 Attachment #4**

Data Requests and Responses

Advanced Metering Infrastructure (AMI) (Bay Area Region, Bear Gulch, Los Altos, Los Angeles County Region, and Westlake):

1. For Attachments A (Breakdown per District) and B to Common Plant Issues Capital Project Justification, Automatic Metering Initiative,[1] please confirm if the information shown in Attachments A and B are correct. If Cal Water has any corrections to these attachments, please provide the corrected information.
   Response: As discussed during Cal Water's presentation, some corrections are needed to the referenced project justification attachments. Cal Water recommends eliminating PID 00133627 which is an erroneous duplicate of PID 00133634. Additionally, there are three funding project numbers incorrectly listed and the budget years for the vehicle projects need to be pushed out a year. Please reference JMI-014 Attachment #1 which shows the original and corrected tables from Project Justification Attachments A and B.

2. Cal Water states that the firm West Monroe developed a proprietary Excel-based model for financial analysis of Cal Water's Advanced Meeting Infrastructure (AMI).[2] Please provide a copy of the West Monroe model in Excel format.
   Response: Please refer to CONFIDENTIAL JMI-014 Attachment #2 - AMI Model, which contains the West Monroe AMI Business Case Analysis Model.

3. Direct Testimony of Todd Pray, Attachment G-1 shows the operations and maintenance (O&M) adjustments made in Cal Water's Results of Operations model.[3] Attachment G-1 references the specific workpaper file: "CH05_OM_FDR_Other_OM", tab: "SD_Misc Adjustments."[4] For the tables shown in Attachment G-1 under the "SOE description" column, please describe what specific items are included in the "Oper Exp-Purch Services- PU", "Oper Exp-Purch Services- WT", and "Oper Exp-Purch Services- CA" line items in Cal Water's Results of Operation model.
   Response: Please refer to JMI-014 Attachment #3. For the source of the additional and reduced expenses listed in the tables, refer to the CONFIDENTIAL JMI-014 Attachment #2 - AMI model noted above, specifically worksheet "CWS Expense". In that attachment, it shows Cal Water totaled certain West Monroe expense projections identified for years 2027 and 2028 (GRC period). Those totals are allocated evenly over 2026-2028 in the Results of Operations Model "ROM". Cal Water normalized these expenses for the GRC cycle because there is only one "Test Year" (TY 2026) for expenses. Putting the average annual forecasted amount into TY 2026 allows the appropriate total amount to be collected in rates over the three-year period.

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[1] Common Plant Issues Capital Project Justification, pp. 147-148.
[2] Testimony Book #3, Attachment E, Direct Testimony of Tricia Anklan, p. 11.
[3] Testimony Book #3, Attachment G, Direct Testimony of Todd Pray (Pray Direct Testimony), Attachment G-1.
[4] Pray Direct Testimony, p. 6.

4. Please provide a capital project cost estimate in a format similar to the capital project cost estimates provided in the Capital Project Justification documents for each project shown in Common Plant Issues Capital Project Justification, Automatic Metering Initiative, Attachment B.[5] *For an example of capital project cost estimate format, please refer to Bay Area Region Capital Project Justification, p. 28, PID 132993: "SC Wildfire Mitigation 585 Zone" (Bayshore District).*

Response: Please refer to JMI-14 Attachment #4. The cost basis for the non-vehicle related funding projects in the attachment can be found in the "AMI Funding Projects" worksheet in the CONFIDENTIAL JMI-014 Attachment #2 - AMI model noted above.

[5] Common Plant Issues Capital Project Justification, p. 148.

Attachment A - Breakdown per District

Project Justification (as submitted)

District	Total Annual Cost 2025	2026	2027	District Total Cost 2025-2027	
Antelope Valley			$ 219,663.38	$ 219,663.38	
Bayshore	$ 2,097,377.02		$ 13,485,590.70	$ 15,582,967.72	One project erroneously duplicated. See tab with "Attachment B Corrections."
Bear Gulch	$ 559,956.80		$ 5,109,121.36	$ 5,669,078.16	
CSS		$ 1,537,614.52		$ 1,537,614.52	
Los Altos	$ 474,131.98		$ 4,939,695.02	$ 5,413,827.00	
Palos Verdes			$ 6,281,129.21	$ 6,281,129.21	
RDOM	$ 559,956.80			$ 559,956.80	
Redwood Valley			$ 497,499.31	$ 497,499.31	
Westlake	$ 302,482.26		$ 2,188,453.00	$ 2,490,935.26	
Total	**$ 3,993,904.86**	**$ 1,537,614.52**	**$ 32,721,151.98**	**$ 38,252,671.36**	

Corrected Version

District	Total Annual Cost 2025	2026	2027	District Total Cost 2025-2027		
Antelope Valley	$ -	$ -	$ 219,663.38	$ 219,663.38		
Bayshore	$ -	$ 1,048,688.51	$ 13,485,590.70	$ 14,534,279.21	After duplicate removed.	$ 1,048,688.51
Bear Gulch	$ -	$ 559,956.80	$ 5,109,121.36	$ 5,669,078.16		
CSS	$ -	$ 1,537,614.52	$ -	$ 1,537,614.52		
Los Altos	$ -	$ 474,131.98	$ 4,939,695.02	$ 5,413,827.00		
Palos Verdes		$ -	$ 6,281,129.21	$ 6,281,129.21		
RDOM	$ -	$ 559,956.80	$ -	$ 559,956.80		
Redwood Valley	$ -	$ -	$ 497,499.31	$ 497,499.31		
Westlake	$ -	$ 302,482.26	$ 2,188,453.00	$ 2,490,935.26		
Total	**$ -**	**$ 4,482,830.87**	**$ 32,721,151.98**	**$ 37,203,982.85**		

ATTACHMENT B CORRECTIONS

PID in PJ	Correct PID	DISTRICT	Description	Direct Cost	Year in PJ	Correct Year
00133620		Antelope Valley	AV 2027 AMI INITIATIVE-METERS	$ 219,663.38	2027	
~~00133627~~		~~BAY~~	~~BSH-AMI INITIATIVE-VEHICLES/EQUIPM~~	~~$ 1,048,688.51~~	~~2025~~	~~2025~~
~~00133634~~	00133599	Bayshore	BSH-AMI INITIATIVE-VEHICLES/EQUIPM	$ 1,048,688.51	2025	2026
~~00133599~~	00133627	Bayshore	MPS 2027 AMI INITIATIVE-METERS	$ 9,189,162.97	2027	
~~00133599~~	00133634	Bayshore	SSF 2027 AMI INITIATIVE-METERS	$ 4,296,427.73	2027	
00133593		Bear Gulch	BG - AMI INITIATIVE-VEHICLES/EQUIP	$ 559,956.80	2025	2026
00133622		Bear Gulch	BG 2027 AMI INITIATIVE-METERS	$ 5,109,121.36	2027	
00133646		CSS	CSS 2026 AMI INITIATIVE-IT INT/DEV	$ 1,537,614.52	2026	
00133597		Los Altos	LAS-AMI INITIATIVE-VEHICLES/EQUIP	$ 474,131.98	2025	2026
00133625		Los Altos	LAS 2027 AMI INITIATIVE-METERS	$ 4,939,695.02	2027	
00133629		Palos Verdes	PV 2027 AMI INITIATIVE-METERS	$ 6,281,129.21	2027	
00133598		RDOM	RDOM-AMI INITIATIVE-VEHICLES/EQUIP	$ 559,956.80	2025	2026
00133632		Redwood Valley	RDV 2027 AMI INITIATIVE-METERS	$ 497,499.31	2027	
00133601		Westlake	WLK-AMI INITIATIVE-VEHICLES/EQUIP	$ 302,482.26	2025	2026
00133610		Westlake	WLK 2027 AMI INITIATIVE-METERS	$ 2,188,453.00	2027	
			Total	$ 38,252,671.36		
			LESS Duplicate Project	$ 37,203,982.85		

Attachment 7-2:
CWS Response to A2407003 Cal Advocates
DR JMI-002 (AMI)

RESPONSE TO DATA REQUEST

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

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Date: Jul 26, 2024 Re: JMI-002 Subj: Advanced Metering Infrastructure	Request Received from CPUC: July 22, 2024 Requested Due Date: July 29, 2024

Comments:

- Full response attached.
- Response provided by Rates.
- Does not contain confidential information.
- This response refers to the following attachments included separately:
  - DR JMI-002 Attachment #1_Pilot Summary & Lessons Learned
  - DR JMI-002 Attachment #2_2021 GRC AMI_AMR Report

Data Requests and Responses

Advanced Metering Infrastructure (AMI) (Bear Gulch and Dominguez):

1. Cal Water states that the AMI pilot in the Bear Gulch District (PID 114644) is expected to be completed in 2024.[1]
   a. Is the pilot completed?
   Response: The pilot is not completed.

   b. If the pilot is not completed as stated in response to question 1.a, when does Cal Water expect the pilot to be completed.
   Response: The deployment is planned to be completed by the end of 2024.

   c. Please provide any reports created related to the pilot results. If a report is not yet completed, when does Cal Water expect the report to be completed.
   Response: A report will be completed once the AMI deployment has been completed and in normal operating condition for several months. The report is currently anticipated to be completed by the 3rd quarter of 2025.

2. Cal Water states that it completed an AMI pilot in its Dominguez District from 2019-2023.[2] Please identify and provide copies of any report(s) related to the pilot results. If a report is planned or in progress but not yet completed, please indicate when Cal Water expects to complete the report.
   Response: Please see attachment #1 and attachment #2.

END RESPONSE

[1] Report on the Results of Operation Bear Gulch District, p. 76.
[2] Common Plant Issues Capital Project Justification, p. 139.

Attachment 7-3:
CWS O&M Savings Included in RO Model

Att. Table 7-1: CWS O&M Savings Included in RO Model[1]

District Code	District Name	SOE Key	SOE Description	2026	2027	2028
152	Bayshore	SOE01-11	Oper Exp-Purch Services-PU	$ (30,966)	$ (30,966)	$ (30,966)
152	Bayshore	SOE01-11	Oper Exp-Purch Services-PU	$ (7,505)	$ (7,505)	$ (7,505)
102	Bear Gulch	SOE01-11	Oper Exp-Purch Services-PU	$ (13,435)	$ (13,435)	$ (13,435)
102	Bear Gulch	SOE01-11	Oper Exp-Purch Services-PU	$ (4,969)	$ (4,969)	$ (4,969)
111	Los Altos	SOE01-11	Oper Exp-Purch Services-PU	$ (14,467)	$ (14,467)	$ (14,467)
111	Los Altos	SOE01-11	Oper Exp-Purch Services-PU	$ (4,448)	$ (4,448)	$ (4,448)
122	LAR	SOE01-11	Oper Exp-Purch Services-PU	$ (21,179)	$ (21,179)	$ (21,179)
122	LAR	SOE01-11	Oper Exp-Purch Services-PU	$ (4,700)	$ (4,700)	$ (4,700)
123	Westlake	SOE01-11	Oper Exp-Purch Services-PU	$ (9,049)	$ (9,049)	$ (9,049)
123	Westlake	SOE01-11	Oper Exp-Purch Services-PU	$ (825)	$ (825)	$ (825)

District Code	District Name	SOE Key	SOE Description	2026	2027	2028
152	Bayshore	SOE01-12	Oper Exp-Purch Services-PU	$ (9,749)	$ (9,749)	$ (9,749)
152	Bayshore	SOE01-12	Oper Exp-Purch Services-PU	$ (27,763)	$ (27,763)	$ (27,763)
152	Bayshore	SOE01-12	Oper Exp-Purch Services-PU	$ (18,509)	$ (18,509)	$ (18,509)
152	Bayshore	SOE01-12	Oper Exp-Purch Services-PU	$ (2,002)	$ (2,002)	$ (2,002)
102	Bear Gulch	SOE01-12	Oper Exp-Purch Services-PU	$ (3,224)	$ (3,224)	$ (3,224)
102	Bear Gulch	SOE01-12	Oper Exp-Purch Services-PU	$ (9,182)	$ (9,182)	$ (9,182)
102	Bear Gulch	SOE01-12	Oper Exp-Purch Services-PU	$ (6,122)	$ (6,122)	$ (6,122)
102	Bear Gulch	SOE01-12	Oper Exp-Purch Services-PU	$ (918)	$ (918)	$ (918)
111	Los Altos	SOE01-12	Oper Exp-Purch Services-PU	$ (3,255)	$ (3,255)	$ (3,255)
111	Los Altos	SOE01-12	Oper Exp-Purch Services-PU	$ (9,271)	$ (9,271)	$ (9,271)
111	Los Altos	SOE01-12	Oper Exp-Purch Services-PU	$ (6,180)	$ (6,180)	$ (6,180)
111	Los Altos	SOE01-12	Oper Exp-Purch Services-PU	$ (927)	$ (927)	$ (927)
122	LAR	SOE01-12	Oper Exp-Purch Services-PU	$ (4,477)	$ (4,477)	$ (4,477)
122	LAR	SOE01-12	Oper Exp-Purch Services-PU	$ (12,749)	$ (12,749)	$ (12,749)
122	LAR	SOE01-12	Oper Exp-Purch Services-PU	$ (8,499)	$ (8,499)	$ (8,499)
122	LAR	SOE01-12	Oper Exp-Purch Services-PU	$ (1,275)	$ (1,275)	$ (1,275)
123	Westlake	SOE01-12	Oper Exp-Purch Services-PU	$ (1,212)	$ (1,212)	$ (1,212)
123	Westlake	SOE01-12	Oper Exp-Purch Services-PU	$ (3,453)	$ (3,453)	$ (3,453)
123	Westlake	SOE01-12	Oper Exp-Purch Services-PU	$ (2,302)	$ (2,302)	$ (2,302)
123	Westlake	SOE01-12	Oper Exp-Purch Services-PU	$ (345)	$ (345)	$ (345)

[1] CWS Testimony Book #3, Attachment G-1.

District Code	District Name	SOE Key	SOE Description	2026	2027	2028
152	Bayshore	SOE01-14	Oper Exp-Purch Services-CA	$ (9,853)	$ (9,853)	$ (9,853)
152	Bayshore	SOE01-14	Oper Exp-Purch Services-CA	$ (629,829)	$ (629,829)	$ (629,829)
102	Bear Gulch	SOE01-14	Oper Exp-Purch Services-CA	$ (24,081)	$ (24,081)	$ (24,081)
102	Bear Gulch	SOE01-14	Oper Exp-Purch Services-CA	$ (277,369)	$ (277,369)	$ (277,369)
111	Los Altos	SOE01-14	Oper Exp-Purch Services-CA	$ (6,266)	$ (6,266)	$ (6,266)
111	Los Altos	SOE01-14	Oper Exp-Purch Services-CA	$ (281,611)	$ (281,611)	$ (281,611)
122	LAR	SOE01-14	Oper Exp-Purch Services-CA	$ (4,862)	$ (4,862)	$ (4,862)
122	LAR	SOE01-14	Oper Exp-Purch Services-CA	$ (326,401)	$ (326,401)	$ (326,401)
123	Westlake	SOE01-14	Oper Exp-Purch Services-CA	$ (2,545)	$ (2,545)	$ (2,545)
123	Westlake	SOE01-14	Oper Exp-Purch Services-CA	$ (75,418)	$ (75,418)	$ (75,418)

Attachment 7-4:
2027 Meter Replacement due to GO 103-A

Att. Table 7-2: 2027 Meter Replacement Budget Based on 2026 Request[1]

District	2026 Proposed Meter Replacement Budget	Escalation (@ 2.5%)	2027 Estimated Meter Replacement
Antelope Valley	$ 14,209.91	$ 355.25	$ 14,565.15
Bayshore-MPS	$ 438,031.96	$ 10,950.80	$ 448,982.76
Bayshore-SSF	$ 217,367.77	$ 5,434.19	$ 222,801.96
Bear Gulch	$ 308,236.19	$ 7,705.90	$ 315,942.10
Los Altos	$ 280,852.12	$ 7,021.30	$ 287,873.43
Palos Verdes	$ 475,214.54	$ 11,880.36	$ 487,094.90
Westlake	$ 113,197.92	$ 2,829.95	$ 116,027.87

[1] CWS Response to Public Advocates Office Data Request JMI-001 (Meter Replacement), Attachment 3 2026 Meter Replacement Cost Estimates.

Attachment 7-5:
2027 Capital Amount Contingent on Performance Standards

Att. Table 7-3: 2027 Capital Amount Contingent on Performance Standards[1]

District	PID	Direct Cost	2027 Estimated Meter Replacement	Direct Cost - 2027 Estimated Meter Replacement	Amount Contingent on Performance Standards	Amount Included in RO Model
Antelope Valley	00133620	$ 219,633.38	$ 14,565.15	$ 205,068.23	$ 102,534.11	$ 117,099.27
Bayshore-MPS	00133627	$ 9,189,162.97	$ 448,982.76	$ 8,740,180.21	$ 4,370,090.10	$ 4,819,072.87
Bayshore-SSF	00133634	$ 4,296,427.73	$ 222,801.96	$ 4,073,625.77	$ 2,036,812.88	$ 2,259,614.85
Bear Gulch	00133622	$ 5,109,121.36	$ 315,942.10	$ 4,793,179.26	$ 2,396,589.63	$ 2,712,531.73
Los Altos	00133625	$ 4,939,695.02	$ 287,873.43	$ 4,651,821.59	$ 2,325,910.80	$ 2,613,784.22
Palos Verdes	00133629	$ 6,281,129.21	$ 487,094.90	$ 5,794,034.31	$ 2,897,017.15	$ 3,384,112.06
Redwood Valley	00133632	$ 497,499.31	$ -	$ 497,499.31	$ 248,749.66	$ 248,749.66
Westlake	00133610	$ 2,188,453.00	$ 116,027.87	$ 2,072,425.13	$ 1,036,212.56	$ 1,152,240.44

[1] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Attachment 7-4 (2027 Meter Replacement due to GO 103-A).

LIST OF ATTACHMENTS FOR CHAPTER 8

	Attachment #	Description
1	Attachment 8-1	2019-2023 Historical District Level Replacement Rate
2	Attachment 8-2	Revised Main Replacement Budget Direct Cost Estimates

Attachment 8-1:
2019-2023 Historical District Level Replacement Rate

Att. Table 8-1: 2019-2023 Historical District Level Replacement Rate[1]

District	Recorded Replacement Rate					Average
	2019	2020	2021	2022	2023	
Antelope Valley	0.00%	0.00%	0.00%	0.82%	0.00%	0.16%
Bakersfield	0.09%	0.46%	0.20%	0.25%	0.28%	0.26%
Bear Gulch	0.35%	1.07%	0.90%	0.70%	0.63%	0.73%
Bayshore	0.40%	0.46%	0.61%	0.65%	0.46%	0.52%
Chico	0.27%	0.63%	0.16%	0.28%	0.64%	0.40%
Dixon	0.00%	0.96%	0.00%	0.00%	0.73%	0.34%
Dominguez	0.00%	0.00%	0.63%	0.43%	0.63%	0.34%
East Los Angeles	0.61%	0.38%	0.51%	0.39%	0.62%	0.50%
Hermosa Redondo	0.42%	1.09%	0.28%	0.63%	0.20%	0.52%
Kern River Valley	0.12%	0.38%	0.25%	0.36%	0.14%	0.25%
King City	0.00%	0.97%	0.84%	0.00%	0.54%	0.47%
Los Altos	0.98%	0.64%	0.17%	0.57%	0.24%	0.52%
Livermore	0.69%	1.14%	0.00%	0.00%	0.68%	0.50%
Marysville	0.81%	0.00%	0.00%	0.50%	0.00%	0.26%
Oroville	0.00%	1.04%	0.59%	0.00%	0.00%	0.33%
Palos Verdes	0.00%	0.18%	1.12%	0.27%	0.00%	0.31%
Redwood Valley	0.00%	0.00%	0.00%	0.54%	0.00%	0.11%
Salinas	0.49%	0.57%	0.51%	0.31%	0.25%	0.43%
Selma	0.00%	0.00%	0.71%	0.69%	1.37%	0.55%
Stockton	0.75%	0.63%	0.88%	1.03%	1.57%	0.97%
Visalia	0.00%	0.05%	0.26%	0.00%	0.43%	0.15%
Westlake	0.00%	0.38%	0.00%	0.00%	0.00%	0.08%
Willows	1.37%	0.00%	0.00%	0.00%	1.44%	0.56%

[1] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement).

Attachment 8-2:
Revised Main Replacement Budget Direct Cost Estimates

Att. Table 8-2: Direct Cost Comparison — 129MRP25[1]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - AV Pipeline Replacement [LF]	1057	308.58	$ 479.34	$ 506,662.38	$ 147,914.18
Subtotal					$ 506,662.38	$ 147,914.18
Contingency				10%	$ 50,666.00	$ -
Subtotal					$ 557,328.38	$ 147,914.18
Escalation				5.06%	$ 28,214.76	$ 7,488.16
Direct Total					$ 585,543.14	$ 155,402.34

Att. Table 8-3: Direct Cost Comparison — 129MRP26[2]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - AV Pipeline Replacement [LF]	1057	308.58	$ 479.34	$ 506,662.38	$ 147,914.18
Subtotal					$ 506,662.38	$ 147,914.18
Contingency				10%	$ 50,666.00	$ -
Subtotal					$ 557,328.38	$ 147,914.18
Escalation				7.69%	$ 42,853.42	$ 11,373.24
Direct Total					$ 600,181.80	$ 159,287.42

[1] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[2] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-4: Direct Cost Comparison — 129MRP27[3]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - AV Pipeline Replacement [LF]	1057	308.58	$ 479.34	$ 506,662.38	$ 147,914.18
Subtotal					$ 506,662.38	$ 147,914.18
Contingency				10%	$ 50,666.00	$ -
Subtotal					$ 557,328.38	$ 147,914.18
Escalation				10.38%	$ 57,843.23	$ 15,351.51
Direct Total					$ 615,171.61	$ 163,265.69

Att. Table 8-5: Direct Cost Comparison — 101MRP25[4]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - BK Pipeline Replacement [LF]	25643	13,289.40	$ 595.65	$ 15,274,252.95	$ 7,915,829.19
Subtotal					$ 15,274,252.95	$ 7,915,829.19
Contingency				10%	$ 1,527,425.00	$ -
Subtotal					$ 16,801,677.95	$ 7,915,829.19
Escalation				5.06%	$ 850,584.73	$ 400,738.75
Direct Total					$ 17,652,262.68	$ 8,316,567.94

[3] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[4] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-6: Direct Cost Comparison— 101MRP26[5]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - BK Pipeline Replacement [LF]	25643	13,289.40	$ 595.65	$ 15,274,252.95	$ 7,915,829.19
Subtotal					$ 15,274,252.95	$ 7,915,829.19
Contingency				10%	$ 1,527,425.00	$ -
Subtotal					$ 16,801,677.95	$ 7,915,829.19
Escalation				7.69%	$ 1,291,891.55	$ 608,653.07
Direct Total					$ 18,093,569.50	$ 8,524,482.25

Att. Table 8-7: Direct Cost Comparison— 101MRP27[6]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - BK Pipeline Replacement [LF]	25643	13,289.40	$ 595.65	$ 15,274,252.95	$ 7,915,829.19
Subtotal					$ 15,274,252.95	$ 7,915,829.19
Contingency				10%	$ 1,527,425.00	$ -
Subtotal					$ 16,801,677.95	$ 7,915,829.19
Escalation				10.38%	$ 1,743,789.36	$ 821,557.15
Direct Total					$ 18,545,467.31	$ 8,737,386.34

[5] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[6] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-8: Direct Cost Comparison —152MRP25[7]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - BAY Pipeline Replacement [LF]	27776	14,405.57	$ 826.48	$ 22,956,308.48	$ 11,905,918.04
Subtotal					$ 22,956,308.48	$ 11,905,918.04
Contingency				10%	$ 2,295,631.00	$ -
Subtotal					$ 25,251,939.48	$ 11,905,918.04
Escalation				5.06%	$ 1,278,379.20	$ 602,736.99
Direct Total					$ 26,530,318.68	$ 12,508,655.03

Att. Table 8-9: Direct Cost Comparison —152MRP26[8]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - BAY Pipeline Replacement [LF]	27776	14,405.57	$ 826.48	$ 22,956,308.48	$ 11,905,918.04
Subtotal					$ 22,956,308.48	$ 11,905,918.04
Contingency				10%	$ 2,295,631.00	$ -
Subtotal					$ 25,251,939.48	$ 11,905,918.04
Escalation				7.69%	$ 1,941,637.32	$ 915,453.44
Direct Total					$ 27,193,576.80	$ 12,821,371.48

[7] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[8] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-10: Direct Cost Comparison — 152MRP27[9]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - BAY Pipeline Replacement [LF]	27776	14,405.57	$ 826.48	$ 22,956,308.48	$ 11,905,918.04
Subtotal					$ 22,956,308.48	$ 11,905,918.04
Contingency				10%	$ 2,295,631.00	$ -
Subtotal					$ 25,251,939.48	$ 11,905,918.04
Escalation				10.38%	$ 2,620,813.44	$ 1,235,674.99
Direct Total					$ 27,872,752.92	$ 13,141,593.03

Att. Table 8-11: Direct Cost Comparison – 102MRP25[10]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - BG Pipeline Replacement [LF]	17774	13,286.12	$ 709.18	$ 12,604,965.32	$ 9,422,250.54
Subtotal					$ 12,604,965.32	$ 9,422,250.54
Contingency				10%	$ 1,260,497.00	$ -
Subtotal					$ 13,865,462.32	$ 9,422,250.54
Escalation				5.06%	$ 701,938.92	$ 477,001.36
Direct Total					$ 14,567,401.24	$ 9,899,251.90

[9] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[10] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-12: Direct Cost Comparison – 102MRP26[11]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - BG Pipeline Replacement [LF]	17774	13,286.12	$ 709.18	$ 12,604,965.32	$ 9,422,250.54
Subtotal					$ 12,604,965.32	$ 9,422,250.54
Contingency				10%	$ 1,260,497.00	$ -
Subtotal					$ 13,865,462.32	$ 9,422,250.54
Escalation				7.69%	$ 1,066,124.04	$ 724,482.72
Direct Total					$ 14,931,586.36	$ 10,146,733.26

Att. Table 8-13: Direct Cost Comparison – 102MRP27[12]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - BG Pipeline Replacement [LF]	17774	13,286.12	$ 709.18	$ 12,604,965.32	$ 9,422,250.54
Subtotal					$ 12,604,965.32	$ 9,422,250.54
Contingency				10%	$ 1,260,497.00	$ -
Subtotal					$ 13,865,462.32	$ 9,422,250.54
Escalation				10.38%	$ 1,065,768.83	$ 978,151.06
Direct Total					$ 14,931,231.15	$ 10,400,401.61

[11] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[12] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-14: Direct Cost Comparison – 104MRP25[13]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - CH Pipeline Replacement [LF]	12782	8699.54	$ 565.63	$ 7,229,882.66	$ 4,920,718.21
Subtotal					$ 7,229,882.66	$ 4,920,718.21
Contingency				10%	$ 722,988.00	$ -
Subtotal					$ 7,952,870.66	$ 4,920,718.21
Escalation				5.06%	$ 402,614.04	$ 249,111.34
Direct Total					$ 8,355,484.70	$ 5,169,829.55

Att. Table 8-15: Direct Cost Comparison – 104MRP26[14]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - CH Pipeline Replacement [LF]	12782	8699.54	$ 565.63	$ 7,229,882.66	$ 4,920,718.21
Subtotal					$ 7,229,882.66	$ 4,920,718.21
Contingency				10%	$ 722,988.00	$ -
Subtotal					$ 7,952,870.66	$ 4,920,718.21
Escalation				7.69%	$ 611,501.16	$ 378,357.08
Direct Total					$ 8,564,371.82	$ 5,299,075.29

[13] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[14] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-16: Direct Cost Comparison – 104MRP27[15]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - CH Pipeline Replacement [LF]	12782	8699.54	$ 565.63	$ 7,229,882.66	$ 4,920,718.21
Subtotal					$ 7,229,882.66	$ 4,920,718.21
Contingency				10%	$ 722,988.00	$ -
Subtotal					$ 7,952,870.66	$ 4,920,718.21
Escalation				10.38%	$ 825,401.53	$ 510,704.69
Direct Total					$ 8,778,272.19	$ 5,431,422.90

Att. Table 8-17: Direct Cost Comparison – 105MRP25[16]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - DIX Pipeline Replacement [LF]	1098	630.68	$ 798.24	$ 876,467.52	$ 503,432.43
Subtotal					$ 876,467.52	$ 503,432.43
Contingency				10%	$ 87,647.00	$ -
Subtotal					$ 964,114.52	$ 503,432.43
Escalation				5.06%	$ 48,808.32	$ 25,486.28
Direct Total					$ 1,012,922.84	$ 528,918.71

[15] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[16] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-18: Direct Cost Comparison – 105MRP26[17]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - DIX Pipeline Replacement [LF]	1098	630.68	$ 798.24	$ 876,467.52	$ 503,432.43
Subtotal					$ 876,467.52	$ 503,432.43
Contingency				10%	$ 87,647.00	$ -
Subtotal					$ 964,114.52	$ 503,432.43
Escalation				7.69%	$ 74,131.32	$ 38,709.21
Direct Total					$ 1,038,245.84	$ 542,141.64

Att. Table 8-19: Direct Cost Comparison – 105MRP27[18]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - DIX Pipeline Replacement [LF]	1098	630.68	$ 798.24	$ 876,467.52	$ 503,432.43
Subtotal					$ 876,467.52	$ 503,432.43
Contingency				10%	$ 87,647.00	$ -
Subtotal					$ 964,114.52	$ 503,432.43
Escalation				10.38%	$ 100,062.24	$ 52,249.58
Direct Total					$ 1,064,176.76	$ 555,682.01

[17] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[18] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-20: Direct Cost Comparison –128MRP25[19]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - DOM Pipeline Replacement [LF]	14496	6,553.73	$ 580.84	$ 8,419,856.64	$ 3,806,668.74
Subtotal					$ 8,419,856.64	$ 3,806,668.74
Contingency				10%	$ 841,986.00	$ -
Subtotal					$ 9,261,842.64	$ 3,806,668.74
Escalation				5.06%	$ 468,880.68	$ 192,712.56
Direct Total					$ 9,730,723.32	$ 3,999,381.30

Att. Table 8-21: Direct Cost Comparison – 128MRP26[20]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - DOM Pipeline Replacement [LF]	14496	6,553.73	$ 580.84	$ 8,419,856.64	$ 3,806,668.74
Subtotal					$ 8,419,856.64	$ 3,806,668.74
Contingency				10%	$ 841,986.00	$ -
Subtotal					$ 9,261,842.64	$ 3,806,668.74
Escalation				7.69%	$ 712,148.88	$ 292,697.14
Direct Total					$ 9,973,991.52	$ 4,099,365.88

[19] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[20] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-22: Direct Cost Comparison – 128MRP27[21]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - DOM Pipeline Replacement [LF]	14496	6,553.73	$ 580.84	$ 8,419,856.64	$ 3,806,668.74
Subtotal					$ 8,419,856.64	$ 3,806,668.74
Contingency				10%	$ 841,986.00	$ -
Subtotal					$ 9,261,842.64	$ 3,806,668.74
Escalation				10.38%	$ 961,255.32	$ 395,081.27
Direct Total					$ 10,223,097.96	$ 4,201,750.01

Att. Table 8-23: Direct Cost Comparison – 106MRP25[22]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - ELA Pipeline Replacement [LF]	9751	7,042.77	$ 592.86	$ 5,780,977.86	$ 4,175,379.13
Subtotal					$ 5,780,977.86	$ 4,175,379.13
Contingency				10%	$ 578,098.00	$ -
Subtotal					$ 6,359,075.86	$ 4,175,379.13
Escalation				5.06%	$ 321,928.19	$ 211,378.55
Direct Total					$ 6,681,004.05	$ 4,386,757.68

[21] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[22] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-24: Direct Cost Comparison – 106MRP26[23]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - ELA Pipeline Replacement [LF]	9751	7,042.77	$ 592.86	$ 5,780,977.86	$ 4,175,379.13
Subtotal					$ 5,780,977.86	$ 4,175,379.13
Contingency				10%	$ 578,098.00	$ -
Subtotal					$ 6,359,075.86	$ 4,175,379.13
Escalation				7.69%	$ 488,953.32	$ 321,047.51
Direct Total					$ 6,848,029.18	$ 4,496,426.64

Att. Table 8-25: Direct Cost Comparison – 106MRP27[24]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - ELA Pipeline Replacement [LF]	9751	7,042.77	$ 592.86	$ 5,780,977.86	$ 4,175,379.13
Subtotal					$ 5,780,977.86	$ 4,175,379.13
Contingency				10%	$ 578,098.00	$ -
Subtotal					$ 6,359,075.86	$ 4,175,379.13
Escalation				10.38%	$ 659,986.93	$ 433,348.45
Direct Total					$ 7,019,062.79	$ 4,608,727.57

[23] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[24] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-26: Direct Cost Comparison – 108MRP25[25]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - HR Pipeline Replacement [LF]	8283	5,805.17	$679.79	$ 5,630,700.57	$3,946,295.55
Subtotal					$ 5,630,700.57	$3,946,295.55
Contingency				10%	$ 563,070.00	$ -
Subtotal					$ 6,193,770.57	$3,946,295.55
Escalation				5.06%	$ 313,559.52	$ 199,781.14
Direct Total					$ 6,507,330.09	$4,146,076.69

Att. Table 8-27: Direct Cost Comparison – 108MRP26[26]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - HR Pipeline Replacement [LF]	8283	5,805.17	$679.79	$ 5,630,700.57	$3,946,295.55
Subtotal					$ 5,630,700.57	$3,946,295.55
Contingency				10%	$ 563,070.00	$ -
Subtotal					$ 6,193,770.57	$3,946,295.55
Escalation				7.69%	$ 476,242.91	$ 303,433.14
Direct Total					$ 6,670,013.48	$4,249,728.70

[25] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[26] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-28: Direct Cost Comparison– 108MRP27[27]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - HR Pipeline Replacement [LF]	8283	5,805.17	$679.79	$ 5,630,700.57	$3,946,295.55
Subtotal					$ 5,630,700.57	$3,946,295.55
Contingency				10%	$ 563,070.00	$ -
Subtotal					$ 6,193,770.57	$3,946,295.55
Escalation				10.38%	$ 642,830.52	$ 409,572.68
Direct Total					$ 6,836,601.09	$4,355,868.24

Att. Table 8-29: Direct Cost Comparison – 109MRP25[28]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - KC Pipeline Replacement [LF]	1104	888.62	$ 773.86	$ 854,341.44	$ 687,669.11
Subtotal					$ 854,341.44	$ 687,669.11
Contingency				10%	$ 85,434.00	$ -
Subtotal					$ 939,775.44	$ 687,669.11
Escalation				5.06%	$ 47,576.04	$ 34,813.18
Direct Total					$ 987,351.48	$ 722,482.29

[27] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[28] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-30: Direct Cost Comparison – 109MRP26[29]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - KC Pipeline Replacement [LF]	1104	888.62	$ 773.86	$ 854,341.44	$ 687,669.11
Subtotal					$ 854,341.44	$ 687,669.11
Contingency				10%	$ 85,434.00	$ -
Subtotal					$ 939,775.44	$ 687,669.11
Escalation				7.69%	$ 72,259.92	$ 52,875.31
Direct Total					$ 1,012,035.36	$ 740,544.42

Att. Table 8-31: Direct Cost Comparison – 109MRP27[30]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - KC Pipeline Replacement [LF]	1104	888.62	$ 773.86	$ 854,341.44	$ 687,669.11
Subtotal					$ 854,341.44	$ 687,669.11
Contingency				10%	$ 85,434.00	$ -
Subtotal					$ 939,775.44	$ 687,669.11
Escalation				10.38%	$ 97,536.12	$ 71,370.86
Direct Total					$ 1,037,311.56	$ 759,039.97

[29] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[30] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-32: Direct Cost Comparison – 110MRP25[31]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - LIV Pipeline Replacement [LF]	7051	5,891.84	$ 757.58	$ 5,341,696.58	$ 4,463,540.73
Subtotal					$ 5,341,696.58	$ 4,463,540.73
Contingency				10%	$ 534,170.00	$ -
Subtotal					$ 5,875,866.58	$ 4,463,540.73
Escalation				5.06%	$ 297,465.72	$ 225,966.73
Direct Total					$ 6,173,332.30	$ 4,689,507.46

Att. Table 8-33: Direct Cost Comparison – 110MRP26[32]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - LIV Pipeline Replacement [LF]	7051	5,891.84	$ 757.58	$ 5,341,696.58	$ 4,463,540.73
Subtotal					$ 5,341,696.58	$ 4,463,540.73
Contingency				10%	$ 534,170.00	$ -
Subtotal					$ 5,875,866.58	$ 4,463,540.73
Escalation				7.69%	$ 451,799.04	$ 343,204.43
Direct Total					$ 6,327,665.62	$ 4,806,745.15

[31] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[32] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-34: Direct Cost Comparison –110MRP27[33]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - LIV Pipeline Replacement [LF]	7051	5,891.84	$ 757.58	$ 5,341,696.58	$ 4,463,540.73
Subtotal					$ 5,341,696.58	$ 4,463,540.73
Contingency				10%	$ 534,170.00	$ -
Subtotal					$ 5,875,866.58	$ 4,463,540.73
Escalation				10.38%	$ 609,836.39	$ 463,255.85
Direct Total					$ 6,485,702.97	$ 4,926,796.58

Att. Table 8-35: Direct Cost Comparison – 111MRP25[34]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - LAS Pipeline Replacement [LF]	10780	7,966.37	$ 609.67	$ 6,572,242.60	$ 4,856,856.97
Subtotal					$ 6,572,242.60	$ 4,856,856.97
Contingency				10%	$ 657,224.00	$ -
Subtotal					$ 7,229,466.60	$ 4,856,856.97
Escalation				5.06%	$ 365,991.61	$ 245,878.29
Direct Total					$ 7,595,458.21	$ 5,102,735.26

[33] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[34] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-36: Direct Cost Comparison – 111MRP26[35]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - LAS Pipeline Replacement [LF]	15265	7,966.37	$ 609.67	$ 9,306,612.55	$ 4,856,856.97
Subtotal					$ 9,306,612.55	$ 4,856,856.97
Contingency				10%	$ 930,661.00	$ -
Subtotal					$ 10,237,273.55	$ 4,856,856.97
Escalation				7.69%	$ 787,150.32	$ 373,446.75
Direct Total					$ 11,024,423.87	$ 5,230,303.72

Att. Table 8-37: Direct Cost Comparison – 111MRP27[36]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - LAS Pipeline Replacement [LF]	15265	7,966.37	$ 609.67	$ 9,306,612.55	$ 4,856,856.97
Subtotal					$ 9,306,612.55	$ 4,856,856.97
Contingency				10%	$ 930,661.00	$ -
Subtotal					$ 10,237,273.55	$ 4,856,856.97
Escalation				10.38%	$ 1,062,492.00	$ 504,076.76
Direct Total					$ 11,299,765.55	$ 5,360,933.73

[35] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[36] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-38: Direct Cost Comparison – 112MRP25[37]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - MRL Pipeline Replacement [LF]	1402	731.91	$ 613.18	$ 859,678.36	$448,794.54
Subtotal					$ 859,678.36	$448,794.54
Contingency				10%	$ 85,968.00	$ -
Subtotal					$ 945,646.36	$448,794.54
Escalation				5.06%	$ 47,873.40	$ 22,720.25
Direct Total					$ 993,519.76	$471,514.79

Att. Table 8-39: Direct Cost Comparison – 112MRP26[38]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - MRL Pipeline Replacement [LF]	1402	731.91	$ 613.18	$ 859,678.36	$448,794.54
Subtotal					$ 859,678.36	$448,794.54
Contingency				10%	$ 85,968.00	$ 44,879.45
Subtotal					$ 945,646.36	$493,673.99
Escalation				7.69%	$ 72,711.25	$ 37,958.86
Direct Total					$ 1,018,357.61	$531,632.85

[37] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[38] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-40: Direct Cost Comparison – 113MRP25[39]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - ORO Pipeline Replacement [LF]	1572	1,027.30	$ 600.45	$ 943,907.40	$ 616,840.50
Subtotal					$ 943,907.40	$ 616,840.50
Contingency				10%	$ 94,391	$ -
Subtotal					$ 1,038,298.40	$ 616,840.50
Escalation				5.06%	$ 52,563.84	$ 31,227.54
Direct Total					$ 1,090,862.24	$ 648,068.04

Att. Table 8-41: Direct Cost Comparison – 113MRP26[40]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - ORO Pipeline Replacement [LF]	1572	1,027.30	$ 600.45	$ 943,907.40	$ 616,840.50
Subtotal					$ 943,907.40	$ 616,840.50
Contingency				10%	$ 94,391.00	$ -
Subtotal					$ 1,038,298.40	$ 616,840.50
Escalation				7.69%	$ 79,835.51	$ 47,429.31
Direct Total					$ 1,118,133.91	$ 664,269.81

[39] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[40] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-42: Direct Cost Comparison – 113MRP27[41]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - ORO Pipeline Replacement [LF]	1572	1,027.30	$ 600.45	$ 943,907.40	$ 616,840.50
Subtotal					$ 943,907.40	$ 616,840.50
Contingency				10%	$ 94,391.00	$ -
Subtotal					$ 1,038,298.40	$ 616,840.50
Escalation				10.38%	$ 107,761.55	$ 64,019.83
Direct Total					$ 1,146,059.95	$ 680,860.33

Att. Table 8-43: Direct Cost Comparison – 122MRP25[42]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - PV Pipeline Replacement [LF]	8812	5,681.88	$ 770.14	$ 6,786,473.68	$ 4,375,840.58
Subtotal					$ 6,786,473.68	$ 4,375,840.58
Contingency				10%	$ 678,647.00	$ -
Subtotal					$ 7,465,120.68	$ 4,375,840.58
Escalation				5.06%	$ 377,921.64	$ 221,526.87
Direct Total					$ 7,843,042.32	$ 4,597,367.45

[41] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[42] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-44: Direct Cost Comparison – 122MRP26[43]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - PV Pipeline Replacement [LF]	14100	5,681.88	$ 770.14	$ 10,858,974.00	$ 4,375,840.58
Subtotal					$ 10,858,974.00	$ 4,375,840.58
Contingency				10%	$ 1,085,897.00	$ -
Subtotal					$ 11,944,871.00	$ 4,375,840.58
Escalation				7.69%	$ 918,448.56	$ 336,461.10
Direct Total					$ 12,863,319.56	$ 4,712,301.68

Att. Table 8-45: Direct Cost Comparison – 122MRP27[44]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - PV Pipeline Replacement [LF]	14100	5,681.88	$ 770.14	$ 10,858,974.00	$ 4,375,840.58
Subtotal					$ 10,858,974.00	$ 4,375,840.58
Contingency				10%	$ 1,085,897.00	$ -
Subtotal					$ 11,944,871.00	$ 4,375,840.58
Escalation				10.38%	$ 1,239,717.83	$ 454,153.72
Direct Total					$ 13,184,588.83	$ 4,829,994.30

[43] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[44] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-46: Direct Cost Comparison – 146MRP25[45]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - RDV Pipeline Replacement [LF]	1232	189.99	$ 773.33	$ 952,742.56	$ 146,924.35
Subtotal					$ 952,742.56	$ 146,924.35
Contingency				10%	$ 95,274.00	$ -
Subtotal					$ 1,048,016.56	$ 146,924.35
Escalation				5.06%	$ 53,055.84	$ 7,438.05
Direct Total					$ 1,101,072.40	$ 154,362.40

Att. Table 8-47: Direct Cost Comparison – 146MRP26[46]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - RDV Pipeline Replacement [LF]	1232	189.99	$ 773.33	$ 952,742.56	$ 146,924.35
Subtotal					$ 952,742.56	$ 146,924.35
Contingency				10%	$ 95,274.00	$ -
Subtotal					$ 1,048,016.56	$ 146,924.35
Escalation				7.69%	$ 80,582.64	$ 11,297.10
Direct Total					$ 1,128,599.20	$ 158,221.45

[45] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[46] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-48: Direct Cost Comparison – 146MRP27[47]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - RDV Pipeline Replacement [LF]	1232	189.99	$ 773.33	$ 952,742.56	$ 146,924.35
Subtotal					$ 952,742.56	$ 146,924.35
Contingency				10%	$ 95,274.00	$ -
Subtotal					$ 1,048,016.56	$ 146,924.35
Escalation				10.38%	$ 108,770.04	$ 15,248.77
Direct Total					$ 1,156,786.60	$ 162,173.12

Att. Table 8-49: Direct Cost Comparison – 114MRP25[48]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - SLN Pipeline Replacement [LF]	8922	7,669.46	$ 626.97	$ 5,593,826.34	$ 4,808,523.83
Subtotal					$ 5,593,826.34	$ 4,808,523.83
Contingency				10%	$ 559,382.63	$ -
Subtotal					$ 6,153,208.97	$ 4,808,523.83
Escalation				5.05%	$ 310,781.61	$ 242,865.27
Direct Total					$ 6,463,990.58	$ 5,051,389.11

[47] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[48] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-50: Direct Cost Comparison – 114MRP26[49]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - SLN Pipeline Replacement [LF]	8921	7,669.46	$ 626.97	$ 5,593,199.37	$ 4,808,523.83
Subtotal					$ 5,593,199.37	$ 4,808,523.83
Contingency				10%	$ 559,319.94	$ -
Subtotal					$ 6,152,519.31	$ 4,808,523.83
Escalation				7.69%	$ 473,070.96	$ 369,730.33
Direct Total					$ 6,625,590.27	$ 5,178,254.16

Att. Table 8-51: Direct Cost Comparison – 114MRP27[50]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - SLN Pipeline Replacement [LF]	8921	7,669.46	$ 626.97	$ 5,593,199.37	$ 4,808,523.83
Subtotal					$ 5,593,199.37	$ 4,808,523.83
Contingency				10%	$ 559,319.94	$ -
Subtotal					$ 6,152,519.31	$ 4,808,523.83
Escalation				10.38%	$ 638,549.16	$ 499,060.42
Direct Total					$ 6,791,068.47	$ 5,307,584.25

[49] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[50] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-52: Direct Cost Comparison – 117MRP25[51]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - SEL Pipeline Replacement [LF]	2349	2,621.72	$ 464.93	$ 1,092,120.57	$ 1,218,915.93
Subtotal					$ 1,092,120.57	$ 1,218,915.93
Contingency				10%	$ 109,212.05	$ -
Subtotal					$ 1,201,332.62	$ 1,218,915.93
Escalation				5.06%	$ 60,817.44	$ 61,707.59
Direct Total					$ 1,262,150.06	$ 1,280,623.52

Att. Table 8-53: Direct Cost Comparison – 117MRP26[52]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - SEL Pipeline Replacement [LF]	2349	2,621.72	$ 464.93	$ 1,092,120.57	$ 1,218,915.93
Subtotal					$ 1,092,120.57	$ 1,218,915.93
Contingency				10%	$ 109,212.06	$ -
Subtotal					$ 1,201,332.63	$ 1,218,915.93
Escalation				7.69%	$ 92,371.20	$ 93,723.19
Direct Total					$ 1,293,703.83	$ 1,312,639.12

[51] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[52] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-54: Direct Cost Comparison – 117MRP27[53]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - SEL Pipeline Replacement [LF]	2349	2,621.72	$ 464.93	$ 1,092,120.57	$ 1,218,915.93
Subtotal					1092120.57	$ 1,218,915.93
Contingency				10%	$ 109,212.06	$ -
Subtotal					$ 1,201,332.63	$ 1,218,915.93
Escalation				10.38%	$ 124,682.27	$ 126,507.18
Direct Total					$ 1,326,014.90	$ 1,345,423.11

Att. Table 8-55: Direct Cost Comparison – 119MRP25[54]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - STK Pipeline Replacement [LF]	27817	26,980.83	$ 634.75	$ 17,656,840.75	$ 17,126,080.54
Subtotal					$ 17,656,840.75	$ 17,126,080.54
Contingency				10%	$ 1,765,684.08	$ -
Subtotal					$ 19,422,524.83	$ 17,126,080.54
Escalation				5.06%	$ 983,265.23	$ 867,007.75
Direct Total					$ 20,405,790.06	$ 17,993,088.29

[53] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[54] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-56: Direct Cost Comparison – 119MRP26[55]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - STK Pipeline Replacement [LF]	27817	26,980.83	$ 634.75	$ 17,656,840.75	$ 17,126,080.54
Subtotal					$ 17,656,840.75	$ 17,126,080.54
Contingency				10%	$ 1,765,684.08	$ -
Subtotal					$ 19,422,524.83	$ 17,126,080.54
Escalation				7.69%	$ 1,493,409.96	$ 1,316,834.94
Direct Total					$ 20,915,934.79	$ 18,442,915.48

Att. Table 8-57: Direct Cost Comparison – 119MRP27[56]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - STK Pipeline Replacement [LF]	27817	26,980.83	$ 634.75	$ 17,656,840.75	$ 17,126,080.54
Subtotal					$ 17,656,840.75	$ 17,126,080.54
Contingency				10%	$ 1,765,684.08	$ -
Subtotal					$ 19,422,524.83	$ 17,126,080.54
Escalation				10.38%	$ -	$ 1,777,907.93
Direct Total					$ 19,422,524.83	$ 18,903,988.47

[55] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[56] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-58: Direct Cost Comparison – 120MRP25[57]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - VIS Pipeline Replacement [LF]	15546	4,774.15	$ 523.22	$ 8,133,978.12	$ 2,497,930.48
Subtotal					$ 8,133,978.12	$ 2,497,930.48
Contingency				10%	$ 813,397.81	$ -
Subtotal					$ 8,947,375.93	$ 2,497,930.48
Escalation				5.06%	$ 452,960.88	$ 126,457.72
Direct Total					$ 9,400,336.81	$ 2,624,388.21

Att. Table 8-59: Direct Cost Comparison – 120MRP26[58]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - VIS Pipeline Replacement [LF]	15546	4,774.15	$ 523.22	$ 8,133,978.12	$ 2,497,930.48
Subtotal					$ 8,133,978.12	$ 2,497,930.48
Contingency				10%	$ 813,397.81	$ -
Subtotal					$ 8,947,375.93	$ 2,497,930.48
Escalation				7.69%	$ 687,969.36	$ 192,067.45
Direct Total					$ 9,635,345.29	$ 2,689,997.93

[57] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[58] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-60: Direct Cost Comparison – 120MRP27[59]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - VIS Pipeline Replacement [LF]	15546	4,774.15	$ 523.22	$ 8,133,978.12	$ 2,497,930.48
Subtotal					$ 8,133,978.12	$ 2,497,930.48
Contingency				10%	$ 813,397.81	$ -
Subtotal					$ 8,947,375.93	$ 2,497,930.48
Escalation				10.38%	$ 928,617.85	$ 259,251.75
Direct Total					$ 9,875,993.78	$ 2,757,182.23

Att. Table 8-61: Direct Cost Comparison – 123MRP25[60]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - WLK Pipeline Replacement [LF]	1785	460.17	$ 992.64	$ 1,771,862.40	$ 456,778.47
Subtotal					$ 1,771,862.40	$ 456,778.47
Contingency				10%	$ 177,186.24	$ -
Subtotal					$ 1,949,048.64	$ 456,778.47
Escalation				5.06%	$ 98,670.48	$ 23,124.39
Direct Total					$ 2,047,719.12	$ 479,902.86

[59] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[60] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-62: Direct Cost Comparison – 123MRP26[61]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - WLK Pipeline Replacement [LF]	1785	460.17	$ 992.64	$ 1,771,862.40	$ 456,778.47
Subtotal					$ 1,771,862.40	$ 456,778.47
Contingency				10%	$ 177,186.24	$ -
Subtotal					$ 1,949,048.64	$ 456,778.47
Escalation				7.69%	$ 149,863.56	$ 35,121.98
Direct Total					$ 2,098,912.20	$ 491,900.46

Att. Table 8-63: Direct Cost Comparison – 123MRP27[62]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - WLK Pipeline Replacement [LF]	1785	460.17	$ 992.64	$ 1,771,862.40	$ 456,778.47
Subtotal					$ 1,771,862.40	$ 456,778.47
Contingency				10%	$ 177,186.24	$ -
Subtotal					$ 1,949,048.64	$ 456,778.47
Escalation				10.38%	$ 202,285.08	$ 47,407.47
Direct Total					$ 2,151,333.72	$ 504,185.95

[61] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[62] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-64: Direct Cost Comparison – 121MRP25[63]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - WIL Pipeline Replacement [LF]	1194	1,126.78	$ 608.75	$ 726,847.50	$ 685,926.26
Subtotal					$ 726,847.50	$ 685,926.26
Contingency				10%	$ 72,684.75	$ -
Subtotal					$ 799,532.25	$ 685,926.26
Escalation				5.06%	$ 40,476.35	$ 34,725.04
Direct Total					$ 840,008.60	$ 720,651.31

Att. Table 8-65: Direct Cost Comparison – 121MRP26[64]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - WIL Pipeline Replacement [LF]	1194	1,126.78	$ 608.75	$ 726,847.50	$ 685,926.26
Subtotal					$ 726,847.50	$ 685,926.26
Contingency				10%		$ -
Subtotal					$ 799,532.25	$ 685,926.26
Escalation				7.69%	$ 61,476.48	$ 52,741.25
Direct Total					$ 861,008.73	$ 738,667.52

[63] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

[64] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

Att. Table 8-66: Direct Cost Comparison – 121MRP27[65]

Item	Description [units]	Qty		Unit Cost	Total	
		CWS	Cal Advocates		CWS	Cal Advocates
REPLACE MAIN PIPELINE	MRP - WIL Pipeline Replacement [LF]	$ 1,194.00	1,126.78	$ 608.75	$ 726,847.50	$ 685,926.26
Subtotal					$ 726,847.50	$ 685,926.26
Contingency				10%	$ 72,684.75	$ -
Subtotal					$ 799,532.25	$ 685,926.26
Escalation				10.38%	$ 82,980.71	$ 71,189.93
Direct Total					$ 882,512.96	$ 757,116.20

[65] CWS Response to Public Advocates Office Data Request JMI-007 (Main Replacement), Attachment 4 Q4 MRP Estimates.

LIST OF ATTACHMENTS FOR CHAPTER 9

	Attachment #	Description
1	Attachment 9-1	CWS Response to A2407003 Cal Advocates DR JMI-008 (AIWA Compliance)

Attachment 9-1:
CWS Response to A2407003 Cal Advocates DR JMI-008
(AIWA Compliance)

RESPONSE TO DATA REQUEST

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

To: **Public Advocates Office**

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From: **California Water Service** 2024GRCDataRequest@calwater.com

Natalie D. Wales Director, Rates	(408) 367-8566 nwales@calwater.com
Patrick Alexander General Rate Case Manager	(408) 367-8230 palexander@calwater.com
Melody Singh Manager, Revenue	(916) 329-1856 msingh@calwater.com

Date: **September 3, 2024** Re: **JMI-008** Subj: **AWIA Compliance**	Request Received from CPUC: **August 26, 2024** Requested Due Date: **September 3, 2024**

Comments:

- **Full response attached.**
- **Response provided by Engineering.**
- **Attachments contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **Confidential JMI-008 Att 1 Q.1d_Phase 3 RRA_Dixon**
  - **Confidential JMI-008 Att 2 Q.1d_Phase 3 RRA_King City**
  - **Confidential JMI-008 Att 3 Q.1d_Phase 3 RRA_Marysville**

Confidential JMI-008 Att 4 Q.1d_Phase 3 RRA_Oroville
Confidential JMI-008 Att 5 Q.1d_Phase 3 RRA_Salinas
Confidential JMI-008 Att 6 Q.1d_Phase 3 RRA_Selma
Confidential JMI-008 Att 7 Q.1d_Phase 3 RRA_Travis
Confidential JMI-008 Att 8 Q.1d Phase 3 RRA_Westlake
Confidential JMI-008 Att 9 Q.1d_Phase 3 RRA_Willows
Confidential JMI-008 Att 10 Q.1d_Antelope Valley ERP_May 2024
Confidential JMI-008 Att 11 Q.1d_Bakersfield ERP_May 2024
Confidential JMI-008 Att 12 Q.1d_Bayshore ERP_July 2024
Confidential JMI-008 Att 13 Q.1d_Bear Gulch ERP_June 2024
Confidential JMI-008 Att 14 Q.1d_Chico ERP_June 2024
Confidential JMI-008 Att 15 Q.1d_CSS_ERP_ July 2024
Confidential JMI-008 Att 16 Q.1d_Dixon_ERP_July 2024
Confidential JMI-008 Att 17 Q.1d_ELA ERP_May 2024
Confidential JMI-008 Att 18 Q.1d_KRV ERP_June 2024
Confidential JMI-008 Att 19 Q.1d_King City ERP_June 2024
Confidential JMI-008 Att 20 Q.1d_Livermore ERP_June 2024
Confidential JMI-008 Att 21 Q.1d_Los Altos ERP_May 2024
Confidential JMI-008 Att 22 Q.1d_Marysville ERP July 2024
Confidential JMI-008 Att 23 Q.1d_Oroville ERP_June 2024
Confidential JMI-008 Att 24 Q.1d_Rancho Dominguez ERP_June 2024
Confidential JMI-008 Att 25 Q.1d_Salinas ERP_June 2024
Confidential JMI-008 Att 26 Q.1d_SEL-TV-ML ERP_JUNE 2024
Confidential JMI-008 Att 27 Q.1d_Stockton ERP_June 2024
Confidential JMI-008 Att 28 Q.1d_Travis_ERP_July 2024
Confidential JMI-008 Att 29 Q.1d_Visalia ERP_June 2024
Confidential JMI-008 Att 30 Q.1d_Westlake ERP_June 2024
Confidential JMI-008 Att 31 Q.1d_Willows ERP_July 2024
JMI-008 Att 32 Q.1d AWIA Confidentiality Memo

Data Requests and Responses

America's Water Infrastructure Act (AWIA) Compliance (All Districts)

1. Section 2013 of the America's Water Infrastructure Act states that community water systems shall review their risk and resilience assessments (R&RAs) and Emergency Response Plans (ERPs) at least once every five years after the applicable certification submission deadlines.[1] Accordingly, the most recent deadlines for the ERPs were September 30, 2020 for systems serving a population over 100,000, June 30, 2021 for systems serving a population between 50,000 - 99,999, and December 31, 2021 for systems serving a population between 3,301 - 49,999.[2]

   In the 2021 rate case, Cal Water stated that the R&RA for the three priority categories was required to be completed by March 31, 2020 for Priority 1 systems, December 31, 2020 for Priority 2 systems, and June 30, 2021 for Priority 3 systems.[3]

   a. Cal Water states that all districts "have updated and fully vetted their ERPs."[4] For each system, please provide the date of the most recent update completed and the scheduled or approximate completion date of the next ERP update.
   Response:

   For AWIA compliance, Cal Water reviewed each risk and resilience report (RRA) for each water system and generated individual technical memorandums for each system serving more than 3,300 people to ensure the ERPs were in compliance with the findings of the RRAs. Various sections of the ERPs were revised to reflect new information from the ERP technical memorandums. The following list shows the district, last ERP certification date, last ERP update, approximate completion date of the next ERP, and the next AWIA ERP certification deadline.

[1] Section 2013 of America's Water Infrastructure Act, Frequently Asked Questions. (https://www.epa.gov/sites/default/files/2020-04/documents/awia_s2013_faqs_final.pdf).
[2] Section 2013 of America's Water Infrastructure Act, Frequently Asked Questions. (https://www.epa.gov/sites/default/files/2020-04/documents/awia_s2013_faqs_final.pdf).
[3] Cal Water Additional Testimony (from A.21-07-002), p. 97, lines 14-20.
[4] Testimony Book #3, p. 52, line 28.

District	System	Last ERP Certification	Last ERP update	Next ERP certification deadline	Next planned ERP update	Notes
Antelope Valley	Antelope Valley	N/A	5/1/2024	N/A	5/1/2025	No AWIA requirement
Bayshore	San Carlos	6/30/2021	7/1/2024	6/30/2026	7/1/2025	
Bayshore	San Mateo	9/30/2020	7/1/2024	9/30/2025	7/1/2025	
Bayshore	South San Francisco	6/30/2021	7/1/2024	6/30/2026	7/1/2025	
Bear Gulch	Bear Gulch	6/30/2021	6/1/2024	6/30/2026	6/1/2025	
BK	Bakersfield	9/30/2020	5/1/2024	9/30/2025	5/1/2025	
BK	North Garden	12/31/2021	5/1/2024	12/31/2026	5/1/2025	
Chico	Chico	9/30/2020	6/1/2024	9/30/2025	6/1/2025	
Dixon	Dixon	12/31/2021	7/1/2024	12/31/2026	7/1/2025	
East Los Angeles	East Los Angeles	9/30/2020	5/1/2024	9/30/2025	5/1/2025	
Kern River Valley	Kern River Valley	N/A	6/1/2024	N/A	6/1/2025	No AWIA requirement
King City	King City	12/31/2021	6/1/2024	12/31/2026	6/1/2025	
Livermore	Livermore	6/30/2021	6/1/2024	6/30/2026	6/1/2025	
Los Altos	Los Altos	6/30/2021	5/1/2024	6/30/2026	5/1/2025	
Marysville	Marysville	12/31/2021	7/1/2024	12/31/2026	7/1/2025	
Oroville	Oroville	12/31/2021	6/1/2024	12/31/2026	6/1/2025	
Rancho Dominguez	Dominguez	9/30/2020	6/1/2024	9/30/2025	6/1/2025	
Rancho Dominguez	Hermosa Redondo	6/30/2021	6/1/2024	6/30/2026	6/1/2025	
Rancho Dominguez	Palos Verdes	6/30/2021	6/1/2024	6/30/2026	6/1/2025	
Redwood Valley	Redwood Valley	N/A	7/1/2024	N/A	7/1/2025	No AWIA requirement
Salinas	Los Lomas	12/31/2021	6/1/2024	12/31/2026	6/1/2025	
Salinas	Oak Hills	12/31/2021	6/1/2024	12/31/2026	6/1/2025	
Salinas	Salinas	9/30/2020	6/1/2024	9/30/2025	6/1/2025	
Salinas	Salinas Hills	12/31/2021	6/1/2024	12/31/2026	6/1/2025	
Selma	Selma	12/31/2021	6/1/2024	12/31/2026	6/1/2025	
Stockton	Stockton	9/30/2020	6/1/2024	9/30/2025	6/1/2025	
Travis	Travis AFB	12/31/2021	7/1/2024	12/31/2026	7/1/2025	
Visalia	Visalia	9/30/2020	6/1/2024	9/30/2025	6/1/2025	
Westlake	Westlake	12/31/2021	6/1/2024	12/31/2026	6/1/2025	
Willows	Willows	12/31/2021	7/1/2024	12/31/2026	7/1/2025	

b. For each system, please provide the date of the most recent R&RA update completed and the scheduled or approximate completion date of the next R&RA update.

Response:

The following table shows each system, the date of the most recent RRA update, and the date of the next required certification.

District	System	Last RRA update	Next RRA certification deadline	Notes
Antelope Valley	Antelope Valley	7/31/2022	N/A	No AWIA requirement
Bayshore	San Carlos	12/31/2020	12/31/2025	
Bayshore	San Mateo	3/31/2020	3/31/2025	
Bayshore	South San Francisco	12/31/2020	12/31/2025	
Bear Gulch	Bear Gulch	12/31/2020	12/31/2025	
BK	Bakersfield	3/31/2020	3/31/2025	
BK	North Garden	6/30/2021	6/30/2026	
Chico	Chico	3/31/2020	3/31/2025	
Dixon	Dixon	6/30/2021	6/30/2026	
East Los Angeles	East Los Angeles	3/31/2020	3/31/2025	
Kern River Valley	Kern River Valley	7/31/2022	N/A	No AWIA requirement
King City	King City	6/30/2021	6/30/2026	
Livermore	Livermore	12/31/2020	12/31/2025	
Los Altos	Los Altos	12/31/2020	12/31/2025	
Marysville	Marysville	6/30/2021	6/30/2026	
Oroville	Oroville	6/30/2021	6/30/2026	
Rancho Dominguez	Dominguez	3/31/2020	3/31/2025	
Rancho Dominguez	Hermosa Redondo	12/31/2020	12/31/2025	
Rancho Dominguez	Palos Verdes	12/31/2020	12/31/2025	
Redwood Valley	Redwood Valley	7/31/2022	N/A	No AWIA requirement
Salinas	Los Lomas	6/30/2021	6/30/2026	
Salinas	Oak Hills	6/30/2021	6/30/2026	
Salinas	Salinas	3/31/2020	3/31/2025	
Salinas	Salinas Hills	6/30/2021	6/30/2026	
Selma	Selma	6/30/2021	6/30/2026	

Stockton	Stockton	3/31/2020	3/31/2025	
Travis	Travis AFB	6/30/2021	6/30/2026	
Visalia	Visalia	3/31/2020	3/31/2025	
Westlake	Westlake	6/30/2021	6/30/2026	
Willows	Willows	6/30/2021	6/30/2026	

c. Please confirm whether Cal Water is requesting funding in this rate case related to updating the R&RAs and ERPs. If so, please specify where in Cal Water's RO model these costs are recorded.

Response:
The majority of the costs incurred for this effort took place in 2020 and 2021. These expenses are included in Cal Water's five-year historical average, which serves as the baseline for our forecast. We will update our RRAs and ERPs in 2026 and 2027, the Test Year and Escalation Year for this proceeding. Cal Water did not request any additional funding over the escalated historical average.

d. Please provide copies of R&RAs updated more recently than July 1, 2021 and ERPs updated more recently than January 1, 2022, if any.

Response:
Please see Confidential Attachments #1-31. This includes all priority 3 RRAs (last certified on 12/31/2021) and all ERPs (last updated in 2024).