

Prepared by Zone 7 Staff

Table of Contents

EXECUTIVE SUMMARY	4
Agency Background.....	4
2021 Untreated Study Background.....	5
General Report Assumptions.....	6
Current Rates	6
Planned Water Deliveries	6
Preliminary Untreated Water Rates.....	6
WATER SERVICE.....	8
Agency Staff Programs.....	8
Water Service Costs	9
AGENCY OVERHEAD.....	10
Overhead Costs and Calculation.....	10
WATER SUPPLY	13
Water Supply Portfolio.....	13
Water Supply Costs.....	14
WATER RECONCILIATION CHARGE	16
Reconciliation Framework.....	16
CY 2022 Reconciliation Calculation.....	18
Outstanding Reconciliation Balance	21
PRELIMINARY UNTREATED WATER RATES.....	23
Untreated Water Rate Calculation	23
Reconciliation Charge Phase-in Options.....	23
TECHNICAL APPENDIX.....	25

List of Tables

Table 1: Current Untreated Water Rates (CY 2023).....	6
Table 2: Planned Water Deliveries (CY 2023).....	6
Table 3: Proposed Untreated Water Rates (CY 2024).....	7
Table 4: Water Service Cost Summary (CY 2024).....	9
Table 5: Agency Direct and Indirect Labor Costs (CY 2024).....	10
Table 6: Agency-wide Overhead Cost Allocations (CY 2024).....	11
Table 7: Untreated Water Overhead Percentage Calculation (CY 2024).....	11
Table 8: Untreated Water Overhead Costs (CY 2024).....	12
Table 9: Water Supply Cost Detail (CY 2024).....	15
Table 10: Planned Water Supply Cost Summary (CY 2024).....	15
Table 11: Water Deliveries and Allocations (CY 2022).....	19
Table 12: Actual Untreated Water Supply and Service Costs (CY 2022).....	19
Table 13: Untreated Water Overhead Costs (CY 2022).....	20
Table 14: Total Untreated Water Program Costs (CY 2022).....	20
Table 15: Water Reconciliation Amount (CY 2022).....	20
Table 16: Water Reconciliation Charge Calculation (CY 2022).....	21
Table 17: Outstanding Water Reconciliation Charge.....	21
Table 18: Preliminary Untreated Water Rates Calculation (CY 2024).....	22
Table 19: Reconciliation Charge Phase-in Options.....	23
Table 20: Reconciliation Phase-in Impacts (CY 2024).....	23
Table 21: Water Service Cost Detail.....	24
Table 22: Central Administration (Indirect Cost) Detail.....	26

List of Figures

Figure 1: Map of Untreated Water Turnouts.....	5
--	---

Executive Summary

Agency Background

The Zone 7 Water Agency (the “Agency”) was established in 1957 to provide untreated water to support agriculture and treated wholesale water to the Livermore-Amador Valley area. In 1961, the Agency contracted for State Water Project (SWP) water deliveries through the South Bay Aqueduct.

The Agency’s water resources include imported water from the SWP, local groundwater storage, surface water captured in the Del Valle Reservoir, and offsite groundwater banking in Kern County. Historically, the majority of the Agency’s water demand has been met by imported water from the SWP; approximately 90 percent of the current water demand is met through SWP water.

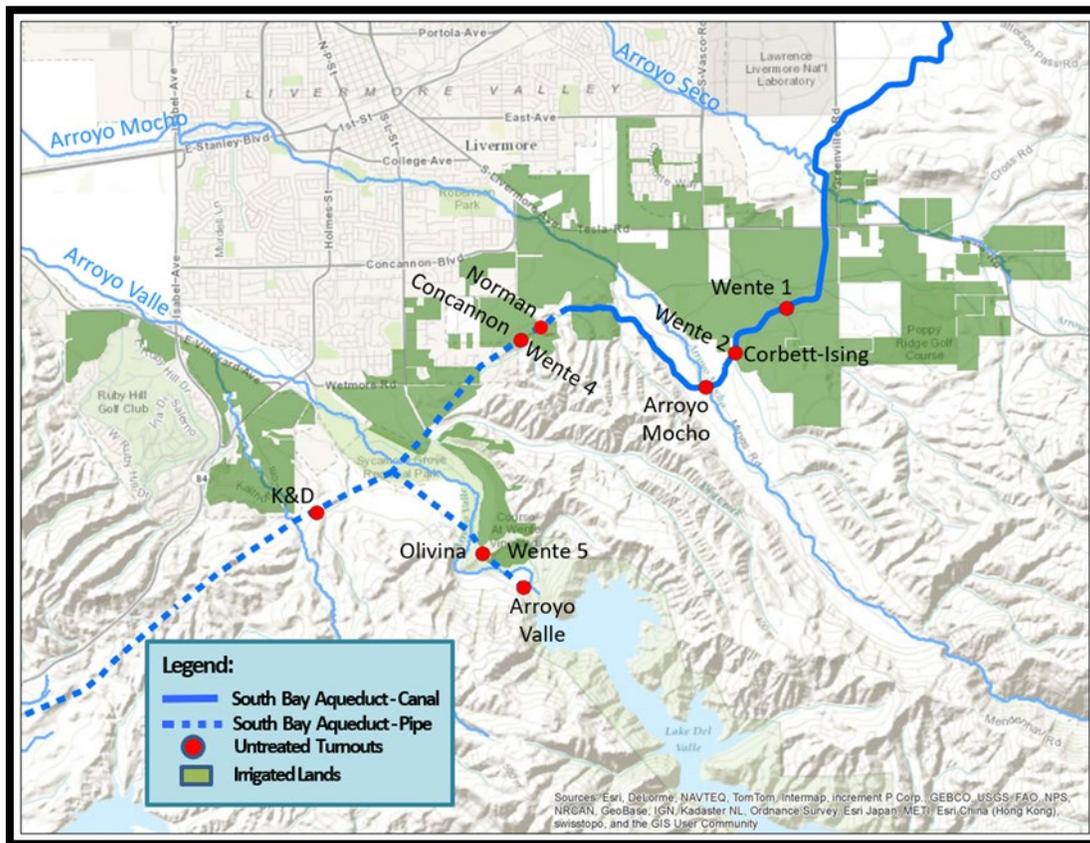
The Agency began delivering untreated water to its service area from the California Department of Water Resources (DWR) via the South Bay Aqueduct (the “SBA”) in 1962. Over the years, deliveries increased with the agricultural development of South Livermore. The Agency provides untreated water service to 87 untreated water users that may collectively request water deliveries of up to 8,104 acre-feet (AF) per year.

Historically, the Agency has had untreated water contracts with separate users; however, only seven of these contractors receive water from the Agency directly from a SBA turnout. These seven water users are referred to as “turnout water users.” The remaining 80 “remote water users” receive their water deliveries through the turnout water users’ respective conveyance facilities. The Agency’s current practice is to invoice the seven turnout water users for all water delivered through the turnouts, which includes water wheeled, or delivered through their respective facilities, to remote water users. The turnout water users, in turn, invoice the respective individual remote water users.

Prior to 2011, the Agency had contracts with the separate users. In 2011, the Agency transitioned from individual contracts to the Rules and Regulations Governing Water Service. The Rules and Regulations Governing Water Service reflect the actual relationship the Agency has with its untreated water customers. This transition allowed the Agency to administer the untreated water program more effectively by clearly documenting and maintaining a maximum annual allocation for each water user and providing a process for water transfers within the service area.

Figure 1 shows the map of the untreated water turnouts and delivery via the SBA.

Figure 1: Map of Untreated Water Turnouts



2023 Untreated Water Rate Update Background

The 2023 Untreated Water Rate Update (the “2023 Update”) updated the untreated water rates based on the Board principles for untreated water rates adopted via Resolution No. 21-77, dated October 20, 2021.

The major objectives of the 2023 Update include the following:

- » Ensure financial sufficiency for the untreated water enterprise to meet water supply and program costs
- » Develop untreated and temporary untreated water rates consistent with approved Board principles
- » Maintain fairness and equitability of rates while minimizing customer impacts

General Report Assumptions

The 2023 Update acknowledges the volatility of water supply costs from year to year and the challenge of accurately predicting future water supply by smoothing

projected water supply costs using a five-year historical average. Introducing this method will help avoid rate shock to Untreated Water Customers when extreme weather patterns are anticipated. The following projections are proposed to reflect five-year historical averages:

- » Planned Water Deliveries
- » Planned Water Supply Costs

Current Rates

The Agency’s current untreated water rates include two components: an untreated water rate for normal water service and a temporary untreated water rate for customers that require temporary service and are unable to obtain water from other areas in the valley. **Table 1** shows the current untreated water rates, which the Agency adopted on October 19, 2022, via Resolution No. 22-85, for CY 2023.

Table 1: Current Untreated Water Rates (CY 2023)

Current Untreated Water Rates (\$/AF) CY 2023	
Untreated Water Rate	\$255 ¹
Temporary Untreated Water Rate	\$1,028

Planned Water Deliveries

Table 2 shows the planned water deliveries for untreated and treated water customers in CY 2024, and the percent of total deliveries for each service. As mentioned above, planned untreated and treated water deliveries are based on the five-year actual historical average.

Table 2: Planned Water Deliveries (CY 2024)

Planned Water Deliveries	Total AF	% of Total
Untreated Water	5,412	13.5%
Treated Water	34,721	86.5%
Total	40,133	100.0%

Preliminary Untreated Water Rates

Table 3 shows the preliminary untreated water rate and the temporary untreated water rate. This preliminary untreated water rate excludes the outstanding reconciliation balance. The amount of the water reconciliation charge applied to the CY 2024 untreated water rate will be reflected in the final report based on the recommended implementation schedule determined by the Agency’s Board of Directors.

¹Current rate includes a \$36 reconciliation charge for CY 2021.

Table 3: Preliminary Untreated Water Rates (CY 2024)

Preliminary Untreated Water Rates (\$/AF)	CY 2024
Untreated Water Rate	\$220
Temporary Untreated Water Rate	\$916

Water Service

This section outlines the Agency's water service costs and the associated costs & descriptions of the various staff programs that make up the water service costs.

Agency Staff Programs

The Agency is committed to providing a reliable supply of high-quality water for municipal, industrial, and agricultural customers and spends a considerable amount of time managing the water supply portfolio. Agency staff program costs are calculated on actual hours worked by Agency staff and an hourly rate of pay.

The following section describes the various staff programs and their roles in the untreated water system. All the following Agency staff programs, except for the Untreated Water Program, serve both treated and untreated water customers. All other Agency staff programs that do not serve the untreated water customers (i.e. Water Treatment, Groundwater Administration, Local Water Rights, and Flood Protection) have been excluded.

State Water Project Program

Administration of the SWP water supply.

Untreated Water Program

Execution, management, and administration of the Untreated Water Program.

Water Supply and Storage Planning

Operational planning of the water utility and the water supply, day-to-day water supply management activities, administration and support related to the water storage program, water supply and conveyance, and other water supplies.

Cawelo Banked Water Program

Administration, operation, and maintenance of the Cawelo water supply, including recovery and storage.

Semitropic Banked Water Program

Administration, operation, and maintenance of the Semitropic water supply, including recovery and storage.

Water Service Costs

Agency staff provided estimated water service costs for each of the programs, which include projected hourly pay and hours worked per role for CY 2024. The detailed water service costs by program are included in the **Technical Appendix**.

Table 4 shows the water service cost summary for all Agency staff programs that serve the Untreated Water Customers and the allocation to the untreated water system. Untreated Water Program costs are only distributed to the untreated water system, while the remaining staff programs benefit both treated and untreated customers, dependent on the volume of planned water deliveries. The percent of costs allocated to untreated water customers (except for Untreated Water Program costs) is based on the proportion of planned water deliveries in CY 2024 from **Table 2**.

Table 4: Water Service Cost Summary (CY 2024)²

Water Service Costs Summary	Total Agency	% To Untreated	Total Untreated
State Water Project Program	\$96,335	13.5%	\$12,991
Untreated Water Program	\$19,804	100.0%	\$19,804
Water Supply and Storage Planning	\$526,126	13.5%	\$70,952
Cawelo Banked Water Program	\$13,518	13.5%	\$1,823
Semitropic Banked Water Program	\$10,457	13.5%	\$1,410
Total - Water Service Costs	\$666,240	16.1%	\$106,981

² Values may not add due to rounding.

Agency Overhead

This section outlines the Agency overhead costs and calculation. The resulting overhead percentage, determined in **Table 7**, is applied to the water service costs derived in the previous section.

Overhead Costs and Calculation

Overhead costs are costs not directly related to water production or water service but are necessary for the operation of the Agency and are shared across all Agency departments. The Agency's central administration program includes the accounting, human resources, governance (Board of Directors), finance, procurement, and management departments. Some examples of Agency overhead include salaries, wages, and benefits of personnel in the central administrative program as well as utilities, supplies, organizational memberships, information technology, legal services, and building maintenance, among others. Detailed Central Administration costs are included in the **Technical Appendix** at the end of this report.

The overhead calculation uses both direct and indirect labor costs for all Agency programs. Direct labor costs are Agency staff hours charged directly to the following programs: Water Utility Support Services, Supply Source and Conveyance, Water Storage, Water Treatment, Water Transmission, and Flood Protection. Indirect labor costs are Agency staff hours charged to the Central Administration program. **Table 5** shows the total direct and indirect costs to each program.

Table 5: Agency Direct and Indirect Labor Costs (CY 2024)³

Programs	Direct Labor	Indirect Labor
Water Utility Support Services	\$3,210,435	\$0
Supply Source & Conveyance	\$304,292	\$0
Water Storage	\$1,502,895	\$0
Water Treatment	\$6,853,977	\$0
Water Transmission	\$1,103,158	\$0
Central Administration	\$0	\$5,505,965
Flood Protection	\$1,890,545	\$0
Total - Programs	\$14,865,301	\$5,505,965

Table 6 shows the total direct and indirect costs from **Table 5** and adds the allocation of indirect costs to each program based on the proportion of direct labor

³ Values may not add due to rounding.

costs. For example, the following equation is used to calculate the allocated Central Administration indirect costs for Water Utility Support Services program:

$$\$5,505,965 \text{ total Central Administration costs} \times (\$3,210,435 \text{ Water Utility Support Services direct labor costs} / \$14,865,301 \text{ total direct labor costs}) = \$1,189,114$$

Table 6: Agency-wide Overhead Cost Allocations (CY 2024)⁴

Programs	Direct Labor	Indirect Labor (Central Admin)	Central Admin Allocation
Water Utility Support Services	\$3,210,435	\$0	\$1,189,114
Supply Source & Conveyance	\$304,292	\$0	\$112,707
Water Storage	\$1,502,895	\$0	\$556,658
Water Treatment	\$6,853,977	\$0	\$2,538,647
Water Transmission	\$1,103,158	\$0	\$408,599
Central Administration	\$0	\$5,505,965	\$0
Flood Protection	\$1,890,545	\$0	\$700,240
Total - Programs	\$14,865,301	\$5,505,965	\$5,505,965

The only relevant programs applicable to the untreated water system include Water Utility Support Services, Supply Source and Conveyance, and Water Storage (highlighted in light blue). **All other program costs do not directly apply to the untreated water system.**

Table 7 shows the calculation of the untreated water overhead percentage. The Agency-wide overhead allocation is represented by the indirect costs (central administration) associated with each dollar of direct labor costs. To calculate the untreated water overhead percentage, the indirect allocated costs for the applicable programs, Water Utility Support Services, Supply Source and Conveyance, and Water Storage, are divided by the total direct labor costs for the same three programs. The resulting percentage of 37.0 percent represents approximately 37 cents of indirect costs for each dollar of applicable direct labor costs allocated to untreated water.

Table 7: Untreated Water Overhead Percentage Calculation (CY 2024)⁴

Untreated Water Programs	Direct Labor	Central Admin
Water Utility Support Services	\$3,210,435	\$1,189,114
Supply Source & Conveyance	\$304,292	\$112,707
Water Storage	\$1,502,895	\$556,658
Total - Untreated Water Programs	\$5,017,622	\$1,858,479
Overhead Percentage	37.0%	

⁴ Values may not add due to rounding.

Table 8 shows the untreated water system’s portion of overhead costs, which is calculated by multiplying the overhead percentage in **Table 7** by the planned untreated water service costs for CY 2024 in **Table 4**.

Table 8: Untreated Water Overhead Costs (CY 2024)⁵

Overhead Costs	Total Untreated
Untreated Water Service Costs	\$106,981
Overhead Percentage	37.0%
Untreated Water Overhead Costs	\$39,625

⁵ Values may not add due to rounding.

Water Supply

This section of the report outlines the Agency's water supply sources and planned water supply costs for CY 2024. Water supply costs make up approximately 85-90% of the untreated water rates and are historically very volatile and challenging to predict.

Water Supply Portfolio

The Agency's water sources are used to meet treated and untreated water demand. Treated water demand is from municipal (retailers) and industrial (direct) customers and untreated water demand is from agricultural customers. Excess surface water supplies are placed into storage locally or remotely for future use. Water supply costs are included in the rate calculation for both treated and untreated water deliveries.

State Water Project

» **Table A**

Table A is the Agency's portion of the State Water Project annual allocation and represents the largest portion of Zone 7's "new" water supply each year. The Agency's maximum allocation is 80,619 AF annually. Each year, the Agency receives a "Table A allocation" representing a percentage of 80,619 AF.

» **Excess Supplies**

This is officially referred to as "Article 21" water and is surplus water that is made available, in addition to Table A water, when the San Luis Reservoir is full. It is water that would otherwise flow to the Bay.

» **Carryover**

This is officially referred to as "Article 56" water and is available when the Agency's Table A water rolls over as carryover for use in future years. In most years, this water remains in the San Luis Reservoir, but in wet years, such as 2023, the San Luis Reservoir can be at risk of spilling, which causes stored carryover to be lost. Each year, the Agency typically reserves 10,000 to 15,000 AF as a carryover to mitigate against fluctuating Table A allocations.

» **Delta Conveyance Project**

This project offers alternative conveyance to the existing State Water Project system based on a new, single-tunnel option that could by-pass the South Delta when it is unusable. The project has been developed by the Department of Water Resources to address challenges related to climate change/sea level rise, earthquakes, environmental impacts, and water quality degradation rendering the State Water Project conveyance system and Delta unreliable. The Agency has been authorized by the Board of Directors to continue its

participation in the Delta Conveyance Project through 2024 (Resolution No. 22-30).

Water Transfers/Exchanges

This supply is comprised of imported water purchased by the Agency through both long-term and short-term (annual) agreements with another entity (e.g., water agency, farm). Based on the recommendations of the 2022 Water Supply Evaluation Update, the Agency plans to pursue transfers (an average of 10,000 AF per year) until additional long-term supply sources become available.

- » **Yuba Accord**

Water from this source is available mainly in dry years through an agreement with the DWR and Yuba County Water Agency. The Agency receives approximately 1 percent of available water.

- » **Dry Year Transfer Program**

During dry years, the State Water Contractors negotiate water purchases north of the Delta, which makes additional water available to interested SWP contractors.

Other Transfers

Water from this source is obtained through negotiations with other SWP contractors, typically in dry years when the Table A allocation is low.

Banked Water Programs

- » **Cawelo and Semitropic Banked Water**

The Agency has agreements with Semitropic Water Storage District and Cawelo Water District in Kern County for 78,000 AF and 120,000 AF of storage capacity, respectively. The Agency recovers water from these banks as needed during dry years (such as 2021 and 2022). Recovered water is delivered via exchange through the South Bay Aqueduct as surface water is conveyed through the Delta. In 2023 the Agency sent water to store due to the 100% SWP allocation.

Water Supply Costs

Anticipated water supply costs and the SWP final allocation for CY 2024 is not available until mid-2024. Therefore, Agency staff propose using the five-year historical average of water supply costs for the CY 2024 planned water supply costs. This method generates a total projected water supply cost of \$7,707,175 for CY 2024.

Table 9 shows the five-year historical water supply costs. The water supply breakdown can be found in the **Technical Appendix**.

Table 9: Five-Year Historical Water Supply Costs

	Total Water Supply Costs
FY 2018-19	\$3,970,369
FY 2019-20	\$3,916,962
FY 2020-21	\$5,672,701
FY 2021-22	\$15,912,409
FY 2022-23 (Unaudited)	\$9,063,435
5-Year Average	\$7,707,175

Table 10 shows the water supply cost summary and the allocation to the untreated water system. The percent of costs allocated to untreated water customers is based on the proportion of planned water deliveries in CY 2024 from **Table 2**.

Table 10: Planned Water Supply Cost Summary (CY 2024)⁶

Planned Water Supply Cost Summary	Total Agency	% To Untreated	Total Untreated
Water Supply Costs	\$7,707,175	13.5%	\$1,039,369
Temporary Water Supply Costs	\$27,915,000	13.5%	\$3,764,541

⁶ Values may not add due to rounding.

Water Reconciliation Charge

This section of the report outlines the framework and calculations for the water reconciliation charge.

Reconciliation Framework

For the 2021 Untreated Water Rate Study, Raftelis Financial Consultants, Inc. collaborated with Agency staff to determine the following framework for calculating the annual water reconciliation charge, which is detailed in this subsection of the report. The proposed water reconciliation charge framework meets the Agency's objectives for the following reasons:

- » Truing up water supply and water service costs from prior years will ensure that the Agency is collecting sufficient revenues to meet its costs.
- » The water reconciliation charge, which can be an additional charge or a credit, ensures the Agency is not over- or under-collecting revenues from its untreated water customers.
- » The water reconciliation charge also establishes equity between treated and untreated water customers by ensuring that untreated water customers are paying for their fair share of costs.

Step 1: Determine the implementation schedule for the water reconciliation charge.

Actual calendar year cost information is available to the Agency six months after the year ends. Therefore, the water reconciliation charge trues up costs at least two years prior to the year that it is implemented. For example, actual costs for CY 2022 are available in mid-2023; the water reconciliation charge, which is calculated to true up CY 2022 costs, is then implemented in the CY 2024 untreated water rate. The Agency's Board can determine the number of years to phase-in the reconciliation charge based on relevant policy objectives, such as minimizing customer impacts. Generally, the water reconciliation charge is applied to the next year's rate. However, if the true-up of costs in a particular year are significantly higher than planned, the Board can opt to phase-in the water reconciliation charge over multiple years to minimize impacts to customers.

Step 2: Allocate actual costs for the entire Agency between treated and untreated water based on planned or actual deliveries.

Agency costs include water supply costs, water service costs, and overhead for both treated and untreated water customers. Once actual costs are available for the

reconciliation year, the proposed framework allocates each cost category based on the following:

- » Water supply costs are allocated between treated and untreated customers based on each user group's proportion of actual deliveries. Since most water supply costs are variable (meaning that the more water delivered, the higher the costs), it is most equitable to allocate these costs between the two customer types based on the amount of actual water delivered to each.
- » Untreated water program costs are allocated entirely to untreated water customers.
- » The remaining water service costs are allocated between treated and untreated customers based on each user group's proportion of planned deliveries. Since water service costs are fixed (meaning that these costs are incurred regardless of how much water is delivered), it is most equitable to allocate these costs based on the planned deliveries that were used to calculate that year's rate.
- » Overhead costs are determined by multiplying the planned overhead percentage for that year's rate by the water service costs allocated to untreated water customers.
- » It is important to note that all costs included in the original untreated water rate should be included in the reconciliation, and vice versa.

Step 3: Calculate the reconciliation amount using a cash flow analysis.

Historically, untreated water usage has been relatively steady year-to-year. However, in years where actual untreated water usage exceeds planned untreated water usage (which is used to determine the rate), increased revenue is received from the untreated water program. The cash flow analysis not only incorporates the actual costs incurred by the Agency but also isolates the untreated water customers' economies of scale generated from increased water usage. The cash flow analysis to determine the amount that is reconciled includes three components:

- » Reconciliation balance from prior years' actual untreated water rate revenues
- » Actual untreated water rate revenues for the reconciliation year
- » Actual untreated water costs for the reconciliation year.

The reconciliation balance represents the amount of money the untreated water utility had over- or under-collected based on the prior water reconciliation charge or credit. Actual untreated water rate revenues are compiled for the reconciliation year and actual untreated water costs were determined in Step 2. The cash flow analysis is equal to the reconciliation balance plus the actual untreated water rate revenues less actual untreated water costs.

Step 4: Determine the water reconciliation charge.

To determine the reconciliation charge, the reconciliation amount, calculated in Step 3, is divided by the planned deliveries for the implementation year. For example, the CY 2022 reconciliation amount is divided by the planned untreated deliveries for CY 2024. The reconciliation charge is then divided by the number of phase-in years determined in Step 1. The resulting number is the reconciliation charge to apply to each future year.

Step 5: Repeat the same process for future years.

This framework can be used to determine the water reconciliation charge for any future year. The Agency’s Board can elect to phase-in the water reconciliation charge as determined in Step 1. However, the reconciliation charge implementation schedule determined in Step 1, must be incorporated each year to ensure Agency staff can fully understand the financial impacts of the implemented rates, especially rates that are lower than what is necessary to fully reconcile all costs and revenues for the untreated water system.

CY 2022 Reconciliation Calculation

This subsection will detail the calculation for the CY 2022 water reconciliation charge following the steps outlined in the framework.

Step 1: Determine the implementation schedule for the water reconciliation charge.

The implementation schedule for the CY 2022 water reconciliation charge will be discussed and determined at the September 2023 Finance Committee Meeting. Staff plans to present options to smooth in the CY 2022 reconciliation charge. This report will assume a one-year implementation schedule.

Step 2: Allocate actual costs for the entire Agency between treated and untreated water based on planned or actual deliveries.

Table 11 shows the planned and actual water deliveries between untreated and treated water in CY 2022. The planned deliveries for CY 2022 are the same as those used to calculate the CY 2022 untreated water rate. The resulting percent allocations are then used to divide actual costs to untreated water customers.

Table 11: Water Deliveries and Allocations (CY 2022)

Water Deliveries	Untreated Water	Treated Water	Total
Planned Deliveries (AF)	5,800	33,200	39,000
Percent Allocation	14.9%	85.1%	100.0%
Actual Deliveries (AF)	5,343	33,362	38,705
Percent Allocation	13.8%	86.2%	100.0%

Table 12, 13, and 14 show the CY 2022 actual costs allocated to untreated water. Water supply costs are allocated based on the percent of actual deliveries, untreated water program costs are allocated entirely to untreated water and the remaining water service costs are allocated based on the percent of planned deliveries from **Table 2**. Untreated overhead costs are allocated based on the planned overhead allocation from **Table 7**.

Table 12: Actual Untreated Water Supply and Service Costs (CY 2022)⁷

Actual Costs (CY 2022)	Agency Total	Allocation Method	% to Untreated	Total Untreated
Water Supply Costs				
Delta Conveyance Project	\$500,000	Actual Deliveries	13.8%	\$69,022
SWP Transportation	\$1,341,745	Actual Deliveries	13.8%	\$185,220
Yuba Accord	\$619,167	Actual Deliveries	13.8%	\$85,472
Dry Year Transfer Program	\$265,053	Actual Deliveries	13.8%	\$36,589
Other Water Transfers	\$3,000,000	Actual Deliveries	13.8%	\$414,133
Semitropic Banked Water	\$2,213,914	Actual Deliveries	13.8%	\$305,618
Semitropic Banked Water O&M	\$495,300	Actual Deliveries	13.8%	\$68,373
Cawelo Banked Water	\$1,887,783	Actual Deliveries	13.8%	\$260,597
Total - Water Supply Costs	\$10,322,962			\$1,425,024
Water Service Costs				
State Water Project Administration	\$108,792	Planned Deliveries	14.9%	\$16,179
Untreated Water Administration ⁸	\$60,568	Untreated Water	100.0%	\$60,568
Water Supply and Storage Planning	\$568,639	Planned Deliveries	14.9%	\$84,567
Cawelo Banked Water	\$6,074	Planned Deliveries	14.9%	\$692
Semitropic Banked Water	\$4,652	Planned Deliveries	14.9%	\$903
Total - Water Supply Management Staff Costs	\$748,725			\$162,909

Overhead was included in the untreated water rate for the first time in CY 2022. Therefore, overhead is included as part of the reconciliation calculation. Overhead

⁷ Values may not add due to rounding.

⁸ Includes the 2021 Study expense of \$26,791. This amount is excluded from the overhead calculation.

costs are the costs not directly related to water production and water service but are necessary for the operation of the Agency (indirect costs). Agency overhead is represented by the indirect costs associated with each dollar of direct labor costs. Based on the results of the 2021 Study, the overhead percentage is 46%, representing approximately 46 cents of indirect dollars for each dollar of applicable direct labor costs. The overhead percentage is then multiplied by the untreated allocation of water service costs (excluding the direct cost for the 2021 untreated cost of service study). The reconciliation uses the planned overhead percentage as these indirect costs are considered fixed. **Table 13** breaks down the reconciled overhead costs based on the planned 46% allocation.

Table 13: Untreated Water Overhead Costs (CY 2022)⁹

Overhead Costs	Total Untreated
Untreated Water Service Costs ¹⁰	\$136,118
Planned Overhead Percentage	46.0%
Untreated Water Overhead Costs	\$62,614

Table 14: Total Untreated Water Program Costs (CY 2022)⁹

Untreated Water Program Costs	CY 2022
Untreated Water Supply	\$1,425,025
Untreated Water Service	\$162,909
Untreated Water Overhead	\$62,614
Total Untreated Costs	\$1,650,548

Step 3: Calculate the reconciliation amount using a cash flow analysis.

The cash flow analysis in this step includes three components: the reconciliation balance, the actual untreated water rate revenues, and the actual untreated water costs. For the CY 2022 reconciliation, the reconciliation balance is \$126,986 since the CY 2022 untreated water rate had a \$22 credit applied from the CY 2020 reconciliation.

Table 15 shows the cash flow analysis to determine the CY 2022 water reconciliation amount, which includes the actual untreated water rate untreated water costs (from **Table 14**).

⁹ Values may not add due to rounding.

¹⁰ Untreated water service costs exclude the untreated cost of service study consultant fee of \$26,791 for purposes of calculating overhead.

Table 15: Water Reconciliation Amount (CY 2022)⁹

Water Reconciliation Charge	CY 2022
CY 2022 Reconciliation Balance	\$126,986
CY 2022 Actual Untreated Water Rate Revenues	\$1,089,972
CY 2022 Actual Untreated Water Costs	(\$1,650,548)
CY 2022 Reconciliation Amount	(\$433,590)

Step 4: Determine the water reconciliation charge.

Until a recommendation is given, the CY 2022 water reconciliation charge is proposed to be implemented over one year and applied to the CY 2024 untreated water rate, as discussed in Step 1.

Table 16 calculates the CY 2022 water reconciliation charge using the reconciliation amount derived in **Table 15** and the CY 2024 planned untreated water deliveries in AF from **Table 2**. The reconciliation amount is divided by the planned deliveries in the year that the reconciliation charge is proposed to be implemented, which for the CY 2022 charge is CY 2024. A negative reconciliation amount signifies that the Agency under-collected from its untreated water customers in CY 2022, meaning that a reconciliation charge of \$81 will be applied to the CY 2024 untreated water rate.

Table 16: Water Reconciliation Charge Calculation (CY 2022)¹¹

Water Reconciliation Charge	CY 2022
CY 2022 Reconciliation Amount	(\$433,590)
CY 2024 Planned Untreated Water Deliveries (AF)	5,412
CY 2022 Water Reconciliation Charge if Applied to CY 2024 Rate (\$/AF)	\$81

Outstanding Reconciliation Balance

The CY 2021 reconciliation resulted in a reconciliation charge of \$164 per AF. Per Resolution No. 22-85 the Board adopted a CY 2023 untreated water rate of \$255/AF of which \$36/AF of the \$164/AF was allocated. No implementation schedule was established for the CY 2021 reconciliation charge. The remaining balance of the CY 2021 reconciliation charge is \$128/AF.

Table 17 provides the outstanding reconciliation charge for the untreated water program.

¹¹ Values may not add due to rounding.

Table 17: Outstanding Water Reconciliation Charge

Water Reconciliation Charge	\$/AF
CY 2021 Reconciliation Charge Balance	\$128
CY 2022 Reconciliation Charge	\$81
Total Outstanding Reconciliation Charge	\$209

Preliminary Untreated Water Rates

This section of the report combines the water service costs, overhead costs, and water supply costs to calculate the proposed untreated water base rates and provides phase-in options for the outstanding reconciliation charge from Table 17. The reconciliation charge implementation schedule will be incorporated in the final report.

Untreated Water Rate Calculation

Table 18 shows the preliminary untreated water rate calculation for CY 2024. The preliminary untreated water rate includes the untreated water system’s portion of water service costs (from **Table 4**), overhead costs (from **Table 8**), and water supply costs (from **Table 10**). The temporary untreated water rate includes all untreated water costs and the temporary water supply costs (from **Table 10**). The reconciliation charge is not applied to the temporary untreated water rate. The untreated costs are divided by the planned untreated water deliveries for CY 2024 (from **Table 2**) to derive the rate per AF of water.

Table 18: Preliminary Untreated Water Rates Calculation (CY 2024)¹²

Untreated Water Rate Calculation	Total Untreated	Untreated Deliveries (AF)	Unit Rate (\$/AF)
Water Supply Costs	\$1,039,369	5,412	\$193
Water Service Costs	\$106,981	5,412	\$20
Overhead Costs	\$39,625	5,412	\$7
Total Preliminary Untreated Water Rate	\$1,185,974		\$220
Untreated Water Costs	\$1,185,974	5,412	\$220
Temporary Water Supply Costs	\$3,764,541	5,412	\$696
Total Temporary Untreated Water Rate	\$4,950,515		\$916

Reconciliation Charge Phase-in Options

Table 19 shows phase-in options for the proposed untreated water base rate. The final phase-in approach will be reflected in the final report.

¹² Values may not add due to rounding.

Table 19: Reconciliation Charge Phase-in Options

Phase-in Options	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
1-Year Phase-in	\$209	\$0	\$0	\$0	\$0
2-Year Phase-in	\$105	\$104	\$0	\$0	\$0
3-Year Phase-in	\$70	\$70	\$69	\$0	\$0
4-Year Phase-in	\$53	\$52	\$52	\$52	\$0
5-Year Phase-in	\$43	\$42	\$42	\$41	\$41

Table 20 shows the impacts of each phase-in option to the CY 2024 preliminary untreated water rate and compares the rates to the current CY 2023 untreated water rate.

Table 20: Reconciliation Phase-in Impacts (CY 2024)

Phase-in Options	Reconciliation Balance	CY 2024 Preliminary Rate	Preliminary CY 2024 Untreated Rate + Phase-in	Current CY 2023 Untreated Rate	Change (\$)
1-Year Phase-in	\$209	\$220	\$429	\$255	+\$174
2-Year Phase-in	\$105	\$220	\$325	\$255	+\$70
3-Year Phase-in	\$70	\$220	\$290	\$255	+\$35
4-Year Phase-in	\$53	\$220	\$273	\$255	+\$18
5-Year Phase-in	\$43	\$220	\$263	\$255	+\$8

Technical Appendix

Table 21: Water Service Cost Detail¹³

Water Service Costs	Hourly Pay (\$/hr) ¹⁴	Hours Worked	Total Cost
Untreated Water Administration			
Finance Analyst	\$156.00	15	\$2,340
Finance Analyst	\$136.00	20	\$2,720
Senior Planner	\$139.00	6	\$834
Integrated Planning Manager	\$211.00	4	\$844
Associate Engineer	\$162.00	65	\$10,530
Associate Planner	\$135.00	2	\$270
Assistant Planner	\$103.00	22	\$2,266
Total- Untreated Water Administration			\$19,804
Water Utility Planning Administration			
Integrated Water Resources Manager	\$216.00	53	\$11,448
Water Resources Tech II	\$116.00	46	\$5,336
Integrated Planning Manager	\$211.00	247	\$52,117
Principal Engineer	\$161.00	50	\$8,050
Associate Engineer	\$162.00	325	\$52,650
Associate Engineer	\$166.00	308	\$51,128
Senior Planner	\$139.00	293	\$40,727
Assistant Engineer	\$135.00	1,187	\$160,245
Associate Planner	\$135.00	17	\$2,295
Senior Engineer	\$165.00	45	\$7,425
Assistant Planner	\$103.00	400	\$41,200
Junior Engineer	\$108.00	32	\$3,456
Junior Engineer	\$103.00	295	\$30,385
Total - Water Utility Planning Administration			\$466,462
State Water Project Administration			
Associate Engineer	\$162.00	361	\$58,482
Integrated Planning Manager	\$211.00	53	\$11,183
Assistant Planner	\$103.00	109	\$11,227
Senior Planner	\$139.00	26	\$3,614
Finance Analyst	\$156.00	4	\$624
Assistant Engineer	\$135.00	83	\$11,205
Total - State Water Project Administration			\$96,335
Water Storage Administration			
Integrated Planning Manager	\$211.00	2	\$422

¹³ Values may not add due to rounding.

¹⁴ Includes salaries, wages, and benefits.

Junior Engineer	\$108.00	6	\$648
Total - Water Storage Administration			\$1,070
Other Water Supplies			
Integrated Planning Manager	\$211.00	32	\$6,752
Associate Engineer	\$162.00	150	\$24,300
Assistant Engineer	\$135.00	4	\$540
Assistant Planner	\$103.00	248	\$25,544
Total - Other Water Supplies			\$57,136
Supply Source & Conveyance Administration			
Associate Engineer	\$162.00	9	\$1,458
Total - Supply Source & Conveyance Administration			\$1,458
Semitropic			
Integrated Planning Manager	\$211.00	1	\$211
Associate Engineer	\$162.00	34	\$5,508
Assistant Planner	\$103.00	46	\$4,738
Total - Semitropic			\$10,457
Cawelo			
Integrated Planning Manager	\$211.00	1	\$211
Associate Engineer	\$162.00	37	\$5,994
Assistant Planner	\$103.00	71	\$7,313
Total - Cawelo			\$13,518

Table 22: Central Administration (Indirect Cost) Detail for CY 2024 Preliminary Rate¹⁵

Account Description - Central Administration	Total Indirect Costs	Flood Protection Operations	Water Operations	
			Treated Water Customers	Untreated Water Customers ¹⁶
Salaries and Wages (OGM, Finance, HR, and Admin)	\$2,175,614	\$271,595	\$1,888,361	\$15,658
Salaries and Wages (Board of Directors)	\$70,000	\$8,739	\$60,758	\$504
Professional and Technical Services (Website, Communications, North Canyons (NC) Property Management, etc.)	\$926,302	\$115,636	\$804,000	\$6,666
County Services (Payroll and Vendor checks etc.)	\$1,122,513	\$140,130	\$974,305	\$8,079
Insurance Services (Property & liability)	\$519,034	\$64,794	\$450,505	\$3,735
Gas and Electricity for North Canyons	\$142,008	\$17,728	\$123,259	\$1,022
Water Service for North Canyons	\$6,767	\$845	\$5,874	\$49
Communications (Telecommunication services for NC)	\$55,475	\$6,925	\$48,150	\$399
Garbage Disposal Services for NC	\$11,156	\$1,393	\$9,683	\$80
Repairs/Service of Equipment (Back-up Generator repairs, etc.)	\$9,944	\$1,241	\$8,631	\$72
Repairs/Service of Buildings & Property (Commercial property Mgmt., ADT security services etc.)	\$169,477	\$21,157	\$147,100	\$1,220
Maintenance Parts & Supplies (Irrigation parts, electrical parts, and misc. supplies)	\$1,069	\$133	\$928	\$8
Rents & Leases - Equipment (Copier machine, postage meter etc.)	\$15,139	\$1,890	\$13,140	\$109
General Office Supplies & Expenses (IT services, software, paper, pens, file, etc.)	\$178,570	\$22,292	\$154,993	\$1,285
Reproduction and Printing (Budget book, etc.)	\$1,753	\$219	\$1,522	\$13
Subscriptions (Newspapers, CA Dept of Fish and Wildlife)	\$1,803	\$225	\$1,565	\$13
Postage, Delivery & Shipping (Payments to US Postal Services, FedEx etc.)	\$2,814	\$351	\$2,442	\$20
Organization Memberships (Board Members Memberships, GM, Admin Staff etc.)	\$7,275	\$908	\$6,314	\$52
Advertising and Legal Notices (Job postings)	\$17,396	\$2,172	\$15,099	\$125
State and Local Fees (City of Livermore Tri-Valley Tech Park CFD No. 99-1 Series 2015 Bonds)	\$32,140	\$4,012	\$27,896	\$231
Clothing and Uniform Services	\$0	\$0	\$0	\$0
Training Materials and Services (ACWA Training, Water Education, CSMFO and GFOA)	\$29,866	\$3,728	\$25,922	\$215
Educational Stipend - Zone 7	\$8,846	\$1,104	\$7,678	\$64
Mileage	\$911	\$114	\$791	\$7
Total	\$5,505,873	\$687,331	\$4,778,917	\$39,625

¹⁵ Values may not add due to rounding.

¹⁶ Untreated Customers pay approximately 0.7% of total Agency overhead.

Table 23: Water Supply Breakdown for CY 2024 Preliminary Rate

Water Supply Cost Breakdown	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23 (unaudited)	5-Year Average
State Water Project	\$1,568,800	\$2,547,436	\$1,643,971	\$2,040,223	\$1,114,630	\$1,783,012
Water Transfers/Exchanges	1,651,657	90,000	2,153,562	8,192,572	3,880,464	3,193,651
Banked Water Programs	749,911	1,279,526	1,179,750	4,305,743	2,202,383	1,943,463
Delta Conveyance Project	0	0	695,418	1,373,871	1,865,957	787,049
Total Water Supply Costs	\$3,970,369	\$3,916,962	\$5,672,701	\$15,912,409	\$9,063,435	\$7,707,175