LOS ANGELES COUNTY
WATERWORKS DISTRICTS

Water Rate Study – Districts 21, 36, & 37

FINAL REPORT / October 24, 2025

RAFTELIS

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LOS ANGELES COUNTY WATERWORKS DISTRICTS

RAFTELIS

October 10, 2025

Mr. Alan Nino, P.E.
Senior Civil Engineer
Los Angeles County Waterworks Districts
900 S. Fremont St.
Alhambra, CA 91803

Subject: Water Financial Plan Study Report for District 21, District 36, and District 37,

Dear Mr. Nino:

Raftelis is pleased to provide this Water Rate Study Report (Report) for the Los Angeles County Waterworks Districts (District) to establish water rates for District 21, District 36, and District 37.

The major objectives of the study include the following:

1. Developing a long-term financial plan that meets the water utilities' revenue requirements, including operations and maintenance (O&M) expenses and the capital improvement plan (CIP), while adequately funding reserves.
2. Conducting cost-of-service (COS) analyses that establish a nexus between rates and charges and costs.
3. Reviewing the current water rate structure and evaluating potential rate structure modifications including fixed and variable revenue recovery.
4. Developing five years of water rates for each district that ensure financial sufficiency to fund operating and capital costs over the study period.

The report has an executive summary followed by a detailed derivation of the financial plans and water rates.

It has been a pleasure working with you, and we thank you and District staff for the support provided during the course of this study.

Sincerely,

Steve Gagnon, P.E. (AZ)
Vice President

Journ Galvan
Consultant

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1. Executive Summary

1.1. Study Background

In 2024, the Los Angeles County Waterworks Districts engaged Raftelis to conduct a Water Rate Study to develop a solvent financial plan for their water utilities, which include Districts 21, 29, 36, 37, and 40, and to establish water rates that are equitable and align with Proposition 218. This report covers Districts 21, 36, and 37[1], due to their similar size and rate structures. Districts 29 and 40 have a larger customer base and more complex water rate structures and are discussed in a separate report.

Los Angeles County Waterworks District 21, Kagel Canyon, is a special district formed in accordance with Division 16, Sections 55000 through 55991 of the State Water Code to supply drinking water for urban use in Kagel Canyon. District 21 is operated by the Los Angeles County Public Works, Waterworks Division and is governed by the Los Angeles County Board of Supervisors. District 21 was established in December of 1935 and began to operate in May 1937. District 21 currently serves approximately 570 people through 250 metered connections and receives its water through an interagency agreement with the cities of Glendale and Los Angeles. The City of Glendale provides groundwater to the City of Los Angeles in exchange for the City of Los Angeles providing the District with a connection to their water system which is located at the south end of the District.

District 36 serves the unincorporated community of Val Verde. District 36 was established in 1963 using a federally assisted County Improvement Assessment District. District 36 provides water service to more than 5,700 customers. District 36's water supply is composed of imported water purchased from Santa Clarita Valley Water Agency and groundwater from a pumping well from the Saugus formation beneath the District's service area. The imported water supply connection was funded by County Block Grant Housing and Community Development Act (HCDA) funds.

District 37 serves the City of Acton, an unincorporated census area near Antelope Valley. District 37 was established in 1963 and services an area of approximately 40 square miles. District 37 provides water service to more than 6,500 customers via 1,400 metered connections. District 37 primarily sources groundwater that is pumped from 3 district-owned wells and supplemented with imported water that is treated at AVEK's Acton water treatment plant in accordance with the State Water Project.

1.2. Study Objectives

The major objectives of the water rate study include:

1. Developing a long-term financial plan that meets the water utilities' revenue requirements, including operations and maintenance (O&M) expenses, the capital improvement plan (CIP) and reserves.
2. Conducting cost-of-service (COS) analyses that establish a nexus between rates and charges and the cost to serve customers and aligns with Proposition 218 requirements.
3. Reviewing the current water rate structure and evaluating potential rate structure modifications.
4. Developing five years of water rates for each District that promote financial sufficiency to fund operating and capital costs over the study period.

[1] The Districts have decided to not move forward with rate increase for District 80.

1.3. Current Rates

The current rate structure for Districts 21, 36, and 37 consists of a fixed charge (known as the Service Charge) and a uniform (non-tiered) Quantity Charge (volumetric) rate for all customers. The current Quantity Charge is assessed for water per hundred cubic feet (hcf) per billing unit per month. Five hcf of water is currently included with the Service Charge by billing unit (meter size) per month and only water above this 5 hcf allowance is billed. Currently, all outside District customers are charged a rate 1.5 times the equivalent inside District rate. Rates and charges are shown on a monthly basis, but customers are billed bi-monthly.

The Districts pass-through the increase in wholesaler water purchase costs and recently implemented a pass-through rate in May of FY 2025. The Districts will continue to pass-through wholesale and inflationary pass-through charges to recover inflationary increases in projected operating expenditures and wholesale water purchases year over year due to wholesaler increases and inflation. The recently implemented May pass-through is included in the current monthly Service Charges shown in this report.

Additionally, customers are charged a Facilities Construction Surcharge (also called ACO charge) which is a uniform quantity surcharge rate on all units of water (even those subject to the allowance). District 21 is the only District that does not have an ACO charge or Private Fireline customers. District 21's current charges for FY 2025 are in **Table 1-1** and **Table 1-2**. District 36 current charges for FY 2025 are in **Table 1-3**, **Table 1-4**, **Table 1-5**. District 37 current charges for FY 2025 are in **Table 1-6**, **Table 1-7**, and **Table 1-8**.

Table 1-1: District 21 Current Monthly Service Charges

Current Rates	FY 2025
Meter Service Charge ($/Billing Unit/month)	
Inside District	$56.912
Outside District	$85.368
Meter Billing Units	
5/8"x3/4"	1
3/4"	1
3/4"x1"	1
1"	2
1.5"	3
2"	5
2.5"	7
3"	11
4"	17
6"	33
8"	53
10"	77
12"	100

Table 1-2: District 21 Current Quantity Charge Rates

Current Rates	FY 2025
Quantity Charge Rate ($/hcf)	
Inside District	
Schedule 2105: Bill Codes I01,W01	$8.173
Outside District	
Schedule 2105; Bill Code W02	$12.260

Table 1-3: District 36 Current Monthly Service Charges

Current Rates	FY 2025
Meter Service Charge ($/Billing Unit/month)	
Inside District	$26.423
Outside District	$39.635
Meter Billing Units	
5/8"x3/4"	1
3/4"	1
3/4"x1"	1
1"	2
1.5"	3
2"	5
2.5"	7
3"	11
4"	17
6"	33
8"	53
10"	77
12"	100
Private Fireline Billing Units	
4" and smaller	2.9
6"	3.9
8"	4.9
10"	6.9
12"	10.9

Table 1-4: District 36 Current Quantity Charge Rate

Current Rates	FY 2025
Quantity Charge Rate ($/hcf)	
Inside District Schedule 3605; Bill Code F12, I12, W12, W14	$3.477
Outside District Schedule 3605; Bill Code W13	$5.215

Table 1-5: District 36 Current Facilities Construction Surcharge

Current Rates	FY 2025
Facilities Construction Surcharges ($/hcf)	
Inside District Schedule 3605; Bill Codes F12, I12, W12,14	$0.268
Outside District Schedule 3605; Bill Code W13	$0.402

Table 1-6: District 37 Current Monthly Service Charges

Current Rates	FY 2025
Meter Service Charge ($/Billing Unit/month)	
Inside District	$28.389
Outside District	$42.583
Meter Billing Units	
3/4"	1
3/4"x1"	1
1"	2
1 1/2"	3
2"	5
2 1/2"	7
3"	11
4"	17
6"	33
8"	53
10"	77
12"	100

Table 1-7: District 37 Current Quantity Charge Rates

Current Rates	FY 2025
Consumption Rate ($/hcf)	
Inside	$1.855
Outside	$2.783

Table 1-8: District 37 Current Facilities Construction Surcharge

Current Rates	FY 2025
Facilities Construction Surcharges ($/hcf)	
Inside	$0.175
Outside	$0.262

1.4. Process and Approach

Raftelis held several meetings with District staff to understand objectives and the challenges of the District's water utilities to provide the recommendations and results detailed in this report. Raftelis confirmed various assumptions and inputs and used an iterative process to view several scenarios to determine the recommended financial plan and water rates. Raftelis then designed and presented a COS and rate model for each District to analyze various rate scenarios to fully fund the each District's revenue requirements through fair, equitable, and defensible cost-based rates.

The proposed financial plans detailed in this report follow industry standards for long-term financial planning. The financial plans rely on reasonable assumptions based on industry indices, such as general inflation based on the Consumer Price Index (CPI), the Engineering News Record Cost Construction Index for capital costs and input from District staff. Raftelis worked closely with District staff to project future revenues and expenses.

The financial plan includes the previous fiscal year (FY) 2025 and the five-year period between FY 2026 to FY 2030. Each fiscal year begins on July 1 and ends on June 30. For example, FY 2025 is defined as the year beginning on July 1, 2024 and ending on June 30, 2025. The proposed rates were developed for implementation on January 1, 2026 and in January of every year thereafter through FY 2030.

The COS analysis and resulting water rates are developed in accordance with the requirements of Proposition 218 to establish proportional, cost-based rates. The methodology used to meet these requirements is based on the American Water Works Association's (AWWA) *Principles of Water Rates, Fees, and Charges, 7th edition* (M1 Manual). The water rates developed in this study were designed based on the industry standard Base-Extra Capacity methodology, which is described in the M1 manual. The Base-Extra Capacity method was used to develop private fire charges for Districts 36 and 37. The Base-Extra Capacity method assigns a portion of system extra capacity for public and private fire capacity.

1.5. Cost-Based Rate-Setting Methodology

To develop water rates that align with Proposition 218 requirements, meet industry standards, and accomplish the District's goals for the study, Raftelis follows the four major steps discussed below.

1.5.1. Revenue Requirement Calculation

The first step is to determine the adequate level of funding for a given district. This is referred to as determining the "revenue requirement" for the base year, which for this study is FY 2026 which runs from July 1, 2025 to June 30, 2026. This analysis considers the short and long-term service objectives over a given planning horizon, including capital facilities, O&M, and financial reserve policies to determine the adequacy of a District's existing rates to recover its costs. Several factors affect these projections, including the number of customers served, water use trends, non-recurring revenues, conservation, use restrictions, inflation, interest rates, capital financing needs, and other changes in operating and economic conditions, among others.

1.5.2. Cost-of-Service Analysis

The annual cost of providing water service is distributed among customer classes commensurate with their service requirements. A COS analysis involves the following:

1. Categorize Costs into System Functions: a rate study categorizes (i.e., functionalizes) the operating and capital costs of the water system among major system functions. Examples of system functions include but are not limited to water supply, storage, treatment, and transmission and distribution, customer service and meter maintenance. Appendix A shows the functionalization of O&M costs for each District.
2. Allocate Functionalized Costs to the Cost Causation Components: Cost components are the major cost drivers of a District. Each function is allocated to one or more cost components. For example, distribution storage costs (a system function) are allocated to base and maximum day cost components since storage systems are sized to accommodate both average (base) demands and maximum day (peak) demands. The Districts' water system cost components include supply, pumping, base, maximum day, maximum hour, customer service, private fire, and meter servicing.
3. Determine Units of Service and Unit Costs for Each Cost Components: Each cost component is associated with a specific unit of service; costs within each component are divided by the total units of service to determine the unit cost by cost component. For example, water supply costs are associated with total annual use. Dividing total annual supply costs by total annual use yields the unit cost of water supply.

4. Calculate Rates Based on the Units of Service: The units of service are used to create a rate structure including fixed charges and volumetric rates.

1.5.3. Rate Design and Derivation

Once the cost of service establishes the cost to serve customers, rates are designed to collect the costs identified in the Cost of Service.

1.5.4. Report Preparation and Rate Adoption

Rate adoption is the last step of the rate-making process. Raftelis documents the rate study results in this report which reflects the basis upon which the rates were calculated, the rationale and justifications behind the proposed charges, any changes to rate structures, and anticipated financial impacts to ratepayers.

1.6. Rate Structure Modifications

The following rate structure modifications apply to all Districts in this report. Raftelis worked with District staff to determine the appropriate water rate structure to meet the each District's objectives and align with legal requirements. The team recommend the following rate structure modifications for all Districts:

- **Elimination of the 5 hcf allowance**: The Districts are eliminating the 5 hcf allowance per month per billing unit.
- **Outside District Rates and Charges**: The Districts are eliminating separate rates and charges for customers located outside District boundaries.
- **Private Fire Charge Ratios**: Raftelis calculated private fire charges based on the potential flow by fire line size, replacing the existing fire flow capacity ratios used to charge for Private Fire service. The potential flow is the diameter of the connection raised to the 2.63 power – which is from the Hazen Williams equation for flow.

1.7. District 21 Proposed Rates

1.7.1. Proposed Water Rates

Table 1-12 show the proposed rates for FY 2026 through FY 2030. Rates for FY 2026 are determined based on the COS analysis. Rates for all subsequent years are determined based on the corresponding revenue adjustments in Line 1 of **Table 1-12**.

Table 1-9: District 21 Proposed Rates

Line No.	Rate Schedule		FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
1	Revenue Adjustments (%)		15.0%	6.0%	6.0%	6.0%	6.0%
2	Effective Month		January	January	January	January	January
Line No.	**Monthly Service Charges**	**Current**	**Proposed FY 2026**	**Proposed FY 2027**	**Proposed FY 2028**	**Proposed FY 2029**	**Proposed FY 2030**
3	5/8"x3/4"	$56.912	$56.92	$60.34	$63.97	$67.81	$71.88
4	3/4"	$56.912	$56.92	$60.34	$63.97	$67.81	$71.88
5	3/4"x1"	$56.912	$56.92	$60.34	$63.97	$67.81	$71.88
6	1"	$113.824	$113.83	$120.66	$127.90	$135.58	$143.72
7	1.5"	$170.736	$170.75	$181.00	$191.86	$203.38	$215.59
8	2"	$284.560	$284.58	$301.66	$319.76	$338.95	$359.29
9	2.5"	$398.384	$398.41	$422.32	$447.66	$474.52	$503.00
10	3"	$626.032	$626.07	$663.64	$703.46	$745.67	$790.42
11	4"	$967.504	$967.57	$1,025.63	$1,087.17	$1,152.41	$1,221.56
12	6"	$1,878.096	$1,878.22	$1,990.92	$2,110.38	$2,237.01	$2,371.24
13	8"	$3,016.336	$3,016.53	$3,197.53	$3,389.39	$3,592.76	$3,808.33
14	10"	$4,382.224	$4,382.51	$4,645.47	$4,924.20	$5,219.66	$5,532.84
15	12"	$5,691.200	$5,691.57	$6,033.07	$6,395.06	$6,778.77	$7,185.50
Line No.	**Quantity Charge Rate**	**Inside District Rate ($ / hcf)**	**Proposed FY 2026**	**Proposed FY 2027**	**Proposed FY 2028**	**Proposed FY 2029**	**Proposed FY 2030**
16	All Classes	$8.173	$5.16	$5.47	$5.80	$6.15	$6.52

1.7.2. Customer Impacts

Table 1-13 shows the proposed FY 2026 monthly bill impacts for a single-family residential user with a 5/8”x 3/4” meter at low, average, and high water use.

Table 1-10: District 21 Bill Impacts

Single Family Residential	Monthly Use (hcf)	Current Monthly Bill	Proposed Monthly Bill	Difference ($)	Difference (%)
Low Use	3	$56.91	$72.40	$15.49	27.2%
Average Use	6	$65.09	$87.88	$22.80	35.0%
High Use	9	$89.60	$103.36	$13.76	15.3%

1.8. District 36 Proposed Rates

1.8.1. Proposed Water Rates

Table 1-14 shows the proposed rates for FY 2026 through FY 2030. Rates for FY 2026 are determined based on the COS analysis. Rates for all subsequent years are determined based on the corresponding revenue adjustments in Line 1 of **Table 1-14.**

Table 1-11: District 36 Proposed Rates

Line No.	Rate Schedule	2026	2027	2028	2029	2030
1	Revenue Adjustments (%)	12.0%	3.0%	3.0%	3.0%	3.0%
2	Effective Month	January	January	January	January	January

Line No.	Monthly Service Charges	Current	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029	Proposed FY 2030
3	5/8"x 3/4"	$26.423	$26.44	$27.24	$28.06	$28.91	$29.78
4	3/4"	$26.423	$26.44	$27.24	$28.06	$28.91	$29.78
5	3/4"x1"	$26.423	$26.44	$27.24	$28.06	$28.91	$29.78
6	1"	$52.846	$52.87	$54.46	$56.10	$57.79	$59.53
7	1.5"	$79.269	$79.31	$81.69	$84.15	$86.68	$89.29
8	2"	$132.115	$132.18	$136.15	$140.24	$144.45	$148.79
9	2.5"	$184.961	$185.05	$190.61	$196.33	$202.22	$208.29
10	3"	$290.653	$290.79	$299.52	$308.51	$317.77	$327.31
11	4"	$449.191	$449.41	$462.90	$476.79	$491.10	$505.84
12	6"	$871.959	$872.38	$898.56	$925.52	$953.29	$981.89
13	8"	$1,400.419	$1,401.09	$1,443.13	$1,486.43	$1,531.03	$1,576.97
14	10"	$2,034.571	$2,035.55	$2,096.62	$2,159.52	$2,224.31	$2,291.04
15	12"	$2,642.300	$2,643.57	$2,722.88	$2,804.57	$2,888.71	$2,975.38

Line No.	Private Fire Charges	Current	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029	Proposed FY 2030
16	4"	$76.627	$58.56	$60.31	$62.12	$63.98	$65.90
17	6"	$103.050	$132.79	$136.77	$140.87	$145.10	$149.45
18	8"	$129.473	$260.83	$268.65	$276.71	$285.01	$293.56
19	10"	$182.319	$453.43	$467.03	$481.04	$495.47	$510.33
20	12"	$288.011	$720.36	$741.97	$764.23	$787.16	$810.77

Line No.	Quantity Charge Rate	Current Inside District Rate ($ / hcf)	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029	Proposed FY 2030
21	All Classes	$3.477	$3.09	$3.18	$3.28	$3.38	$3.48
22	Facility Rate (ACO)	$0.268	$0.28	$0.29	$0.30	$0.31	$0.32

1.8.2. Customer Impacts

Table 1-15 shows the proposed FY 2026 monthly bill impacts for a single-family residential customer with a 5/8"x 3/4" meter at low, average, and high water use.

Table 1-12: District 36 Bill Impacts

Single Family Residential	Monthly Use (hcf)	Current Monthly Bill	Proposed Monthly Bill	Difference ($)	Difference (%)
Low Use	3	$27.23	$36.55	$9.32	34.2%
Average Use	19	$80.19	$90.54	$10.47	12.8%
High Use	40	$158.84	$161.24	$2.40	1.5%

1.9. District 37 Proposed Rates

1.9.1. Proposed Water Rates

Table 1-16 shows the proposed rates for FY 2026 through FY 2030. Rates for FY 2026 are determined based on the COS analysis. Rates for all subsequent years are determined based on the corresponding revenue adjustments in Line 1 of **Table 1-16**.

Table 1-13: District 37 Proposed Rates

Line No.	Rate Schedule		2026	2027	2028	2029	2030
1	Revenue Adjustments (%)		10.0%	3.0%	3.0%	3.0%	3.0%
2	Effective Month		January	January	January	January	January
Line No.	**Monthly Service Charges**	**Current**	**Proposed FY 2026**	**Proposed FY 2027**	**Proposed FY 2028**	**Proposed FY 2029**	**Proposed FY 2030**
3	5/8"x3/4"	$28.389	$28.39	$29.24	$30.12	$31.02	$31.95
4	3/4"	$28.389	$28.39	$29.24	$30.12	$31.02	$31.95
5	3/4"x1"	$28.389	$28.39	$29.24	$30.12	$31.02	$31.95
6	1"	$56.777	$56.78	$58.48	$60.23	$62.04	$63.90
7	1.5"	$85.166	$85.17	$87.73	$90.36	$93.07	$95.86
8	2"	$141.943	$141.95	$146.21	$150.60	$155.12	$159.77
9	2.5"	$198.720	$198.73	$204.69	$210.83	$217.15	$223.66
10	3"	$312.275	$312.28	$321.65	$331.30	$341.24	$351.48
11	4"	$482.607	$482.62	$497.10	$512.01	$527.37	$543.19
12	6"	$936.825	$936.85	$964.96	$993.91	$1,023.73	$1,054.44
13	8"	$1,504.598	$1,504.64	$1,549.78	$1,596.27	$1,644.16	$1,693.48
14	10"	$2,185.925	$2,185.99	$2,251.57	$2,319.12	$2,388.69	$2,460.35
15	12"	$2,838.864	$2,838.94	$2,924.11	$3,011.83	$3,102.18	$3,195.25
Line No.	**Private Fire Charges**	**Current**	**Proposed FY 2026**	**Proposed FY 2027**	**Proposed FY 2028**	**Proposed FY 2029**	**Proposed FY 2030**
16	4"	$82.328	$44.89	$46.23	$47.62	$49.05	$50.52
17	6"	$110.717	$64.15	$66.07	$68.05	$70.09	$72.19
18	8"	$139.106	$97.37	$100.30	$103.31	$106.41	$109.60
19	10"	$195.884	$147.35	$151.77	$156.32	$161.01	$165.84
20	12"	$309.440	$216.62	$223.11	$229.80	$236.69	$243.79
Line No.	**Quantity Charge Rates**	**Current Inside District Rate ($ / hcf)**	**Proposed FY 2026**	**Proposed FY 2027**	**Proposed FY 2028**	**Proposed FY 2029**	**Proposed FY 2030**
21	All Classes	$1.855	$1.82	$1.87	$1.93	$1.99	$2.05
22	Facility Rate (ACO)	$0.175	$0.17	$0.18	$0.19	$0.20	$0.21

1.9.2. Customer Impacts

Table 1-17 shows the proposed FY 2026 monthly bill impacts for a single-family residential customer with a 5/8”x3/4” meter at low, average, and high water use.

Table 1-14: District 37 Bill Impacts

Single Family Residential	Monthly Usage (hcf)	Current Monthly Bill	Proposed Monthly Bill	Difference ($)	Difference (%)
Low Use	17	$53.62	$62.22	$8.60	16.0%
Average Use	34	$88.13	$96.05	$7.92	9.0%
High Use	68	$157.15	$163.71	$6.56	4.2%

2. District 21 Financial Plan

This section describes the water financial plan and the assumptions used to project operating and capital expenses, as well as reserve policies and debt coverage requirements that determine the overall rate revenue increases needed for a sustainable water district. Numbers shown in the tables of this section are rounded. Therefore, hand calculations based on the displayed numbers, such as summing or multiplying, may not equal the exact results shown.

2.1. Inflationary Assumptions

Table 2-1 shows the cost escalation factors assumed in the study. Inflationary assumptions were developed in consultation with District Staff and historical data. The capital inflation rate is based on Engineering News-Record Construction Cost Index average inflation in the past ten years. To estimate FY 2025 expenses, FY 2024 *actual* operating and maintenance (O&M) expenses are inflated using the factors shown in the FY 2025 column of **Table 2-1**. All Districts will continue the current inflationary pass-through based on the Consumer Price Index (CPI). However, as shown below, the cost for certain line items will likely exceed the CPI which over the long term has averaged approximately 3%. The difference between the inflationary pass throughs and the assumed inflationary factors, as well as capital expenses, is recovered in the proposed rates and charges.

Table 2-1: District 21 Inflationary Assumptions

Cost Escalation Factors	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
General	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Labor	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Utilities	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Capital	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%
Water Supply	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

2.2. Current Water Rates

Table 2-2 shows District 21's current monthly Service Charges as well as meter billing units per meter size. The Service Charge allows for 5 hcf uncharged units per month per billing unit. Billing units are determined by the size of the customer's meter

Table 2-2: District 21 Current Fixed Charge

Current Rates	FY 2025
Meter Service Charge ($/Billing Unit/month)	
Inside District	$56.912
Outside District	$85.366
Meter Billing Units	
5/8"x3/4"	1
3/4"	1
3/4"x1"	1
1"	2
1.5"	3
2"	5
2.5"	7
3"	11
4"	17
6"	33
8"	53
10"	77
12"	100

Table 2-3 shows the District 21 current Quantity Charge.

Table 2-3: District 21 Current Quantity Charge Rate

Current Rates	FY 2025
Quantity Charge Rate ($/hcf)	
Inside District Schedule 2105; Billing Codes I01,W01	$8.173
Outside District Schedule 2105; Billing Code W02	$12.260

2.3. Projected Revenue & Customer Accounts

Two items affecting future water rate revenue are new account growth and annual water demand. District Staff do not anticipate significant account growth and projects water demand will remain consistent throughout the study period.

Table 2-4 shows the number of water accounts by meter size. The projected number of accounts is used to forecast the amount of fixed revenue the District can expect from Meter Service Charges. The number of accounts shown below are FY 2023 actuals provided by the District. This study assumes the projected number of accounts stay the same for the study period due to low or no growth.

Table 2-4: District 21 Accounts by Meter Size

Meter Size	FY 2026
5/8"x3/4"	103
3/4"	89
3/4"x1"	45
1"	11
1.5"	2
2"	1
2.5"	1
Total	**252**

2.4. Reserve Policies

District 21 maintains two reserves for operating and capital, respectively. The operating reserve provides funds for working capital for daily expenses in between billing cycles. The capital reserve provides funds so that the Districts can enter into construction contracts and have the funds readily available to pay contractors and for unforeseen project change orders.

The reserve targets for each fund are as follows:

1. Operating Reserve – 25% of annual operating expenses
2. Capital Replacement Reserve – 25% of the average annual capital improvement program expenditures over 5 years

The District's actual capital replacement reserve is 25% of annual capital expenses, Raftelis modeled 25% of the average capital expense over 5 years because this target fluctuates less and is more common.

2.5. Capital Improvement Plan

Table 2-5 shows the District's Capital Improvement Plan for the study period. The District ideally would like to execute more capital projects, however it must consider the financial impact on customers. These projects are necessary to maintain the functional integrity of the District's water system. The District plans to finance its capital projects through rate revenue and reserves (also known as PAY-GO funding). The Capital Improvement Plan (CIP) shown below is adjusted for inflation and reduced by the capital accomplishment rate shown, which assumes the District will complete the percentage shown of its intended CIP, in each year. The total annual CIP costs, accounting for the accomplishment rate, are shown in the bottom line. The District plans to complete approximately $1.1 million in capital expenditures over five years after applying the accomplishment rate.

Table 2-5: District 21 Proposed Capital Improvement Plan

Capital Improvement Plan - Inflated	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Pipeline Improv - Phase I	$0	$0	$4,085,718	$0	$0
Pipeline Improv - Phase II	$0	$3,479,595	$0	$0	$0
Pipeline Improv - Phase III	$0	$0	$0	$4,208,290	$0
Pipeline Improv - Phase IV	$0	$0	$0	$0	$0
LADWP 2-inch Interconn. Upgrade	$1,389,700	$1,459,185	$0	$0	$0
Total CIP - Inflated	**$1,389,700**	**$4,938,780**	**$4,085,718**	**$4,208,290**	**$0**
CIP Accomplishment Rate	7.5%	7.5%	7.5%	7.5%	25.0%
CIP Expense in Rate Study (Includes Inflation)	$104,228	$370,409	$306,429	$315,622	$0

2.6. Financial Plan Without Revenue Adjustments

Table 2-6 shows the financial plan without revenue adjustments. The purpose of showing the financial plan without revenue increases is to show that revenue is not sufficient to cover costs as shown by the net cashflow at the bottom of the table.

Table 2-6: District 21 Financial Plan Without Revenue Adjustments

Cash Flow				FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenues				$229,702	$240,698	$240,698	$240,698	$240,698	$240,698
Revenues from Existing Rates									
Waterworks Dist Gen #21 - N18				$229,702	$240,698	$240,698	$240,698	$240,698	$240,698
Waterworks Dist ACO #21 - N19				$0	$0	$0	$0	$0	$0
Rev Adj.	**% Adj**	**Eff. Month**	**Effective**						
FY 2025	0%	January	6	$0	$0	$0	$0	$0	$0
FY 2026	0%	January	6		$0	$0	$0	$0	$0
FY 2027	0%	January	6			$0	$0	$0	$0
FY 2028	0%	January	6				$0	$0	$0
FY 2029	0%	January	6					$0	$0
FY 2030	0%	January	6						$0
Revenue Adjustments				$0	$0	$0	$0	$0	$0
Total Rate Revenue			FY 27	$229,702	$240,698	$240,698	$240,698	$240,698	$240,698
Future Wholesale Water Purchase Pass-through			5.6%		$4,340	$13,452	$23,477	$34,503	$46,633
Future Inflationary Pass-through			3.8%		$2,993	$9,069	$15,328	$21,774	$28,413
Waterworks Dist Gen #21 - N18									
580 Property Taxes				$109,000	$111,180	$113,404	$115,672	$117,985	$120,345
584 Fines Forfeitures & Penalties				$0	$0	$0	$0	$0	$0
586 Revenue - Use of Money & Prop				$14,000	$24,703	$27,437	$30,197	$32,972	$35,750
Waterworks Dist ACO #21 - N19									
580 Property Taxes				$0	$0	$0	$0	$0	$0
584 Fines Forfeitures & Penalties				$0	$0	$0	$0	$0	$0

Cash Flow	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
586 Revenue - Use of Money & Prop	$3,000	$0	$0	$0	$0	$0
588 Intergvmtl Revenue - State	$0	$0	$0	$0	$0	$0
590 Intergvmtl Revenue - Federal	$0	$0	$0	$0	$0	$0
592 Charges for Services	$9,000	$9,090	$9,181	$9,273	$9,365	$9,459
594 Miscellaneous Revenue	$0	$0	$0	$0	$0	$0
Total Revenues	**$364,702**	**$393,003**	**$413,241**	**$434,644**	**$457,298**	**$481,298**
O&M Expenses						
Waterwork District General Fund #18	$286,334	$303,855	$322,657	$342,847	$364,541	$387,868
Waterwork District ACO Fund #19	$205	$219	$230	$239	$246	$254
Total O&M Expenses	**$286,539**	**$304,074**	**$322,887**	**$343,086**	**$364,788**	**$388,121**
Net Revenue	**$78,164**	**$88,929**	**$90,354**	**$91,558**	**$92,510**	**$93,176**
CIP Expenditures						
Pay-as-you-go	$0	$1,389,700	$4,938,780	$4,085,718	$4,208,290	$0
Total CIP Expenditures	**$0**	**$1,389,700**	**$4,938,780**	**$4,085,718**	**$4,208,290**	**$0**
Total Expenditures	**$286,539**	**$1,693,774**	**$5,261,667**	**$4,428,804**	**$4,573,077**	**$388,121**
Net Operating Surplus/(Deficit)	**$78,164**	**($1,300,771)**	**($4,848,426)**	**($3,994,160)**	**($4,115,780)**	**$93,176**

Water OperatingGeneral Fund	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Beginning Balance - Fund N18	$475,000	$504,000	$584,059	$665,462	$747,986	$831,377
Loan from District						
Net Cash Flow	**$52,369**	**$55,356**	**$53,967**	**$52,327**	**$50,419**	**$48,221**
Interest Earnings	*$14,000*	*$24,703*	*$27,437*	*$30,197*	*$32,972*	*$35,750*
Ending Balance	**$541,369**	**$584,059**	**$665,462**	**$747,986**	**$831,377**	**$915,348**
Target Reserve Balance						
Operating Reserve 25% of O&M Exp	$71,635	$76,018	$80,722	$85,772	$91,197	$97,030
Target Reserve Variance	*$469,734*	*$508,040*	*$584,740*	*$662,215*	*$740,180*	*$818,318*

Water CapitalCapital Outlay Fund	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Beginning Balance - Fund N19	$181,000	$117,000	($1,263,829)	($6,193,658)	($10,270,343)	($14,469,513)
Net Cash Flow	**$8,795**	**($1,380,829)**	**($4,929,829)**	**($4,076,685)**	**($4,199,171)**	**$9,205**
Interest Earnings	*$3,000*	*$0*	*$0*	*$0*	*$0*	*$0*
Ending Balance	**$192,795**	**($1,263,829)**	**($6,193,658)**	**($10,270,343)**	**($14,469,513)**	**($14,460,308)**
Target Reserve Balance						
Capital Reserve 25% of 5 Yr CIP	$731,124	$731,124	$814,710	$567,771	$586,776	$376,362
Total Target Reserve	**$731,124**	**$731,124**	**$814,710**	**$567,771**	**$586,776**	**$376,362**
Target Reserve Variance	($538,329)	($1,994,954)	($7,008,369)	($10,838,114)	($15,056,290)	($14,836,670)
Total Net Cashflow	**$78,164**	**($1,300,771)**	**($4,848,426)**	**($3,994,160)**	**($4,115,780)**	**$93,176**
Total Reserve Balances	**$734,164**	**($679,771)**	**($5,528,196)**	**($9,522,357)**	**($13,638,136)**	**($13,544,960)**

2.7. Financial Plan with Revenue Adjustments

Table 2-7 shows the proposed revenue adjustments and CIP accomplishment rate for each year. The proposed financial plan implements the revenue adjustments on January 1 of each respective fiscal year beginning in FY 2026. The revenue adjustments assume the capital accomplishment rates shown.

Table 2-7: District 21 Proposed Revenue Adjustments and Capital Accomplishment Rate

Fiscal Year	Effective Month	Revenue Adjustment	Capital Accomplishment Factor
FY 2026	January	15%	8%
FY 2027	January	6%	8%
FY 2028	January	6%	8%
FY 2029	January	6%	8%
FY 2030	January	6%	25%

Table 2-8 shows the proposed financial plan incorporating the proposed revenue adjustments and CIP accomplishment rate from **Table 2-7**. The District will continue to operate at a deficit through FY 2029. However, this deficit is significantly smaller than the status quo scenario shown in **Table 2-6**. The District is purposely using reserves to minimize customer bill increases.

Table 2-8: District 21 Financial Plan With Revenue Adjustments

Cash Flow				FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenues				$229,702	$240,698	$240,698	$240,698	$240,698	$240,698
Revenues from Existing Rates									
Waterworks Dist Gen #21 - N18				$229,702	$240,698	$240,698	$240,698	$240,698	$240,698
Waterworks Dist ACO #21 - N19				$0	$0	$0	$0	$0	$0
Rev Adj.	**% Adj**	**Eff. Month**	**Effective**						
FY 2025	0%	January	6	$0	$0	$0	$0	$0	$0
FY 2026	15%	January	6		$18,052	$36,105	$36,105	$36,105	$36,105
FY 2027	6%	January	6			$8,304	$16,608	$16,608	$16,608
FY 2028	6%	January	6				$8,802	$17,605	$17,605
FY 2029	6%	January	6					$9,330	$18,661
FY 2030	6%	January	6						$9,890
Revenue Adjustments				$0	$18,052	$44,409	$61,515	$79,648	$98,869
Total Rate Revenue			FY 27	$229,702	$258,750	$285,107	$302,213	$320,346	$339,567
Future Wholesale Water Purchase Pass-through			5.6%		$4,340	$13,452	$23,477	$34,503	$46,633
Future Inflationary Pass-through			3.8%		$2,993	$9,069	$15,328	$21,774	$28,413
Waterworks Dist Gen #21 - N18									
580 Property Taxes				$109,000	$111,180	$113,404	$115,672	$117,985	$120,345
584 Fines Forfeitures & Penalties				$0	$0	$0	$0	$0	$0
586 Revenue - Use of Money & Prop				$14,000	$25,046	$28,984	$33,821	$39,423	$45,847
Waterworks Dist ACO #21 - N19									
580 Property Taxes				$0	$0	$0	$0	$0	$0
584 Fines Forfeitures & Penalties				$0	$0	$0	$0	$0	$0
586 Revenue - Use of Money & Prop				$3,000	$2,641	$0	$0	$0	$0
588 Intergvmtl Revenue - State				$0	$0	$0	$0	$0	$0
590 Intergvmtl Revenue - Federal				$0	$0	$0	$0	$0	$0
592 Charges for Services				$9,000	$9,090	$9,181	$9,273	$9,365	$9,459
594 Miscellaneous Revenue				$0	$0	$0	$0	$0	$0
Total Revenues				**$364,702**	**$414,041**	**$459,197**	**$499,783**	**$543,397**	**$590,264**
O&M Expenses									
Waterwork District General Fund #18				$286,334	$303,855	$322,657	$342,847	$364,541	$387,868
Waterwork District ACO Fund #19				$205	$219	$230	$239	$246	$254
Total O&M Expenses				**$286,539**	**$304,074**	**$322,887**	**$343,086**	**$364,788**	**$388,121**
Net Revenue				**$78,164**	**$109,967**	**$136,310**	**$156,697**	**$178,609**	**$202,143**
CIP Expenditures									
Pay-as-you-go				$0	$104,228	$370,409	$306,429	$315,622	$0
Total CIP Expenditures				**$0**	**$104,228**	**$370,409**	**$306,429**	**$315,622**	**$0**
Total Expenditures				**$286,539**	**$408,301**	**$693,295**	**$649,515**	**$680,410**	**$388,121**

Cash Flow			FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Net Operating Surplus/(Deficit)			**$78,164**	**$5,739**	**($234,099)**	**($149,732)**	**($137,013)**	**$202,143**
Water General Fund			**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**FY 2030**
Beginning Balance - Fund N18			$475,000	$504,000	$602,455	$729,814	$877,477	$1,046,967
Loan from District								
Net Cash Flow			**$52,369**	**$73,408**	**$98,375**	**$113,842**	**$130,067**	**$147,090**
Interest Earnings			*$14,000*	*$25,046*	*$28,984*	*$33,821*	*$39,423*	*$45,847*
Ending Balance			**$541,369**	**$602,455**	**$729,814**	**$877,477**	**$1,046,967**	**$1,239,904**
Target Reserve Balance								
Operating Reserve	25%	of O&M Exp	$71,635	$76,018	$80,722	$85,772	$91,197	$97,030
Target Reserve Variance			*$469,734*	*$526,436*	*$649,092*	*$791,706*	*$955,770*	*$1,142,874*
Water ACO Fund			**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**FY 2030**
Beginning Balance - Fund N19			$181,000	$117,000	$24,285	($337,173)	($634,569)	($941,071)
Net Cash Flow			**$8,795**	**($95,357)**	**($361,458)**	**($297,395)**	**($306,503)**	**$9,205**
Interest Earnings			*$3,000*	*$2,641*	*$0*	*$0*	*$0*	*$0*
Ending Balance			**$192,795**	**$24,285**	**($337,173)**	**($634,569)**	**($941,071)**	**($931,866)**
Target Reserve Balance								
Capital Reserve	25%	of 5 Yr CIP	$54,834	$54,834	$60,338	$41,818	$42,126	$26,345
Total Target Reserve			**$54,834**	**$54,834**	**$60,338**	**$41,818**	**$42,126**	**$26,345**
Target Reserve Variance			$137,961	($30,550)	($397,511)	($676,386)	($983,198)	($958,211)
Total Net Cashflow			**$78,164**	**$5,739**	**($234,099)**	**($149,732)**	**($137,013)**	**$202,143**
Total Reserve Balances			**$734,164**	**$626,739**	**$392,641**	**$242,909**	**$105,896**	**$308,038**

Figure 2-1 graphically illustrates the operating financial plan, which compares existing (current) and proposed revenues with projected expenses. The stacked bars show expenses, including O&M expenses, debt service, rate-funded CIP, and reserve funding. If the reserve funding bar falls above the x-axis, then the District is adding funds to its reserves. If the reserve funding bar falls below the x-axis, then the District is using funds from its reserves to cover expenses. Total revenues at existing and proposed rates are shown by the dashed and solid lines, respectively. Current revenue (dashed line) at existing rates does not meet future total expenses and demonstrates the need for revenue adjustments.

Figure 2-1: District 21 Financial Plan

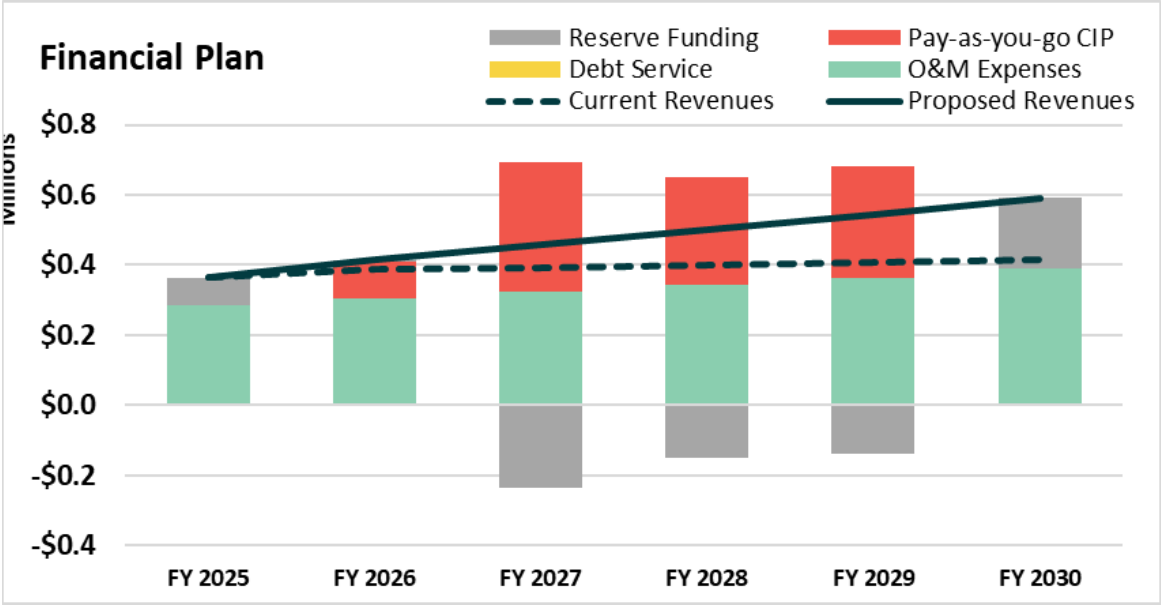


Figure 2-2 summarizes the projected CIP. The CIP is funded solely from rate revenue. The CIP expenses are inflated and are adjusted for the CIP accomplishment rate proposed in **Table 2-5**. The labels in the figure show the adjusted CIP expenditures per year after the captial accomplishment rate has been applied. The gray bars show the amount of CIP expenditures originally planned that will not be funded.

Figure 2-2: District 21 Proposed Capital Financing Plan

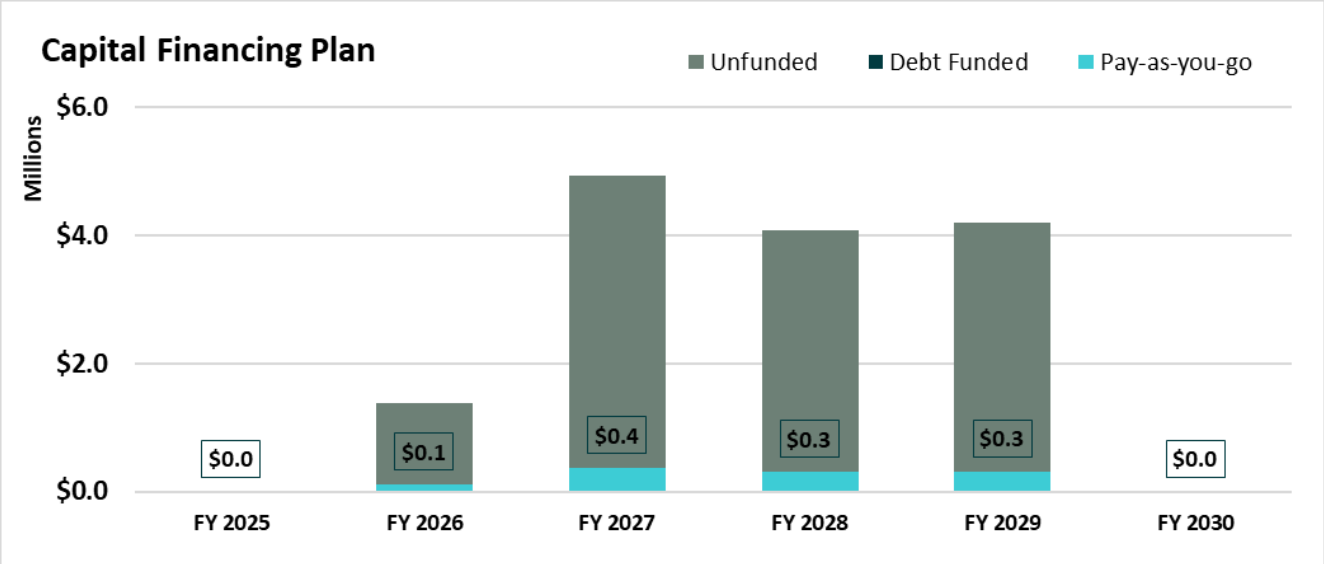
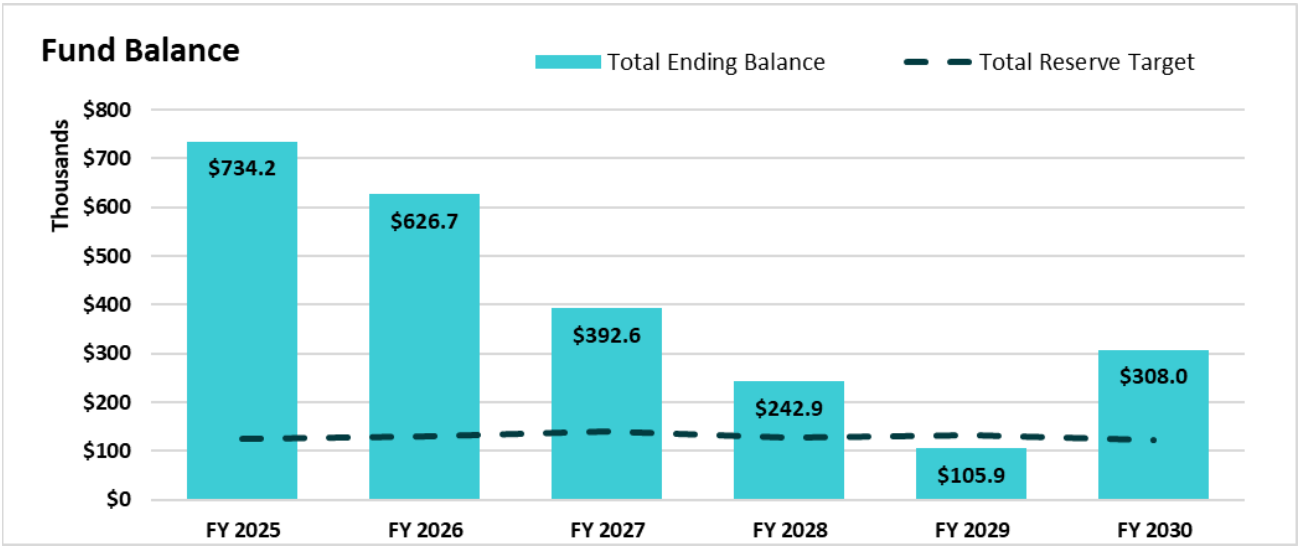


Figure 2-3 shows the projected combined fund balances which include the General Fund and Accumulative Capital Outlay fund (ACO fund). The total reserve target is shown as the dashed line. The combined fund balance (shown in blue) assumes there can be transfers between the two funds.

Figure 2-3: District 21 Fund Ending Balances



3. District 21 Cost of Service

The COS analysis was developed for the purpose of complying with Proposition 218's requirement to establish rates that do not exceed the proportional cost of service on a parcel basis. In order to meet this requirement, the analysis uses the Base-Extra Capacity methodology as adjusted to meet District 37's particular circumstances. This methodology was developed by industry experts and professionals as a means to separate costs associated with average use, and those associated with above average – or extra-capacity-use, and to allocate costs accordingly. Further explanation and analysis of this methodology can be found in the AWWA's M1 Manual. The Base-Extra Capacity methodology was used to allocate system capacity designed to provide capacity to deliver water to fight fire, both through public hydrants and private fire lines.

District 21's operating costs were functionalized because it allows the functionalized costs to be allocated to cost causation components. The functionalization is shown in **Appendix A**. We used the Base-Extra Capacity method to allocate costs to the cost causation components to assess private fire costs for most Districts. Since District 21 does not have private fire charges and has a simple service charge and a uniform volumetric rate for all customers, it is not necessary to allocate costs to the cost causation components. However, it is necessary to do so for the remaining districts to determine private fire costs. District 21 follows the same steps as for the other districts for continuity. The cost causation components include:

1. Supply
2. Pumping
3. Base (average) costs (can be further divided into supply and delivery)
4. Maximum Day and Maximum Hour (known as peaking costs)
5. Meter service
6. Billing and customer service
7. Fire Capacity
8. General and administrative costs

Extra capacity costs are also called maximum day (max day) and maximum hour (max hour) costs. Max day demand is the maximum amount of water used in a single day in a year. The max hour demand is the maximum hour water use on the maximum use day. Max day and max hour costs were used to calculate private fire costs. Certain facilities, such as distribution and storage facilities, are designed to meet fire flow demands. This method is consistent with the AWWA M1 Manual and is widely used in the water industry to perform cost of service analyses.

3.1. Allocation of Functionalized Expenses to Cost Components

To allocate the revenue requirement to the cost components we use the allocations shown in **Table 3-1**, which are based on system-wide peaking factors. The peaking factors were established in accordance with Section 64554 of the California Code of Regulations. Peaking factors are used to allocate costs to the Max Day and Max Hour cost components which are known as extra capacity. Extra capacity is calculated, for all Districts with the exception of District 21 since it does not have private fire charges, to assign private fire capacity costs since fire capacity is a subset of extra capacity. Portions of a water system, such as tanks and distribution lines, are designed for Max Day and Max Hour flows – a portion of which are for fire flows. For example, a

tank is often designed to meet Max Day flows plus fire flow. Allocating costs to Max Day and Max Hour cost components allows for an estimate of the cost associated with dedicated fire capacity in a water system which is derived in this section.

The system-wide peaking factors are used to derive the base, max day and max hour cost component allocation bases (i.e., percentages) shown. To understand the interpretation of the percentages, we first establish that base costs are costs associated with serving water during average flows. If the base allocation basis is used to allocate an expense, the costs associated with that expense are to meet average daily demand (base) related costs. Expenses that are allocated to the cost causation components using the maximum day bases attribute 50% (1.00/2.00) of the demand (and therefore costs) to base (average daily demand) use and the remaining 50% to maximum day (peaking) use. Expenses allocated using the maximum hour bases assume 25% (1.00/4.00) of costs are due to base demands, 25% due to max day ((2.00-1.00)/4.00)), and 50% ((4.00-2.00)/4.00) are due to max hour costs. Collectively the maximum day and hour cost components are known as peaking costs. These allocation bases are used to allocate the functionalized costs, shown in Column A of **Table 3-2**, to the cost causation components, shown in the column headers of **Table 3-2**.

Table 3-1: District 21 System Wide Peaking Factors and Allocation Basis

Line No.	System-Wide Peaking Factors	Peaking Factor	Base	Max Day	Max Hour	Total
1	Base	1.00	100%			100%
2	Max Day	2.00	50%	50%		100%
3	Max Hour	4.00	25%	25%	50%	100%

Table 3-2 shows the allocation of the District's functionalized O&M expenses to the cost causation components. The percentages shown in Lines 1 through 9, Columns C through I, are used to allocate the functionalized costs to each cost causation component. The allocation basis is selected based on the type of cost (function) for each line item. For example, Distribution (Line 5) is allocated using the max hour basis; in proportion to max hour allocations identified in **Table 3-1**. This is because the distribution system must be sized and operated to meet max hour demands. Distribution storage costs are allocated using the max day basis since tanks are sized to meet max day demands. Certain cost bases are identical to the cost causation components – such as Meter Service – and are easily allocated to the cost component with the same name. Line 19 shows the result of the allocation of all expenses to the cost causation components. Line 20 shows the total percentage allocated to each cost component. The percentages in Line 20 are used to allocate the operating revenue requirement on Line 1 in **Table 3-8**.

Table 3-2: District 21 Allocation of O&M Expenses to Cost Causation Components

Line No.	Function (A)	Allocation Basis (B)	Supply (C)	Pumping (D)	Base (E)	Max Day (F)	Max Hour (G)	Meter (H)	General (I)	Total (J)
1	Supply	Supply	100%							100%
2	Pumping	Max Day		100%						100%
3	Treatment	Max Day			50%	50%				100%
4	Distribution Storage	Max Day			50%	50%				100%
5	Distribution	Max Hour			25%	25%	50%			100%
7	Conservation	Base			100%					100%
6	Customer Service & Meter Reading	Cust Service						100%		100%
8	Meter Maint	Meter Maintenance						100%		100%
9	General/Admin	General							100%	100%

Line No.	O&M Expenses	Allocation Basis	Supply	Pumping	Base	Max Day	Max Hour	Meter	General	Total
10	Supply	Supply	$95,673							$95,673
11	Pumping	Max Day		$37,032						$37,032
12	Treatment	Max Day								$0
13	Distribution Storage	Max Day			$2,920	$2,920				$5,841
14	Distribution	Max Hour			$28,844	$28,844	$57,689			$115,377
15	Conservation	Base			$1,106					$1,106
16	Customer Service & Meter Reading	Cust Service						$17,887		$17,887
17	Meter Maint	Meter Maintenance						$1,028		$1,028
18	General/Admin	General							$30,130	$30,130
19	**Total Allocation to Cost Components ($)**		**$95,673**	**$37,032**	**$32,871**	**$31,765**	**$57,689**	**$18,915**	**$30,130**	**$304,074**
20	**Allocation of O&M Expenses to Cost Components (%)**		**31%**	**12%**	**11%**	**10%**	**19%**	**6%**	**10%**	**100%**

Table 3-3 shows the allocation of the District's capital revenue requirement to the cost components. The revenue requirement is comprised of a capital component. District 21's capital projects are all pipeline (distribution) related, therefore the capital component of the revenue requirement is allocated to the cost components in the same proportions as the Distribution function as shown in Line 1 of **Table 3-3** below.

Table 3-3: District 21 Capital Revenue Requirement Allocation to Cost Causation Components

Line No.	Asset Allocation (A)	Base (B)	Max Day (C)	Max Hour (D)	Total (E)
1	Distribution	25%	25%	50%	100%

3.2. Revenue Requirement Determination

Table 3-4 shows the revenue requirement determination. Line 14 shows the total revenue required from rates, calculated by subtracting revenue offsets (Line 10) and adjustments (Line 13) from the gross revenue requirement (Line 3). Raftelis calculated the revenue requirement using FY 2026 costs, including water purchases, O&M expenses, capital expenses, as shown in Lines 1 – 3. Lines 4-10 show the revenue offsets from non-rate revenues. Line 11 increases (it subtracts a negative number) the revenue requirement by the anticipated amount shown that will fund reserves in the test year. Line 12 also increases the revenue requirement to account for the fact that impending rate adjustment will take place in January, half-way through the fiscal year, and the rates need to be derived to collect a year's worth of revenue as opposed to 6 months' worth.

Table 3-4: District 21 Revenue Requirement Determination

Line No.	Revenue Requirement - FY 2026 (A)	Operating (B)	Capital (C)	Total (D)
	Revenue Requirements			
1	O&M Expenses	$304,074		$304,074
2	Rate Funded CIP		$104,228	$104,228
3	**Gross Revenue Requirement**	**$304,074**	**$104,228**	**$408,301**
	Revenue Offsets			
	Pass-through Revenue			
4	Future Wholesale Water Purchase Pass-through	$4,340		$4,340
5	Future Inflationary Pass-through	$2,993		$2,993
	Waterworks Dist Gen #21 - N18			
6	580 Property Taxes	$6,953	$104,228	$111,180
7	586 Revenue - Use of Money & Prop	$25,046		$25,046
	Waterworks Dist ACO #21 - N19			
8	586 Revenue - Use of Money & Prop	$2,641		$2,641
9	592 Charges for Services	$9,090		$9,090
10	**Total - Revenue Offsets**	**$51,063**	**$104,228**	**$155,290**
	Adjustments			
11	Adjustment for Cash Balance	($5,739)		($5,739)
12	Adjustments to Annualize Rate Increase	($18,052)		($18,052)
13	**Total - Adjustments**	**($23,792)**	**$0**	**($23,792)**
14	**Net Revenue Requirement**	**$276,803**	**$0**	**$276,803**

3.3. Equivalent Meters

The concept of equivalent meters is used to allocate meter-related and fixed capacity related costs to customers in proportion to their potential water use. Using equivalent meters, instead of a total meter count, to distribute costs, accounts for the fact that larger meters impose greater demands on the system and are more expensive to install, maintain, and replace than smaller meters. Equivalent meters are used in calculating the Service Charge which is a fixed charge.

The number of equivalent meters is based on meter hydraulic capacity. Equivalent meters represent the potential demand on the water system in terms of the base meter size – which is the smallest most common meter. To calculate the number of equivalent meters, hydraulic capacity ratios are calculated by dividing each meter's hydraulic capacity by the base meter hydraulic capacity. The capacity ratio is calculated using the meter's capacity in gallons per minute (GPM) provided in the AWWA M1 Manual Principles of Water Rates, Fees, and Charges (7th Edition).

The base meter is the most common meter, in this case, a 5/8-inch x 3/4-inch meter. **Table 3-5** shows the number of meters by class and meter size. **Table 3-6** shows the calculation of the number of equivalent meters. Column B in **Table 3-6**, shows the hydraulic capacity ratios, which is the potential flow through each meter size compared to a 5/8-inch or ¾-inch meter as established by the American Water Works Association (AWWA) hydraulic capacity ratios. For example, the flow through a 2-inch meter is 5 times that of a 3/4-inch meter. **Table 3-6** shows the total equivalent meters in Column H. It is calculated by taking the number of meters by size in **Table 3-5** (Column B-F) and multiplying by the corresponding capacity ratio, Column B in **Table 3-6**. The total equivalent meters is used as the denominator in developing the monthly fixed Service Charges.

Table 3-5: District 21 Number of Meters

Line No.	Meter Size (A)	Number of Meters Single Family (B)	Multi-Family (C)	Commercial (D)	Construction (E)	Government (F)	Total (G)
1	5/8"x3/4"	102		1			**103**
2	3/4"	89					**89**
3	3/4"x1"	44		1			**45**
4	1"	11					**11**
5	1.5"					2	**2**
6	2"					1	**1**
7	2.5"					1	**1**
8	**Total**	**246**	**0**	**2**	**0**	**4**	**252**

Table 3-6: District 21 Number of Equivalent Meters

Line No.	Meter Size (A)	Hydraulic Capacity Ratio (B)	Number of Equivalent Meters Single Family (C)	Multi-Family (D)	Commercial (E)	Construction (F)	Government (G)	Total (H)
1	5/8"x3/4"	1.0	102		1			**103**
2	3/4"	1.0	89					**89**
3	3/4"x1"	1.0	44		1			**45**
4	1"	2.0	22					**22**
5	1.5"	3.0					6	**6**
6	2"	5.0					5	**5**
7	2.5"	7.0					7	**7**
8	**Total**	**311**	**257**	**0**	**2**	**0**	**18**	**277**

3.4. Units of Service

To calculate the fixed Service Charge and the Quantity Charge (volumetric) rate, we must first calculate the units of service for the denominators in the calculation. Raftelis calculated units of service as shown in **Table 3-7**. As mentioned earlier, the units of service for extra capacity, shown in Columns F and I are used to assess fire capacity and its associated cost.

Table 3-7: District 21 Units of Service

Line No.	Customer Classes (A)	Annual Use (hcf) (B)	Average Daily Use (hcf/day) (C)	Max Day Peaking Factor (D)	Max Day Total Capacity (hcf/day) (E)	Max Day Extra Capacity (hcf/day) (F)	Max Hour Peaking Factor (G)	Max Hour Total Capacity (hcf/day) (H)	Max Hour Extra Capacity (hcf/day) (I)	Number of Equiv. Meters (J)	Number of Customers (K)
1	All Classes	16,994	47	2.00	93	47	4.00	186	140	277	252

3.5. Revenue Requirement Allocation to Cost Components

Table 3-8 shows the allocation of the revenue requirement to the cost components. Costs are allocated to the max day and max hour cost components. Line 1 shows the allocation of the operating revenue requirement, from Line 14 of **Table 3-4**, to the cost components using the percentages on Line 20 of **Table 3-2**. Line 4 allocates general costs to all cost components in proportion to the percentages shown in Line 3 which is the proportion of each cost component not including general and admin costs. Line 6 reallocates costs from all cost components to the meter capacity cost component ($170,075, as shown in Column G), meaning these costs will be collected through the fixed meter charge. This is so the District can meet its revenue stability goals and collect a portion of capacity through the fixed Service Charge. District 21 currently collects approximately 79% of its revenue through the fixed Service Charge and therefore the reallocations of costs in Line 6 allow the District to continue this fixed cost recovery. Line 7 shows the final cost allocation to the cost components. Line 8 shows the units of service, derived in **Table 3-7**, which are used to calculate the volumetric Quantity Charge in B9 and the meter charge in G9. The Quantity Charge rate is the supply cost in B7, divided by the total water use in B8. The meter Service Charge is the cost in G7 divided by the units of service in G8 and divided by 12. The rates are derived to collect the total amount shown in Line I7.

Table 3-8: District 21 Revenue Requirement Allocation to Cost Components

Line No.	(A)	Supply (B)	Pumping (C)	Base (D)	Max Day (E)	Max Hour (F)	Meter (G)	General (H)	Total (I)
1	Operating Revenue Requirement	$87,092	$33,710	$29,923	$28,916	$52,515	$17,219	$27,428	$276,803
2	Total - Cost of Service	$87,092	$33,710	$29,923	$28,916	$52,515	$17,219	$27,428	$276,803
3	Allocation of General Costs (%)	35%	14%	12%	12%	21%	7%		100%
4	Allocation of General Costs	$9,579	$3,708	$3,291	$3,180	$5,776	$1,894	($27,428)	$0
5	Total - Adjusted Cost of Service	$96,671	$37,418	$33,214	$32,096	$58,291	$19,113	$0	$276,803
6	**Reallocation of Fixed Capacity Costs**	($9,056)	($37,418)	($33,214)	($32,096)	($58,291)	$170,075		
7	**Subtotal**	**$87,615**	**$0**	**$0**	**$0**	**$0**	**$189,188**	**$0**	**$276,803**
8	Units of Service	16,994 hcf					277 Per Equi. Mtr		
9	**Unit Rate**	$5.16					$682.99		

4. District 21 Rate Derivation

This section calculates water rates based on the Cost of Service, known as Cost of Service rates.

4.1. Existing Rate Structure and Proposed Changes

District 21's current water rates were implemented May 1, 2025. The current rate structure consists of a fixed Service Charge and a Quantity Charge Rate for every hundred cubic feet (hcf) of water for all customers. The current Quantity Charge rate is assessed for water use above 5 hundred cubic feet (hcf) per billing unit per month. Currently, all outside District customers are charged a rate 1.5 times the equivalent inside District rate.

There are two changes proposed for the Districts. The Districts will no longer include 5 hcf in the Service Charge and will charge for all water use. It will also discontinue charging outside District customers 1.5 times the inside rate.

4.2. Monthly Service Charge

The fixed monthly Service Charge by meter size recovers customer costs, meter reading, meter maintenance costs and mostly fixed costs associated with maintaining the water system.The fixed Service Charge recognizes the fact that the District incurs fixed costs related to maintaining/replacing meters and maintaining the water system. These costs are distributed to customers based on their potential demand based on meter size. These costs include meter maintenance costs which increase with meter size, as it takes less time and resources to repair and maintain smaller meters compared to a larger meter.

The Districts pass-through the increase in wholesaler water purchase costs and inflation and recently implemented a pass-through rate in May of FY 2025. The Districts will continue to pass-through wholesale and inflationary pass-through charges to recover the difference in projected operating expenditures and wholesale water purchases year over year due to wholesaler increases and inflation. The recently implemented May pass-through is included in the current monthly fixed Service Charge shown in **Table 4-1**. Therefore, the rates proposed herein recover anticipated costs that exceed inflation, which include capital expenses.

Table 4-1 shows the current and proposed monthly fixed Service Charge by meter size. The monthly Service Charge, for a 5/8-inch or ¾-inch meter was derived in G9 of **Table 3-8**. The charge for larger meters is derived by multiplying the capacity ratio in Column C by the charge for a 5/8-inch meter. It reflects the fact that larger meters have the potential to demand more capacity compared to smaller meters. The potential capacity demanded is proportional to the potential flow through each meter size (as established by the AWWA hydraulic capacity ratios). Capacity ratios show the potential flow through each meter size compared to the flow through a 3/4-inch meter. Allocating capacity costs by meter size is a common way to recover fixed costs and increase revenue stability.

Table 4-1: District 21 Current and Proposed Monthly Fixed Charges

Line No.	Meter Size	Meter Count	AWWA Capacity Ratio	Meter Costs	Proposed Monthly Charge ($ / Month)	Current Monthly Charge ($ / Month)	Difference ($)	Difference (%)
1	5/8"x3/4"	103	1.00	$56.92	**$56.92**	**$56.912**	$0.01	0.0%
2	3/4"	89	1.00	$56.92	**$56.92**	**$56.912**	$0.01	0.0%
3	3/4"x1"	45	1.00	$56.92	**$56.92**	**$56.912**	$0.01	0.0%
4	1"	11	2.00	$113.83	**$113.83**	**$113.824**	$0.01	0.0%
5	1.5"	2	3.00	$170.75	**$170.75**	**$170.736**	$0.01	0.0%
6	2"	1	5.00	$284.58	**$284.58**	**$284.560**	$0.02	0.0%
7	2.5"	1	7.00	$398.41	**$398.41**	**$398.384**	$0.03	0.0%
8	3"	-	11.00	$626.07	**$626.07**	**$626.032**	$0.04	0.0%
9	4"	-	17.00	$967.57	**$967.57**	**$967.504**	$0.07	0.0%
10	6"	-	33.00	$1,878.22	**$1,878.22**	**$1,878.096**	$0.12	0.0%
11	8"	-	53.00	$3,016.53	**$3,016.53**	**$3,016.336**	$0.19	0.0%
12	10"	-	77.00	$4,382.51	**$4,382.51**	**$4,382.224**	$0.29	0.0%
13	12"	-	100.00	$5,691.57	**$5,691.57**	**$5,691.200**	$0.37	0.0%
14	**Total**	**252**						

4.3. Quantity Charge Rate ($/hcf)

The District's current Quantity Charge (volumetric rate) is charged for water use beyond 5 hcf per billing unit per month. The District will discontinue this practice and charge for all water use. This lowers the Quantity Charge rate since the revenue that must be recovered from the Quantity Charge rate is divided by all use instead of only use above 5 hcf. The Quantity Charge recovers the supply component and was previously derived in B9 of **Table 3-8** and is rederived in **Table 4-2**. Supply costs are associated with obtaining water to make it ready for transmission and distribution.

Table 4-2: District 21 Derivation of the Quantity Charge Rate ($/hcf)

Line No.	Description (A)	Proposed Rate ($/ hcf) (B)
1	Volumetric Revenue Requirement	$87,615
2	Volume Sold (hcf)	16,994
3	**Quantity Charge Rate (All Classes, $/hcf)**	**$5.156**
4	Current Rate	**$8.173**
5	% Difference	-36.9%

4.4. Proposed Five Year Rates

Table 4-3 shows the proposed rates and charges for the five-year study period. FY 2026 rates are set by the COS analysis while subsequent years are escalated by revenue adjustments.

Table 4-3: District 21 Proposed Five -Year Rate Schedule

Line No.	Rate Schedule	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
1	Revenue Adjustments (%)	15.0%	6.0%	6.0%	6.0%	6.0%
2	Effective Month	January	January	January	January	January

Line No.	Monthly Fixed Service Charges	Current	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029	Proposed FY 2030
3	5/8"x3/4"	$56.912	$56.92	$60.34	$63.97	$67.81	$71.88
4	3/4"	$56.912	$56.92	$60.34	$63.97	$67.81	$71.88
5	3/4"x1"	$56.912	$56.92	$60.34	$63.97	$67.81	$71.88
6	1"	$113.824	$113.83	$120.66	$127.90	$135.58	$143.72
7	1.5"	$170.736	$170.75	$181.00	$191.86	$203.38	$215.59
8	2"	$284.560	$284.58	$301.66	$319.76	$338.95	$359.29
9	2.5"	$398.384	$398.41	$422.32	$447.66	$474.52	$503.00
10	3"	$626.032	$626.07	$663.64	$703.46	$745.67	$790.42
11	4"	$967.504	$967.57	$1,025.63	$1,087.17	$1,152.41	$1,221.56
12	6"	$1,878.096	$1,878.22	$1,990.92	$2,110.38	$2,237.01	$2,371.24
13	8"	$3,016.336	$3,016.53	$3,197.53	$3,389.39	$3,592.76	$3,808.33
14	10"	$4,382.224	$4,382.51	$4,645.47	$4,924.20	$5,219.66	$5,532.84
15	12"	$5,691.200	$5,691.57	$6,033.07	$6,395.06	$6,778.77	$7,185.50

Line No.	Quantity Charge Rate	Inside District Rate ($ / hcf)	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029	Proposed FY 2030
16	All Classes	$8.173	$5.16	$5.47	$5.80	$6.15	$6.52

4.5. Drought Rates

The steps involved in calculating drought rates are:

1. Calculate the expected decreased water use during each stage of a drought.
2. The decreased water use leads to decreased revenue. Step 2 involves estimating the lost revenue.
3. Step 3 estimates the District's water purchase cost savings and increased costs such as public outreach if applicable.
4. Step 4 sums the lost revenue and increased costs and compares it to projected drought revenue for each drought stage.
5. The percent difference between the two is the percent increase for each stage of the drought.

The drought surcharge is a percentage increase on the Quantity Charge rates. The following tables derive the drought percentage increase for each drought stage.

4.5.1. Decreased Water Use

Table 4-4 shows the projected water use at each drought stage. The percentage reductions are 10, 20, 30, 40, 50 and 60% respectively and are taken from District 21's drought contingency plan.

Table 4-4: District 21 Projected Water Use for Each Drought Stage

	Baseline	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Use by Stage	16,994	15,295	13,595	11,896	10,196	8,497	6,798

4.5.2. Lost Revenue

Table 4-5 shows the lost revenue for each stage of the drought. It is calculated by multiplying the Quantity Charge rate by the projected use in **Table 4-4**.

Table 4-5: District 21 Lost Revenue for Each Drought Stage

	Baseline	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Volumetric Revenue	$87,689	$78,920	$70,151	$61,382	$52,613	$43,845	$35,076
Lost Revenue		$8,769	$17,538	$26,307	$35,076	$43,845	$52,613
% Change		10%	20%	30%	40%	50%	60%

4.5.3. Water Purchase Cost Savings and Increased Drought Costs

Table 4-6 shows the projected water purchase cost savings. During a drought the District purchases less water. It is calculated as a percentage of the baseline (non-drought) water purchase costs using the same percentages as the required water use cutbacks (10%, 20%, etc.).

Table 4-6: District 21 Water Purchase Cost Savings

	Water Purchase Budget	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Supply Cost	$87,615	$78,854	$70,092	$61,331	$52,569	$43,808	$35,046
Water Purchase Savings		$8,762	$17,523	$26,285	$35,046	$43,808	$52,569

Table 4-7 shows the anticipated public outreach costs associated with notifying customers of required water use cutbacks. The costs were provided by the District.

Table 4-7: District 21 Drought Public Outreach Costs

	Total	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Additional Costs	$602	$30	$30	$60	$60	$211	$211

Table 4-8 shows the calculation of the percentage increase required during each drought stage. It sums the lost revenue, the water purchase cost savings and drought costs. The total is the net lost revenue during a drought. The drought revenue requirement is the sum of the expected drought revenue and the lost revenue. The percentage increase is the revenue requirement divided by the expected volumetric revenue. Looking at Stage 5 as an example, the 0.6% increase can be interpreted as follows: the District could expect $43,845

during a Stage 5 drought if customers curtailed water use. The District would need $44,092 to cover costs. Therefore, the District can increase the Quantity Charge by 0.5%.

Table 4-8: District 21 Final Drought Percentage Increase Calculation

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Lost Revenue	$8,769	$17,538	$26,307	$35,076	$43,845	$52,613
Water Purchase Savings	($8,762)	($17,523)	($26,285)	($35,046)	($43,808)	($52,569)
Additional Costs	$30	$30	$60	$60	$211	$211
Lost Revenue	**$37**	**$45**	**$82**	**$90**	**$248**	**$255**
Expected Revenue	$78,920	$70,151	$61,382	$52,613	$43,845	$35,076
Drought Revenue Requirement	$78,958	$70,196	$61,465	$52,703	$44,092	$35,331
% Increase	**0.0%**	**0.1%**	**0.1%**	**0.2%**	**0.6%**	**0.7%**

Proposed drought rates are shown in **Table 4-9.** Note that the District would increase the volumetric rate that is current at the time of the drought by the percentages shown in **Table 4-8.**

Table 4-9: District 21 Proposed Drought Rates

Fiscal Year	Normal Conditions	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
FY 2026	$5.16	$5.16	$5.16	$5.17	$5.17	$5.19	$5.20
FY 2027	$5.47	$5.47	$5.47	$5.48	$5.48	$5.50	$5.51
FY 2028	$5.80	$5.80	$5.80	$5.81	$5.81	$5.83	$5.84
FY 2029	$6.15	$6.15	$6.15	$6.16	$6.16	$6.18	$6.19
FY 2030	$6.52	$6.52	$6.52	$6.53	$6.53	$6.56	$6.57

5. District 21 Bill Impacts

Table 5-1 shows single family monthly bill impacts for a 5/8" x 3/4" meter at low usage (3 hcf), average usage (6 hcf), and high usage (9 hcf).

Table 5-1: District 21 Bill Impacts

Single Family Residential	Monthly Use (hcf)	Current Monthly Bill	Proposed Monthly Bill	Difference ($)	Difference (%)
Low Use	3	$56.91	$72.40	$15.49	27.2%
Average Use	6	$65.09	$87.88	$22.80	35.0%
High Use	9	$89.60	$103.36	$13.76	15.3%

6. District 36 Financial Plan

This section describes the water financial plan and the assumptions used to project operating and capital expenses, as well as reserve policies and debt coverage requirements that determine the overall rate revenue increases needed for a sustainable water district.

6.1. Inflationary Assumptions

The study period is from FY 2026 through FY 2030. **Table 6-1** shows the cost escalation factors assumed to escalate District 36 expenses. Inflationary assumptions were developed in consultation with District Staff and historical data. The capital inflation rate is based on Engineering News-Record Construction Cost Index average inflation in the past ten years. FY 2024 actual operating and maintenance (O&M) expenses are inflated using the factors shown in the FY 2025 Column of **Table 6-1**.

All Districts will continue the current inflationary pass-through based on the Consumer Price Index (CPI). However, as shown below, the cost for certain line items will likely exceed the CPI which over the long term has averaged approximately 3%. The difference between the inflationary pass throughs and the assumed inflationary factors below is recovered in the proposed rates and charges.

Table 6-1: District 36 Cost Escalation Factors

Cost Escalation Factors	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
General	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Labor	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Utilities	6.5%	6.5%	4.5%	4.5%	4.5%	4.5%
Capital	6.9%	6.9%	5.0%	4.0%	3.0%	3.0%
Water Supply	8.0%	8.0%	12.0%	8.0%	5.0%	5.0%

Two items that affect the projection of future water rate revenue are new account growth and annual water demand. District Staff do not anticipate significant growth. Therefore, this study assumes no growth in water use.

Table 6-2 shows the number of water accounts (excluding private fire) by meter size for the study period. The projected number of accounts is used to forecast the amount of fixed revenue the District can expect from Meter Service Charges. The number of accounts shown below are FY 2023 actuals provided by the District. The projected number of accounts remains the same for the study period since there is no or little growth.

Table 6-2: District 36 Projected Accounts by Meter Size

Meter Size	FY 2023
5/8"x3/4"	6
3/4"	407
3/4"x1"	772
1"	250
1.5"	23
2”	22
2.5"	13
6"	2
8"	1
Total	**1,496**

6.2. Reserve Policies

District 36 maintains two reserves for operating and capital, respectively. The operating reserve provides funds for working capital for daily expenses in between billing cycles. The capital reserve provides funds so that the District can enter into construction contracts and have the funds readily available to pay contractors and for unforeseen project change orders.

The reserve targets for each fund are as follows:

- Operating Reserve – 25% of annual operating expenses
- Capital Replacement Reserve – 25% of the average annual capital improvement program expenditures over 5 years

The District’s actual capital replacement reserve is 25% of annual capital expenses, Raftelis modeled 25% of the average capital expense over 5 years because this target fluctuates less and is more common

6.3. Capital Improvement Plan

Table 6-3 shows the District’s Capital Improvement Plan (CIP). These repairs are necessary to maintain the functional integrity of the District’s water system. The District plans to finance its capital projects over the study period through rate revenue and reserves (also known as PAY-GO funding). The Capital Improvement Plan shown below is adjusted for inflation and reduced by the accomplishment rate shown. The final adjusted annual CIP expenses, accounting for the accomplishment rates, are shown at the bottom of the table.

Table 6-3: District 36 Proposed Capital Improvement Plan

Capital Improvement Plan - Inflated	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Advance Metering Infrast (AMI)	$213,867	$224,560	$233,542	$240,549	$247,765
Industry Drive Water Main	$2,031,733	$2,133,320	$0	$0	$0
Emer Conn with SCVWA at Hillcrest	$213,867	$224,560	$233,542	$240,549	$247,765
Wayside Pump Station Improvement	$802,000	$0	$0	$0	$0
Total CIP - Inflated	**$3,261,467**	**$2,582,440**	**$467,085**	**$481,097**	**$495,530**
CIP Accomplishment Rate	25.0%	25.0%	25.0%	25.0%	25.0%
CIP Expense in Rate Study	$815,367	$645,610	$116,771	$120,274	$123,883

6.4. Financial Plan Without Revenue Adjustments

Table 6-5 shows the financial plan without revenue adjustments. The purpose of showing the financial plan without revenue increases is to show that revenue is not sufficient to cover costs as shown by the net cashflow (operating surplus or deficit) shown in the bottom line.

Table 6-4: Financial Plan Without Revenue Adjustments

Cash Flow				FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenues				$1,562,358	$1,683,578	$1,683,578	$1,683,578	$1,683,578	$1,683,578
Revenues from Existing Rates									
Waterworks Dist Gen #36 - N46				$1,464,377	$1,585,598	$1,585,598	$1,585,598	$1,585,598	$1,585,598
Waterworks Dist ACO #36 - N47				$97,981	$97,981	$97,981	$97,981	$97,981	$97,981
Rev Adj.	**% Adj**	**Eff. Month**	**Effective**						
FY 2025	0%	January	6	$0	$0	$0	$0	$0	$0
FY 2026	0%	January	6		$0	$0	$0	$0	$0
FY 2027	0%	January	6			$0	$0	$0	$0
FY 2028	0%	January	6				$0	$0	$0
FY 2029	0%	January	6					$0	$0
FY 2030	0%	January	6						$0
Revenue Adjustments				$0	$0	$0	$0	$0	$0
Total Rate Revenue			FY 27	$1,562,358	$1,683,578	$1,683,578	$1,683,578	$1,683,578	$1,683,578
Future Wholesale Water Purchase Pass-through			10.29%		$25,297	$163,153	$214,406	$256,747	$296,651
Future Inflationary Pass-through			4.48%		$23,454	$71,066	$120,107	$170,619	$222,646
Waterworks Dist Gen #36 - N32									
586 Revenue - Use of Money & Prop				$22,000	$30,367	$0	$0	$0	$0
592 Charges for Services				$21,000	$21,210	$21,422	$21,636	$21,853	$22,071
594 Miscellaneous Revenue				$0	$0	$0	$0	$0	$0
596 Other Financing Sources				$0	$0	$0	$0	$0	$0
Waterworks Dist ACO #36 - N33									
580 Property Taxes				$62,000	$62,620	$63,246	$63,879	$64,517	$65,163
584 Fines Forfeitures & Penalties				$2,000	$2,020	$2,040	$2,061	$2,081	$2,102
586 Revenue - Use of Money & Prop				$102,000	$44,200	$0	$0	$0	$0
592 Charges for Services				$93,000	$93,930	$94,869	$95,818	$96,776	$97,744
Total Revenues				**$1,864,358**	**$1,986,676**	**$2,099,375**	**$2,201,485**	**$2,296,171**	**$2,389,955**
O&M Expenses									
Waterwork District General Fund #36				$2,196,033	$2,318,977	$2,471,214	$2,605,833	$2,723,856	$2,847,388
Waterwork District ACO Fund #36				$6,512	$6,874	$7,217	$7,557	$7,891	$8,240
Total O&M Expenses				**$2,202,545**	**$2,325,851**	**$2,478,431**	**$2,613,390**	**$2,731,747**	**$2,855,629**
Net Revenue				**($338,187)**	**($339,175)**	**($379,056)**	**($411,906)**	**($435,575)**	**($465,674)**
Debt Service									
Existing Debt				$153,766	$153,766	$153,766	$153,766	$153,766	$153,766
Proposed Debt				$0	$0	$0	$0	$0	$0
Total Debt Service				**$153,766**	**$153,766**	**$153,766**	**$153,766**	**$153,766**	**$153,766**
CIP Expenditures									
Pay-as-you-go				$0	$3,261,467	$2,582,440	$467,085	$481,097	$495,530
Total CIP Expenditures				**$0**	**$3,261,467**	**$2,582,440**	**$467,085**	**$481,097**	**$495,530**
Total Expenditures				**$2,356,311**	**$5,741,083**	**$5,214,637**	**$3,234,241**	**$3,366,610**	**$3,504,925**
Net Operating Surplus/(Deficit)				**($491,953)**	**($3,754,408)**	**($3,115,261)**	**($1,032,756)**	**($1,070,439)**	**($1,114,970)**

General Fund	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030

Cash Flow			FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Beginning Balance - Fund N46			$714,000	$1,230,000	$443,183	($340,558)	($1,158,410)	($2,001,216)
Net Cash Flow			($864,422)	($817,184)	($783,740)	($817,852)	($842,806)	($874,189)
Interest Earnings			*$22,000*	*$30,367*	*$0*	*$0*	*$0*	*$0*
Ending Balance			**($128,422)**	**$443,183**	**($340,558)**	**($1,158,410)**	**($2,001,216)**	**($2,875,404)**
Target Reserve Balance								
Operating Reserve	25%	of O&M Exp	$550,636	$581,463	$619,608	$653,348	$682,937	$713,907
Capital Reserve	25%	% of Avg Annual CIP over 5 years	$339,604	$339,604	$339,604	$339,604	$339,604	$339,604
Total Target Reserve			**$890,241**	**$921,067**	**$959,212**	**$992,952**	**$1,022,541**	**$1,053,512**
Target Reserve Variance			*($1,018,663)*	*($477,885)*	*($1,299,770)*	*($2,151,362)*	*($3,023,757)*	*($3,928,916)*
Accumulative Capital Outlay (ACO) Fund								
Beginning Balance - Fund N47			$2,946,000	$2,617,000	($350,590)	($2,682,111)	($2,897,016)	($3,124,648)
Net Cash Flow			$248,469	($3,011,790)	($2,331,521)	($214,904)	($227,633)	($240,781)
Interest Earnings			*$102,000*	*$44,200*	*$0*	*$0*	*$0*	*$0*
Ending Balance			**$3,296,469**	**($350,590)**	**($2,682,111)**	**($2,897,016)**	**($3,124,648)**	**($3,365,430)**
Target Reserve Balance								
Capital Reserve	25%	of Avg Annual CIP over 5 years	$339,604	$339,604	$339,604	$339,604	$339,604	$339,604
Total Target Reserve			**$339,604**	**$339,604**	**$339,604**	**$339,604**	**$339,604**	**$339,604**
Target Reserve Variance			$2,956,864	($690,195)	($3,021,716)	($3,236,620)	($3,464,253)	($3,705,034)
Debt Coverage								
Net Revenue before ACO Expenses			($331,676)	($332,301)	($371,838)	($404,349)	($427,685)	($457,434)
Simple Debt Cov			-2.16	-2.16	-2.42	-2.63	-2.78	-2.97
Target Coverage			1.20	1.20	1.20	1.20	1.20	1.20
Total Cashflow			**($491,953)**	**($3,754,408)**	**($3,115,261)**	**($1,032,756)**	**($1,070,439)**	**($1,114,970)**
Total Balance			$3,168,047	$92,592	($3,022,669)	($4,055,425)	($5,125,864)	($6,240,834)

6.5. Proposed Financial Plan With Revenue Adjustment

Table 6-6 shows the proposed revenue adjustments and CIP accomplishment rate for each year of the study. The proposed financial plan implements the revenue adjustments on January 1 of each respective fiscal year beginning in FY 2026.

Table 6-5: District 36 Propose Revenue Adjustments and Capital Execution Factor

Fiscal Year	Effective Month	Revenue Adjustment	Capital Accomplishment Factor
FY 2026	January 2026	12%	25%
FY 2027	January 2027	3%	25%
FY 2028	January 2028	3%	25%
FY 2029	January 2029	3%	25%
FY 2030	January 2030	3%	25%

Table 6-6 shows the proposed financial plan incorporating the proposed revenue adjustments and CIP accomplishment rate. The District will continue to operate at a deficit through FY 2029. This financial plan will use reserves to minimize the bill increases for customers.

Table 6-6: District 36 Proposed Financial Plan With Revenue Adjustments

Cash Flow				FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenues				$1,562,358	$1,683,578	$1,683,578	$1,683,578	$1,683,578	$1,683,578
Revenues from Existing Rates									
Waterworks Dist Gen #36 - N46				$1,464,377	$1,585,598	$1,585,598	$1,585,598	$1,585,598	$1,585,598
Waterworks Dist ACO #36 - N47				$97,981	$97,981	$97,981	$97,981	$97,981	$97,981
Rev Adj.	**% Adj**	**Eff. Month**	**Effective**						
FY 2025	0%	January	6	$0	$0	$0	$0	$0	$0
FY 2026	12%	January	6		$101,015	$202,029	$202,029	$202,029	$202,029
FY 2027	3%	January	6			$28,284	$56,568	$56,568	$56,568
FY 2028	3%	January	6				$29,133	$58,265	$58,265
FY 2029	3%	January	6					$30,007	$60,013
FY 2030	3%	January	6						$30,907
Revenue Adjustments				$0	$101,015	$230,314	$287,730	$346,870	$407,783
Total Rate Revenue				$1,562,358	$1,784,593	$1,913,892	$1,971,309	$2,030,448	$2,091,361
Future Wholesale Water Purchase Pass-through					$25,297	$163,153	$214,406	$256,747	$296,651
Future Inflationary Pass-through					$23,454	$71,066	$120,107	$170,619	$222,646
Waterworks Dist Gen #36 - N32									
586 Revenue - Use of Money & Prop				$22,000	$32,179	$5,319	$0	$0	$0
592 Charges for Services				$21,000	$21,210	$21,422	$21,636	$21,853	$22,071
594 Miscellaneous Revenue				$0	$0	$0	$0	$0	$0
596 Other Financing Sources				$0	$0	$0	$0	$0	$0
Waterworks Dist ACO #36 - N33									
580 Property Taxes				$62,000	$62,620	$63,246	$63,879	$64,517	$65,163
584 Fines Forfeitures & Penalties				$2,000	$2,020	$2,040	$2,061	$2,081	$2,102
586 Revenue - Use of Money & Prop				$102,000	$90,910	$76,446	$74,993	$83,671	$92,726
592 Charges for Services				$93,000	$93,930	$94,869	$95,818	$96,776	$97,744
Total Revenues				**$1,864,358**	**$2,136,213**	**$2,411,453**	**$2,564,208**	**$2,726,712**	**$2,890,463**
O&M Expenses									
Waterwork District General Fund #36				$2,196,033	$2,318,977	$2,471,214	$2,605,833	$2,723,856	$2,847,388
Waterwork District ACO Fund #36				$6,512	$6,874	$7,217	$7,557	$7,891	$8,240
Total O&M Expenses				**$2,202,545**	**$2,325,851**	**$2,478,431**	**$2,613,390**	**$2,731,747**	**$2,855,629**
Net Revenue				**($338,187)**	**($189,638)**	**($66,977)**	**($49,182)**	**($5,035)**	**$34,835**
Debt Service									
Existing Debt				$153,766	$153,766	$153,766	$153,766	$153,766	$153,766
Proposed Debt				$0	$0	$0	$0	$0	$0
Total Debt Service				**$153,766**	**$153,766**	**$153,766**	**$153,766**	**$153,766**	**$153,766**
CIP Expenditures									
Pay-as-you-go				$0	$815,367	$645,610	$116,771	$120,274	$123,883
Total CIP Expenditures				**$0**	**$815,367**	**$645,610**	**$116,771**	**$120,274**	**$123,883**
Total Expenditures				**$2,356,311**	**$3,294,983**	**$3,277,807**	**$2,883,927**	**$3,005,787**	**$3,133,277**
Net Operating Surplus/(Deficit)				**($491,953)**	**($1,158,770)**	**($866,353)**	**($319,719)**	**($279,075)**	**($242,814)**

General Fund	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Beginning Balance - Fund N46	$714,000	$1,230,000	$540,131	($21,381)	($568,248)	($1,084,371)
Net Cash Flow	($864,422)	($722,049)	($566,830)	($546,867)	($516,123)	($490,138)
Interest Earnings	*$22,000*	*$32,179*	*$5,319*	*$0*	*$0*	*$0*

Cash Flow			FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Ending Balance			**($128,422)**	**$540,131**	**($21,381)**	**($568,248)**	**($1,084,371)**	**($1,574,509)**
Target Reserve Balance								
Operating Reserve	25%	of O&M Exp	$550,636	$581,463	$619,608	$653,348	$682,937	$713,907
Capital Reserve	25%	% of Avg Annual CIP over 5 years	$84,901	$84,901	$84,901	$84,901	$84,901	$84,901
Total Target Reserve			**$635,537**	**$666,364**	**$704,509**	**$738,249**	**$767,838**	**$798,808**
Target Reserve Variance			*($763,959)*	*($126,233)*	*($725,890)*	*($1,306,497)*	*($1,852,209)*	*($2,373,317)*
Accumulative Capital Outlay (ACO) Fund								
Beginning Balance - Fund N47			$2,946,000	$2,617,000	$2,148,099	$1,843,257	$2,070,405	$2,307,453
Net Cash Flow			$248,469	($559,811)	($381,287)	$152,155	$153,377	$154,598
Interest Earnings			*$102,000*	*$90,910*	*$76,446*	*$74,993*	*$83,671*	*$92,726*
Ending Balance			**$3,296,469**	**$2,148,099**	**$1,843,257**	**$2,070,405**	**$2,307,453**	**$2,554,777**
Target Reserve Balance								
Capital Reserve	25%	% of Avg Annual CIP over 5 years	$84,901	$84,901	$84,901	$84,901	$84,901	$84,901
Total Target Reserve			**$84,901**	**$84,901**	**$84,901**	**$84,901**	**$84,901**	**$84,901**
Target Reserve Variance			$3,211,568	$2,063,198	$1,758,356	$1,985,504	$2,222,552	$2,469,876
Debt Coverage								
Net Revenue before ACO Expenses			($331,676)	($182,764)	($59,760)	($41,625)	$2,856	$43,075
Simple Debt Cov			-2.16	-1.19	-0.39	-0.27	0.02	0.28
Target Coverage			1.20	1.20	1.20	1.20	1.20	1.20
Total Cashflow			**($491,953)**	**($1,158,770)**	**($866,353)**	**($319,719)**	**($279,075)**	**($242,814)**
Total Balance			$3,168,047	$2,688,230	$1,821,876	$1,502,157	$1,223,082	$980,268

Figure 6-1 graphically illustrates the operating financial plan, which compares existing (current) and proposed revenues with projected expenses. The stacked bars show expenses, including O&M expenses, debt service, rate-funded CIP, and reserve funding. If the reserve funding bar falls above the x-axis, then the District is adding funds to its reserves. If the reserve funding bar falls below the x-axis, then the District is using funds from its reserves to cover expenses. Total revenues at existing and proposed rates are shown by the dashed and solid lines, respectively.

Figure 6-1: District 36 Proposed Financial Plan

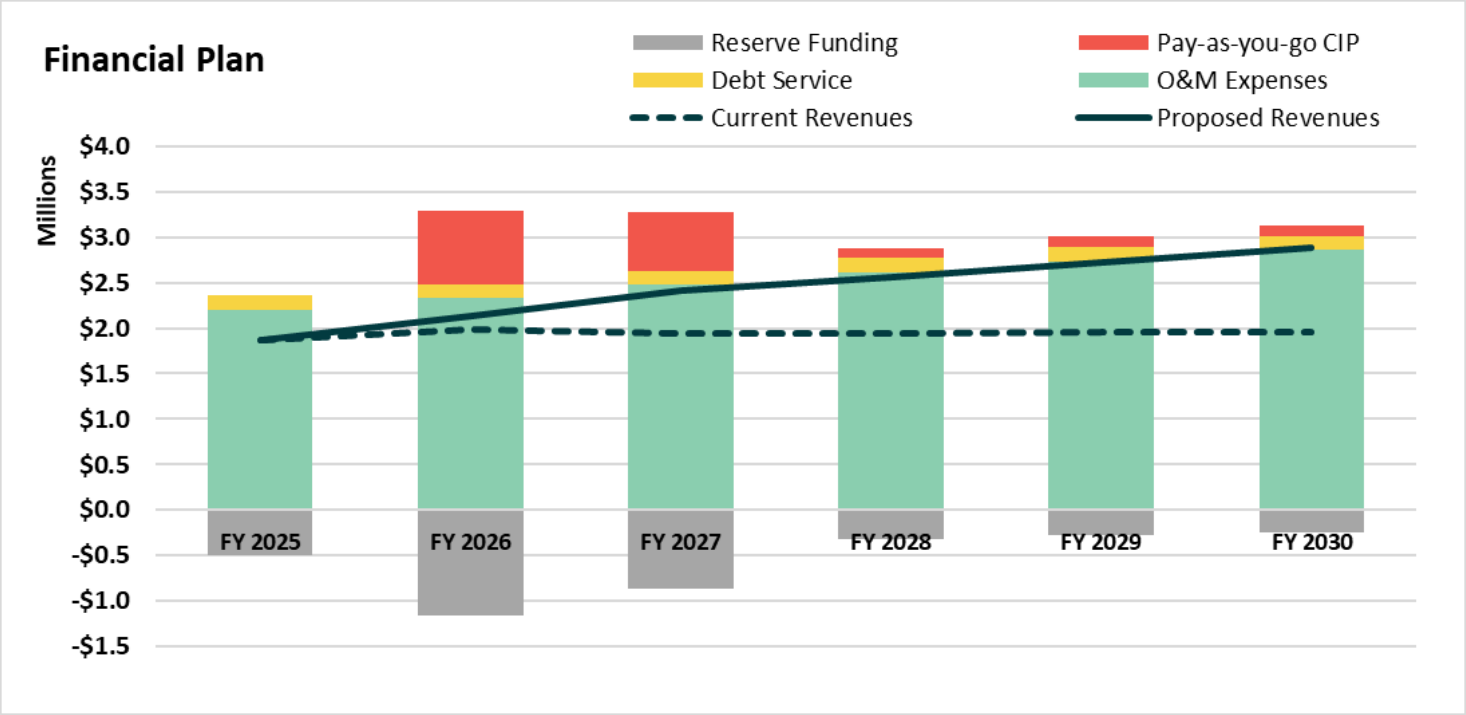


Figure 6-2 summarizes CIP expenses. The CIP is funded solely from rate revenue. The CIP expenses are inflated and are adjusted for the CIP accomplishment rate proposed in **Table 6-5**. The gray bars show the amount of CIP expenditures originally planned that will not be funded after the CIP accomplishment rate is applied.

Figure 6-2: District 36 Proposed Capital Financing Plan

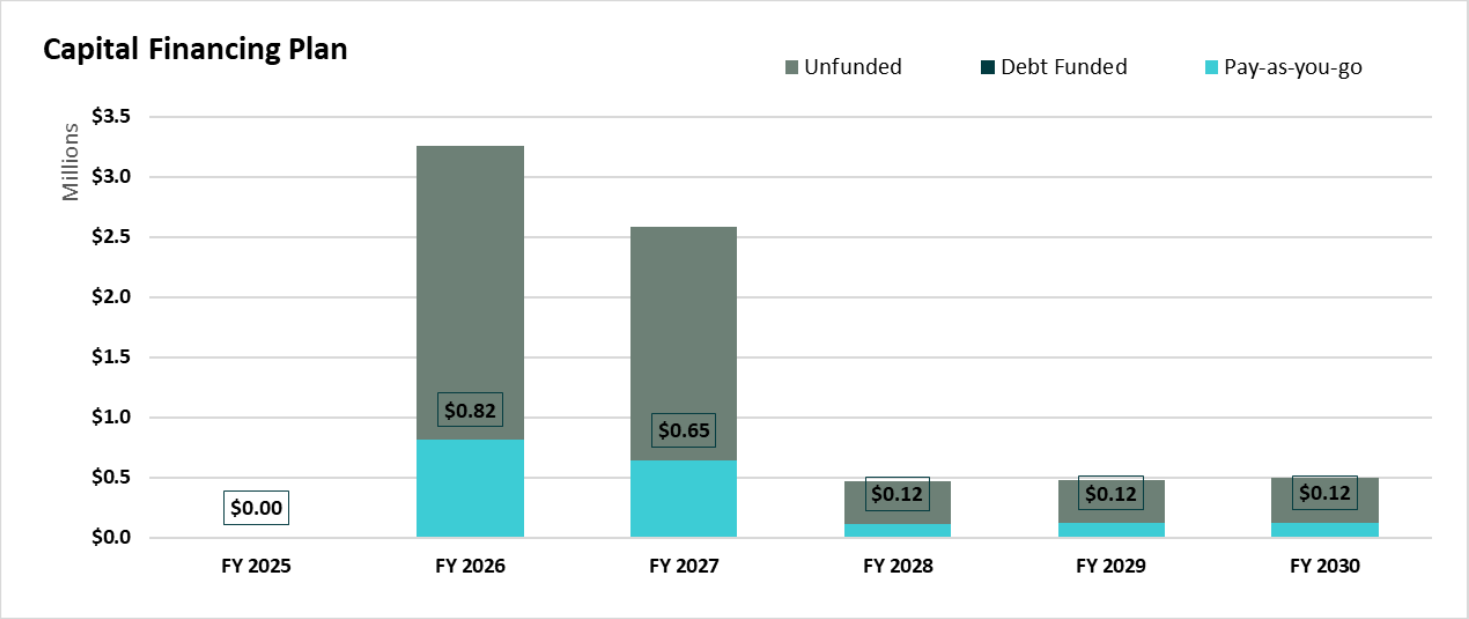
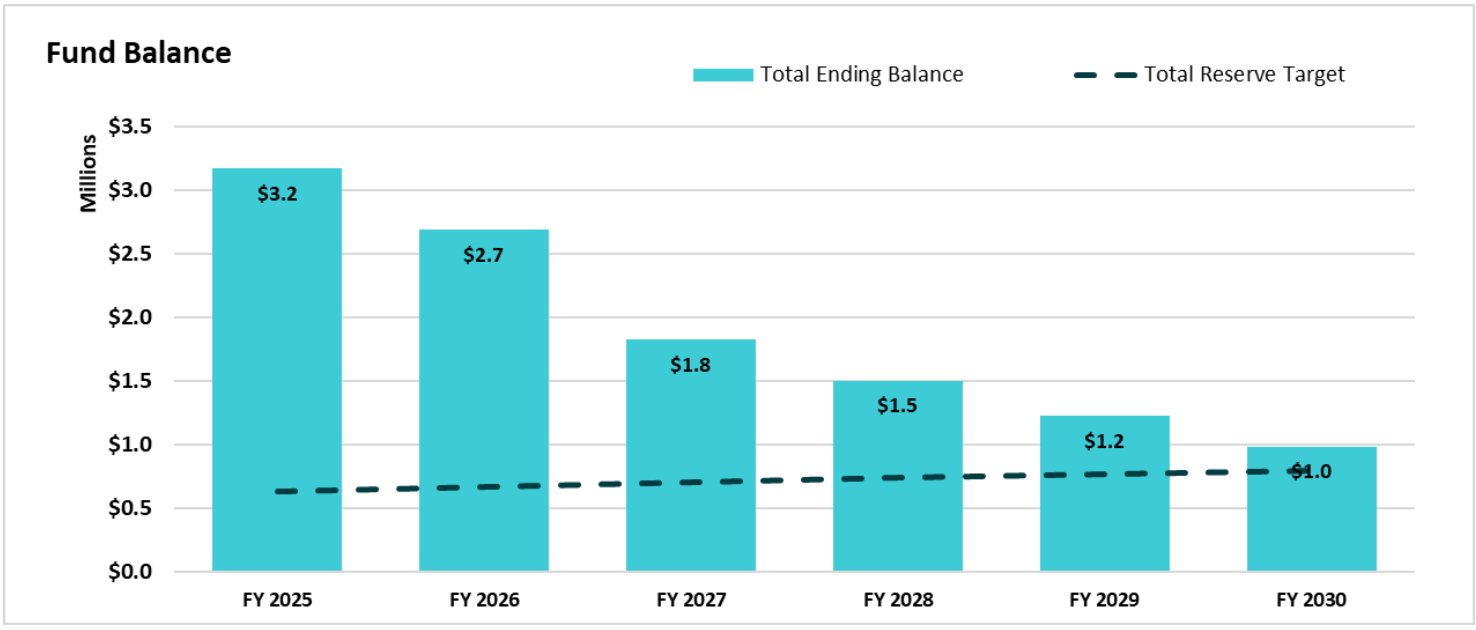


Figure 6-3 shows the projected combined operating and capital fund balances. The total reserve target is shown by the dashed lines. The combined ending balances for the General and ACO (capital) funds meet the reserve target in all years of the study. The combined fund balance assumes there can be transfers between the two funds.

Figure 6-3: District 36 Fund Ending Balances



7. District 36 Cost of Service

7.1. Allocation of Functionalized Expenses to Cost Components

The COS analysis was developed for the purpose of complying with Proposition 218's requirement to establish rates that do not exceed the proportional cost of service on a parcel basis. In order to meet this requirement, the analysis uses the Base-Extra Capacity methodology as adjusted to meet District 37's particular circumstances. This methodology was developed by industry experts and professionals as a means to separate costs associated with average use, and those associated with above average – or extra-capacity-use, and to allocate costs accordingly. Further explanation and analysis of this methodology can be found in the AWWA's M1 Manual. The Base-Extra Capacity methodology was used to allocate system capacity designed to provide capacity to deliver water to fight fire, both through public hydrants and private fire lines.

District 36's operating costs were first functionalized because it allows the functionalized costs to be allocated to cost causation components. The functionalization is shown in **Appendix A**. To allocate the revenue requirement to the cost components we use the allocation bases shown in **Table 7-1**, which are based on the system-wide peaking factors. The peaking factors were established in accordance with Section 64554 of the California Code of Regulations. Peaking factors are used to allocate costs to the Max Day and Max Hour cost components which are known as extra capacity. They are used, for all Districts, to assign private fire capacity costs since fire capacity is a subset of extra capacity. Portions of a water system, such as tanks and distribution lines, are designed for Max Day and Max Hour flows – a portion of which are for fire flows. For example, a tank is often designed to meet Max Day flows plus fire flow. Allocating costs to Max Day and Max Hour cost components allows for an estimate of the cost associated with dedicated fire capacity in a water system which is derived in this section.

The system-wide peaking factors are used to derive the base, max day and max hour cost component allocation bases (i.e., percentages) shown. These were used to assess private fire service charges. To understand the interpretation of the percentages, we first establish that base costs are costs associated with serving water during average flows. If the base allocation basis is used to allocate an expense, the costs associated with that expense are to meet average daily demand (base) related costs. Expenses that are allocated to the cost causation components using the maximum day bases attribute 50% (1.00/2) of the demand (and therefore costs) to base (average daily demand) use and the remaining 50% to maximum day (peaking) use. Expenses allocated using the maximum hour bases assume 25% (1.00/4.00) of costs are due to base demands, 25% due to max day (2.00-1.00)/4.00)), and 50% (4.00-2.00)/4.00) are due to max hour costs. Collectively the maximum day and hour cost components are known as peaking costs. These allocation bases are used to assign the functionalized costs, shown in Column A of **Table 7-2**, to the cost causation components, shown in the Column headers of **Table 7-1**.

The allocations discussed above are used to allocate costs to extra capacity costs in the following sections. For example, distribution storage costs, as shown in **Table 7-2**, are allocated using the Max Day allocation bases. This implies that 50% of distribution storage costs are associated with Max Day flows - a subset of which is fire flow. Storage tanks and distribution lines must be sized to provide fire flow. Therefore, the purpose of the cost allocations below is to estimate the cost of dedicated fire capacity in a water system. This is derived in Section 7.4.

Table 7-1: District 36 System-Wide Peaking Factors and Allocation to Cost Components

Line No.	Allocation Basis	Peaking Factor	Base	Max Day	Max Hour	Total
1	Base	1.00	100%	0%	0%	100%
2	Max Day	2.00	50%	50%	0%	100%
3	Max Hour	4.00	25%	25%	50%	100%

Table 7-2 shows the allocation of District 36's functionalized O&M expenses to the cost causation components. The percentages shown in Lines 1-9 are used to allocate the functionalized costs to each cost causation component. The allocation basis (Column B) is selected based on the type of cost (function) for each line item and the proportion of those costs associated with each cost causation component (max day, max hour, general, customer, etc.). For example, Distribution (Line 5) is allocated using the max hour basis; in proportion to max hour allocations identified in **Table 7-1**. This is because the distribution system must be sized and operated to meet max hour demands. Distribution storage costs are allocated using the max day basis since tanks are sized to meet max day demands. Certain cost bases are identical to the cost causation components – such as Meter – and are easily allocated to the cost component with the same name. Line 19 shows the result of the allocation of all expenses to the cost causation components. Line 20 shows the total percentage allocated to each cost component. This percentage is used to allocate the operating revenue requirement shown in **Table 7-10**.

Table 7-2: District 36 Allocation of O&M Expenses to Cost Causation Components

Line No.	Function (A)	Allocation Basis (B)	Supply (C)	Pumping (D)	Base (E)	Max Day (F)	Max Hour (G)	Meter (H)	Private Fire Backflow Admin & Meter Reading (I)	General (J)	Total (K)
1	Supply	Supply	100%								100%
2	Pumping	Pumping		100%							100%
3	Treatment	Base			100%						100%
4	Distribution Storage	Max Day			50%	50%	0%				100%
5	Distribution	Max Hour			25%	25%	50%	0%			100%
6	Conservation	Base			100%						100%
7	Customer Service & Meter Reading	Customer Service						100%	0%		100%
8	Meter Maint	Meter Maintenance						100%	0%		100%
9	General/Admin	General							0.100%	100%	100%

Line No.	O&M Expenses	Allocation Basis	Supply	Pumping	Base	Max Day	Max Hour	Meter	Private Fire Backflow Admin & Meter Reading	General	Total
10	Supply	Supply	$683,059								$683,059
11	Pumping	Pumping		$520,027							$520,027
12	Treatment	Base			$86,557						$86,557
13	Distribution Storage	Max Day			$45,415	$45,415					$90,831
14	Distribution	Max Hour			$64,012	$64,012	$128,024				$256,048
15	Conservation	Base			$12,861						$12,861
16	Customer Service & Meter Reading	Customer Service						$134,389			$134,389
17	Meter Maint	Meter Maintenance						$87,815			$87,815
18	General/Admin	General							$454	$453,808	$454,263
19	**Total Allocation to Cost Components ($)**		**$683,059**	**$520,027**	**$208,845**	**$109,428**	**$128,024**	**$222,204**	**$454**	**$453,808**	**$2,325,849**
20	**Allocation of O&M Expenses to Cost Components (%)**		**29.4%**	**22.4%**	**9.0%**	**4.7%**	**5.5%**	**9.6%**	**0.0%**	**19.5%**	**100%**

The capital revenue requirement, shown in **Table 7-4**, Column D, is also allocated to the cost components. The capital revenue requirement is allocated in proportion to the percentages shown in **Table 7-3**. Since the CIP for District 36 is distribution related, the max hour allocation was used. Distribution lines are an example of infrastructure that is sized and operated to meet both average flows and Max Day and Max Hour flows.

Table 7-3: District 36 Allocation of Capital Assets to Cost Causation Components

Line No.	Asset Allocation (A)	Base (B)	Max Day (C)	Max Hour (D)	Total (E)
1	Distribution	25%	25%	50%	100%

7.2. Revenue Requirement Determination

Table 7-4 shows the revenue requirement determination. Line 16 shows the total revenue required from rates, calculated by subtracting revenue offsets (Line 12) and adjustments (Line 15) from the operating and capital revenue requirements (Line 4). Raftelis calculated the revenue requirement for the test year, FY 2026. Lines 5-11 show the revenue offsets from non-rate revenues. Line 13 decreases (it is subtracted) the revenue requirement by the anticipated amount shown that will be used from reserves (Line 13) and for the fact that an impending rate adjustment will take place in January, half-way through the fiscal year, and the rates need to be derived to collect a year's worth of revenue as opposed to 6 months' worth (Line 14).

Table 7-4: District 36 Revenue Requirement Determination

Line No.	Revenue Requirement - FY 2026 (A)	Operating (B)	Capital (C)	Total (D)
	Revenue Requirements			
1	O&M Expenses	$2,325,851		$2,325,851
2	Debt Service		$153,766	$153,766
3	Rate Funded CIP		$815,367	$815,367
4	**Gross Revenue Requirement**	**$2,325,851**	**$969,132**	**$3,294,983**
	Revenue Offsets			
	Pass-through Revenue			
5	Future Wholesale Water Purchase Pass-through	$25,297		$25,297
6	Future Inflationary Pass-through	$23,454		$23,454
	Waterworks Dist Gen #36 - N32			
7	592 Charges for Services	$21,210		$21,210
	Waterworks Dist ACO #36 - N33			
8	580 Property Taxes		$62,620	$62,620
9	584 Fines Forfeitures & Penalties	$2,020		$2,020
10	586 Revenue - Use of Money & Prop		$90,910	$90,910
11	592 Charges for Services	$93,930		$93,930
12	**Total - Revenue Offsets**	**$198,090**	**$153,530**	**$351,620**
	Adjustments			
13	Adjustment for Cash Balance	$1,158,770		$1,158,770
14	Adjustments to Annualize Rate Increase	($101,015)		($101,015)
15	**Total - Adjustments**	**$1,057,756**	**$0**	**$1,057,756**
16	**Net Revenue Requirement**	**$1,070,005**	**$815,603**	**$1,885,608**

7.3. Equivalent Meters

The concept of equivalent meters is used to allocate meter-related and fixed capacity related costs to customers in proportion to their potential water use. Using equivalent meters, instead of a total meter count, to distribute costs, accounts for the fact that larger meters impose greater demands on the system and are more expensive to install, maintain, and replace than smaller meters. Equivalent meters are used in calculating the Service Charge which is a fixed charge. The number of equivalent meters is based on meter hydraulic capacity. Equivalent meters represent the potential demand on the water system in terms of the base meter size – which is the smallest most common meter. To calculate the number of equivalent meters, hydraulic capacity ratios are calculated by dividing each meter's hydraulic capacity by the base meter hydraulic capacity. The capacity ratio is calculated using the meter's capacity in gallons per minute (GPM) provided in the AWWA M1 Manual *Principles of Water Rates, Fees, and Charges* (7th Edition).

The base meter is the most common meter, in this case, a ¾" x 1" meter. **Table 7-5** shows the number of meters by class and meter size. **Table 7-6** shows the calculation of the number of equivalent meters. Column B in **Table 7-6,** shows the hydraulic capacity ratios, which is the potential flow through each meter size compared to the base meter. For example, the flow through a 2-inch meter is 5 times that of a 3/4-inch meter. **Table 7-6** shows the total equivalent meters in Column H. It is calculated by taking the number of meters by size in **Table 7-5** (Column B-F) and multiplying by the corresponding capacity ratio, Column B in **Table 7-6**. The total equivalent meters is used as the denominator in developing the monthly fixed Service Charges.

Table 7-5:District 36 Number of Meters

Line No.	Meter Size (A)	Number of Meters: Single Family (B)	Multi-Family (C)	Commercial (D)	Construction (E)	Government (F)	Total (G)
1	5/8"x 3/4"	6					**6**
2	3/4"	404			3		**407**
3	3/4"x1"	767			5		**772**
4	1"	249			1		**250**
5	1.5"	21				2	**23**
6	2"	15		1	1	5	**22**
7	2.5"	2		9		2	**13**
8	3"						
9	4"						
8	6"		1	1			**2**
9	8"					1	**1**
10	**Total**	**1,464**	**1**	**11**	**10**	**10**	**1,496**

Table 7-6: District 36 Meter Equivalents Calculation

Line No.	Meter Size (A)	AWWA Hydraulic Capacity Ratio (B)	Number of Equivalent Meters Single Family (C)	Multi-Family (D)	Commercial (E)	Construction (F)	Government (G)	Total (H)
1	5/8"x 3/4"	1.0	6					**6**
2	3/4"	1.0	404			3		**407**
3	3/4"x1"	1.0	767			5		**772**
4	1"	2.0	498			2		**500**
5	1.5"	3.0	63				6	**69**
6	2"	5.0	75		5	5	25	**110**
7	2.5"	7.0	14		63		14	**91**
8	6"	33.0		33	33			**66**
9	8"	53.0					53	**53**
10	**Total**		**1,827**	**33**	**101**	**15**	**98**	**2,074**

7.4. Private Fire Cost Determination

Water systems deliver water to property in sufficient quantities and pressure to fight fires in two ways: public fire hydrants which are designed to deliver water to properties within their perimeter, and lines to private parcels or buildings for fire suppression. The peaking factors and cost allocations to the max day and max hour cost components are used to calculate private fire costs.. Raftelis uses the potential flow of private fire lines and public hydrants, as recommended by the AWWA, to determine the share of total fire costs allocated to private fire connections and public connections (hydrants).

Table 7-7 shows the potential demand for private and public fire lines. Each fire connection size has a potential fire demand, much like the hydraulic capacity factor of a water meter. The count of connections by size (Column D) is multiplied by the fire flow demand factor (Column C) to derive total equivalent fire demand units (Column E). The Hazen-Williams equation is used to calculate equivalent potential demand in Column C by raising the pipeline's diameter to the power of 2.63.

Table 7-7: District 36 Private Fire Connections

Line No.	Private Fireline Size (A)	Private Fire Connection Size (B)	Potential Demand (C)	Number of Private Fire Connections (D)	Private Fire Potential Demand (E)
1	.75	3/4"	0.47		
2	1	1"	1.00		
3	1.5	1.5"	2.90		
4	2	2"	6.19		
5	3	3"	17.98		
6	4	4"	38.32		
7	6	6"	111.31		
8	8	8"	237.21	1	237
9	10	10"	426.58		
10	12	12"	689.04		
11	**Total Fire Lines**			**1**	**237**
Line No.	Public Fireline Size (inch diameter) (A)	Public Fire Connection Size (B)	Potential Demand (6" Main) (C)	Number of Hydrants (D)	Public Fire Potential Demand (E)
12	6	6"	111.31	302	33,616
13	**Total Fire Flow Potential Demand**				**33,853**
14	**Percent Allocated to Private Fire Flow**				**0.7%**
15	**Percent Allocated to Public Fire Flow**				**99.3%**
16	**Total Fire Capacity**				**100.0%**

Table 7-7 also shows the equivalent potential demand from public fire hydrants in E12. The potential demand for a fire hydrant is based on the diameter of the main raised to the power of 2.63 to calculate the potential demand, for one hydrant, shown in Column C. The total equivalent potential demand (Column E) is calculated by multiplying the number of hydrants (Column D) by the potential demand (Column C). Lines 14 and 15 show the proportion of fire capacity (which is a subset of *extra* capacity) allocated to private fire lines and public hydrants.

Table 7-8 derives the portion of *extra* capacity that is for public and private fire flow in Line 11 and 12. Line 1 and 2 show the assumptions for a fire: a fire flow of 2,500 gallons per minute (GPM) for two hours. Line 3 derives the potential max day fire capacity by converting 2,500 GPM to gallons per hour, then multiplying by the two-hour duration of a typical fire and then converting to hcf per day as shown in B3. C3 is the max hour capacity, multiplying 2,500 gpm by 24 hours less the capacity already allocated to Max Day in Column B. Line 5 shows the percentage of the District's extra capacity allocated to private fire as derived in E14 of **Table 7-7**. Line 7 is the private fire capacity in hcf/day derived by multiplying Line 3 by Line 5. Line 9 adds the domestic potable water extra capacity so that we may calculate the proportion of capacity for private fire which is shown in Line 12. It is derived as Line 7 divided by Line 10. These percentages are used to assign costs to private fire customers.

Table 7-8: District 36 Private Fire Capacity as a Percent of Total Capacity

Line No.	Fire Flow Capacity (A)	Fire Assumptions (B)	(C)
1	**Hours for Fire**	2.0	
2	**Gals/minute**	2,000	
		Max Day	Max Hour*
3	**Capacity Demanded for Fire (hcf/day)**	321	3,529
4	Cost to Public Fire	99.3%	99.3%
5	Cost to Private Fire	0.7%	0.7%
6	Public Fire Capacity (hcf/day)	319	3,505
7	Private Fire Capacity (hcf/day)	2	25
8	**Total Fire Flow Capacity**	**321**	**3,530**
9	**Potable Water Demand Extra Capacity**	**722**	**2,166**
10	**Total Extra Capacity - Fire and Potable (hcf/day)**	**1,043**	**5,696**
	* In excess of Max Day		
11	Public Fire Proportion	30.6%	61.5%
12	Private Fire	0.2%	0.4%
13	Total Fire Flow	30.8%	61.9%

7.5. Units of Service

The end goal of a cost-of-service analysis is to distribute the revenue requirement to each customer class. To do so, we must first calculate the units of service. **Table 7-9** shows the derivation of the units of service which are used in calculating unit costs. Projected FY 2026 water use was divided by 365 days to determine daily use (Column B & C). The max day and max hour capacities are calculated by multiplying the average daily use by the max day or max hour peaking factor. This results in the total max day capacity, with extra capacity calculated by subtracting the average daily use from the total max day capacity. The same calculations are performed for the total max hour and extra max hour capacity. The values shown are rounded to the nearest hcf. Columns J and K show the total number of customers and equivalent meters for potable water. Equivalent meters counts were derived in **Table 7-6.**

Table 7-9: District 36 Units of Service

Line No.	Customer Class (A)	Annual Use (hcf) (B)	Average Daily Use (hcf/day) (C)	Peaking Factor (D)	Max Day Total Capacity (hcf/day) (E)	Max Day Extra Capacity (hcf/day) (F)	Max Hour Peaking Factor (G)	Max Hour Total Capacity (hcf/day) (H)	Max Hour Extra Capacity (hcf/day) (I)	Number of Equiv. Meters (J)	Number of Customers (K)	Number of Private Fire Customers (L)
1	All Classes	362,866	994	2.00	1,988	994	4.00	3,977	2,982	2,074	1,496	1

7.6. Revenue Requirement Allocation to Cost Components

Table 7-10 shows the allocation of the revenue requirement to the cost components. Line 1 shows the allocation of the operating revenue requirement, from B16 of **Table 7-4**, to the cost components using the percentages on Line 20 of **Table 7-2**. Line 5 allocates General costs to all cost components in proportion to the percentages shown in Line 4 which is the proportion of each cost component not including general and admin costs. Line 7 reallocates public fire flow costs to the meter capacity cost component, meaning these costs will be collected through the fixed meter charge. This is calculated as Line 6, Columns E and F, multiplied by the percentages for public fire shown in Line 11 of **Table 7-8.** Line 8 reallocates private fire costs to private fire customers in Column H. This is calculated as Line 6, Columns E and F, multiplied by the percentages for private fire in Line 12 of **Table 7-8**. Line 10 reallocates costs so that they may be collected via the Facilities Construction Surcharge shown in Column J. Line 12 reallocates fixed costs from the base, max day and max hour cost components to be collected from the fixed Service Charge. This is so the District can meet its revenue stability goals and collects a portion of fixed capacity costs through the fixed Service Charge. The District currently collects approximately 39% and proposes collecting approximately 35%. Line 13 shows the final cost allocation to the cost components. Line 14 shows the units of service, derived in **Table 7-9**. Line 15 derives the unit costs by dividing Line 13 by Line 14. These unit costs are used to derive the final rates and charges.

Table 7-10: District 36 Revenue Requirement Allocation to Cost Components

Line No.	Adjusted Cost of Service (A)	Supply (B)	Pumping (C)	Base (D)	Max Day (E)	Max Hour (F)	Meter (G)	Private Fire (H)	Private Fire Backflow Admin & Meter Reading (I)	Capital Facility Charge (J)	General (K)	Total (L)
1	Operating Revenue Requirement	$314,241	$239,238	$96,079	$50,342	$58,897	$102,225		$209		$208,774	**$1,070,005**
2	Capital Revenue Requirement			$203,901	$203,901	$407,801						**$815,603**
3	**Total - Revenue Requirement**	**$314,241**	**$239,238**	**$299,980**	**$254,243**	**$466,699**	**$102,225**	**$0**	**$209**	**$0**	**$208,774**	**$1,885,608**
4	Allocation of General Costs (%)	19%	14%	18%	15%	28%	6%	0%	0.0%			100.0%
5	Allocation of General Costs	$39,125	$29,786	$37,349	$31,654	$58,106	$12,727	$0	$26		($208,774)	$0
6	**Total - Adjusted Cost of Service**	**$353,365**	**$269,024**	**$337,329**	**$285,897**	**$524,805**	**$114,952**	**$0**	**$235**		**$0**	**$1,885,608**
7	Public Fire Flow to Meter Charge			**$0**	($87,345)	($322,915)	**$410,260**					
8	Private Fire Flow				($616)	($2,279)		**$2,895**				
9	**Subtotal**	**$353,365**	**$269,024**	**$337,329**	**$197,936**	**$199,611**	**$525,213**	**$2,895**	**$235**		**$0**	**$1,885,608**
10	**Facility Surcharge**			($47,226)	($27,711)	($27,946)				$102,883		
11	**Subtotal**	**$353,365**	**$269,024**	**$290,103**	**$170,225**	**$171,666**	**$525,213**	**$2,895**	**$235**	**$102,883**	**$0**	**$1,885,608**
12	**Reallocation of Fixed Costs**			($60,922)	($35,747)	($36,050)	$132,719					
13	**Subtotal**	**$353,365**	**$269,024**	**$229,181**	**$134,478**	**$135,616**	**$657,931**	**$2,895**	**$235**	**$102,883**	**$0**	**$1,885,608**
14	**Units of Service**	**362,866**	**362,866**	**362,866**	**362,866**	**362,866**	**2,074**	**237**	**12**	**362,866**		
15	**Unit Costs**	Use **$0.97**	Use **$0.74**	Use **$0.63**	Use **$0.37**	Use **$0.37**	Equiv Meters **$317.23**	Prvt Capacity **$12.20**	Annual Prvt Fire Bills **$19.58**	Use **$0.284**		

8. District 36 Rate Derivation

8.1. Existing Rate Structure and Proposed Changes

The District's current rate structure includes a fixed Service Charge and volumetric Quantity Charge for all customers. There is a Fire Line Service Charge only for those customers with private fire flow connections. The Quantity Charge rates are uniform volumetric rates and are charged for water use in excess of 5 hcf per billing unit per month allowance. The District also has a uniform (non-tiered) Facilities Construction (ACO) Surcharge rate per hcf on all water consumption for all customer classes. All outside District customers are charged a rate 1.5 times the equivalent inside District rate.

8.2. Monthly Service Charge

The fixed monthly Service Charge by meter size recovers customer costs, meter reading, meter maintenance costs and fixed costs associated with maintaining the water system.

The fixed Service Charge recognizes the fact that the District incurs fixed costs related to maintaining/replacing meters and maintaining fixed assets such as distribution pipelines and distribution storage reservoirs. These costs are distributed to customers based on their potential demand based on meter size. A portion of these costs are meter maintenance costs which increase with meter size, as it takes less time and resources to repair and maintain smaller meters compared to a larger meter.

The Districts pass-through the increase in wholesaler water purchase costs and recently implemented a pass-through rate in May of FY 2025. The Districts will continue to pass-through wholesale and inflationary pass-through charges to recover the difference in projected operating expenditures and wholesale water purchases year over year due to wholesaler increases and inflation. The recently implemented May pass-through is included in the current monthly fixed Service Charge shown in **Table 8-1**.

Table 8-1 shows the current and proposed monthly fixed charge by meter size. The ***yearly*** meter charge, for a 5/8-inch or ¾-inch meter was derived in G15 of **Table 7-10.** The Meter Charge for larger meters is derived by multiplying the capacity ratio in Column C by the charge for a 5/8-inch meter. It reflects the fact that larger meters have the potential to demand more capacity compared to smaller meters. The potential capacity demanded is proportional to the potential flow through each meter size (as established by the AWWA hydraulic capacity ratios). The ratios show the potential flow through each meter size compared to the flow through a 3/4-inch meter. Allocating capacity costs by meter size is a common way to recover fixed costs and increase revenue stability.

District 36's most common small meter is the ¾" (3/4" x 1") meter and it is common to assign capacity ratios based on the most common small meter. Meter sizes of 5/8" are no longer issued. Therefore, the ¾" meter is considered the baseline small meter.

Table 8-1: District 36 Current & Proposed Monthly Fixed Charge

Line No.	Meter Size (A)	Meter Count (B)	AWWA Capacity Ratio (C)	Meter Costs (D)	Proposed Monthly Charge ($ / Month) (E)	Current Monthly Charge ($ / Month) (F)	Difference ($) (G)	Difference (%) (H)
1	5/8"x 3/4"	6	1.00	$26.44	**$26.44**	**$26.423**	$0.01	0.05%
2	3/4"	407	1.00	$26.44	**$26.44**	**$26.423**	$0.01	0.05%
3	3/4"x1"	772	1.00	$26.44	**$26.44**	**$26.423**	$0.01	0.05%
4	1"	250	2.00	$52.87	**$52.87**	**$52.846**	$0.03	0.05%
5	1.5"	23	3.00	$79.31	**$79.31**	**$79.269**	$0.04	0.05%
6	2"	22	5.00	$132.18	**$132.18**	**$132.115**	$0.06	0.05%
7	2.5"	13	7.00	$185.05	**$185.05**	**$184.961**	$0.09	0.05%
8	3"	-	11.00	$290.79	**$290.79**	**$290.653**	$0.14	0.05%
9	4"	-	17.00	$449.41	**$449.41**	**$449.191**	$0.22	0.05%
10	6"	2	33.00	$872.38	**$872.38**	**$871.959**	$0.42	0.05%
11	8"	1	53.00	$1,401.09	**$1,401.09**	**$1,400.419**	$0.67	0.05%
12	10"	-	77.00	$2,035.55	**$2,035.55**	**$2,034.571**	$0.98	0.05%
13	12"	-	100.00	$2,643.57	**$2,643.57**	**$2,642.300**	$1.27	0.05%
14	**Total**	**1,496**		**$657,931**	**$657,931**	**$657,616**		**0.0%**

8.3. Private Fire

Private Fire monthly Service Charges are derived in **Table 8-2** by private fire line size. The annual private fire charge per unit of potential demand was derived in H15 of **Table 7-10**. The proposed fire Service Charges by connection size are derived in Column D in **Table 8-2** by multiplying the potential demand in Column C by the unit cost in H15 of **Table 7-10** divided by twelve. Column E adds a backflow administration charge which was derived in Column I of **Table 7-10.**

Table 8-2: District 36 Current & Proposed Private Fire Charge

Line No.	Private Fire Connection Size (Inches) (A)	Count (B)	Potential Fire Demand (C)	Proposed Private Fire Charge (D)	Proposed Private Fire Backflow Admin & Meter Reading (E)	Total Private Fire Charge (F)	Current Private Fire Charge (G)
1	4"		38.32	$38.97	$19.58	**$58.56**	**$76.627**
2	6"		111.31	$113.21	$19.58	**$132.79**	**$103.050**
3	8"	1	237.21	$241.25	$19.58	**$260.83**	**$129.473**
4	10"		426.58	$433.84	$19.58	**$453.43**	**$182.319**
5	12"		689.04	$700.78	$19.58	**$720.36**	**$288.011**

8.4. Quantity Charge Rates ($/hcf)

The District's current Quantity Charge (volumetric) rate is charged for water use beyond 5 hcf per billing unit per month. The District will discontinue this practice and charge for all water use. This lowers the volumetric rate as discussed in this section. The volumetric rate recovers the cost components described below.

1. Water Supply
2. Pumping
3. Base costs
4. Peaking (max day and max hour costs)

Water Supply costs are associated with obtaining and treating water to make it ready for transmission and distribution.

Pumping costs are costs associated with pumping groundwater and pumping water through the distribution system.

Base costs are the operating and capital costs associated with delivering water to all customers at a constant average rate of use – also known as serving customers under average daily demand conditions.

Peaking costs, extra capacity or max day and max hour costs, represent costs incurred to meet customer peak demands more than a base use (or in excess of average daily demand). Thes costs are only identified to assess private fire service charges. Fire capacity is a subset of what is known as extra capacity.

Table 8-3 shows current and proposed inside District Quantity Charge rates. Because proposed rates no longer include a 5 hcf allowance, the Quantity Charge rate decreases compared to the current rate.

Table 8-3: District 36 Current and Proposed Quantity Charge Rates

Line No.	Description (A)	Proposed Inside District Rate ($ / hcf) (B)	Current Inside District Rate ($ / hcf) (C)	% Increase (D)
1	Volumetric Revenue Requirement	$1,121,664		
2	Volume Billed (hcf)	362,866		
3	**Quantity Charge Rate (All Classes, $ / hcf)**	**$3.09**	**$3.477**	-11.1%

8.5. Facilities Construction Surcharge

The District also charges a Facilities Construction Surcharge to fund repair and replacement capital improvement projects. The costs collected via this surcharge were identified in Line 10 of **Table 7-10**. **Table 8-4** shows the current Facilities Construction Surcharge and the derivation of the proposed Facilities Construction Surcharge. District 36 currently recovers approximately 14% of capital related costs through the Facilities Surcharge. The remainder of capital costs are recovered through the Service Charge and Quantity Charge. The portion of capital costs recovered from the Facilities Surcharge is dedicated to capital projects.

Table 8-4: District 36 Current & Proposed Facilities Construction Surcharge

Line No.	Description (A)	Proposed Inside District Rate ($ / hcf) (B)	Current Inside District Rate ($ / hcf) (C)	% Increase (D)
1	Facilities Construction Surcharge Revenue Requirement	$102,883		
2	Volume Billed (hcf)	362,866		
3	**Facilities Construction Surcharge (All Classes, $ / hcf)**	**$0.28**	**$0.268**	5.8%

8.6. Proposed Five Year Rates

Table 8-5 shows the proposed rates and charges for the five-year study period. FY 2026 charges were derived above as part of the cost-of-service analysis. The rates for the out years are derived by escalating the FY 2026 rates by the revenue increases shown in Line 1.

Table 8-5: District 36 Proposed Five-Year Rate Schedule

Line No.	Rate Schedule		2026	2027	2028	2029	2030
1	Revenue Adjustments (%)		12.0%	3.0%	3.0%	3.0%	3.0%
2	Effective Month		January	January	January	January	January
Line No.	**Monthly Meter Service Charges**	**Current**	**Proposed FY 2026**	**Proposed FY 2027**	**Proposed FY 2028**	**Proposed FY 2029**	**Proposed FY 2030**
3	5/8"x 3/4"	$26.423	$26.44	$27.24	$28.06	$28.91	$29.78
4	3/4"	$26.423	$26.44	$27.24	$28.06	$28.91	$29.78
5	3/4"x1"	$26.423	$26.44	$27.24	$28.06	$28.91	$29.78
6	1"	$52.846	$52.87	$54.46	$56.10	$57.79	$59.53
7	1.5"	$79.269	$79.31	$81.69	$84.15	$86.68	$89.29
8	2"	$132.115	$132.18	$136.15	$140.24	$144.45	$148.79
9	2.5"	$184.961	$185.05	$190.61	$196.33	$202.22	$208.29
10	3"	$290.653	$290.79	$299.52	$308.51	$317.77	$327.31
11	4"	$449.191	$449.41	$462.90	$476.79	$491.10	$505.84
12	6"	$871.959	$872.38	$898.56	$925.52	$953.29	$981.89
13	8"	$1,400.419	$1,401.09	$1,443.13	$1,486.43	$1,531.03	$1,576.97
14	10"	$2,034.571	$2,035.55	$2,096.62	$2,159.52	$2,224.31	$2,291.04
15	12"	$2,642.300	$2,643.57	$2,722.88	$2,804.57	$2,888.71	$2,975.38
Line No.	**Private Fire Service Charges**	**Current**	**Proposed FY 2026**	**Proposed FY 2027**	**Proposed FY 2028**	**Proposed FY 2029**	**Proposed FY 2030**
16	4"	$76.627	$58.56	$60.31	$62.12	$63.98	$65.90
17	6"	$103.050	$132.79	$136.77	$140.87	$145.10	$149.45
18	8"	$129.473	$260.83	$268.65	$276.71	$285.01	$293.56
19	10"	$182.319	$453.43	$467.03	$481.04	$495.47	$510.33
20	12"	$288.011	$720.36	$741.97	$764.23	$787.16	$810.77
Line No.	**Quantity Charges / Facilities Construction Surcharge**	**Current Inside District Rate ($ / hcf)**	**Proposed FY 2026**	**Proposed FY 2027**	**Proposed FY 2028**	**Proposed FY 2029**	**Proposed FY 2030**
21	Quantity Charge	$3.477	$3.09	$3.18	$3.28	$3.38	$3.48
22	Facilities Const. Surcharge	$0.268	$0.28	$0.29	$0.30	$3.31	$0.32

8.7. Drought Rates

The steps involved in calculating drought rates are:

1. Calculate the expected decreased water use during each stage of a drought.
2. The decreased water use leads to decreased revenue. Step 2 involves estimating the lost revenue.
3. Step 3 estimates the Districts water purchase cost savings and increased costs such as public outreach if applicable.
4. Step 4 sums the lost revenue and increased costs and compares it to projected drought revenue for each drought stage.
5. The percent difference between the two is the percent increase for each stage of the drought.

The drought surcharge is a percentage increase on the Quantity Charge rates. The following tables derive the drought percentage increase for each drought stage.

8.7.1. Decreased Water Use

Table 8-6 shows the projected water use at each drought stage. The percentage reductions are 10, 20, 30, 40, 50 and 60% respectively and are taken from the District's drought contingency plan.

Table 8-6: District 36 Projected Water Use for Each Drought Stage

Total Use	Baseline	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Total Use	362,866	326,579	290,293	254,006	217,720	181,433	145,146

8.7.2. Lost Revenue

Table 8-7 show the lost revenue for each stage of the drought. It is calculated by multiplying the Quantity Charge by the projected use in **Table 8-6**.

Table 8-7: District 36 Lost Revenue for Each Drought Stage

	Baseline	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Total Commodity Revenue	$1,121,256	$1,009,130	$897,005	$784,879	$672,754	$560,628	$448,502
Lost Revenue		$112,126	$224,251	$336,377	$448,502	$560,628	$672,754
% Change		10%	20%	30%	40%	50%	60%

8.7.3. Water Purchase Cost Savings and Increased Drought Costs

Table 8-8 shows the projected water purchase cost savings. During a drought the District purchases less water. It is calculated as a percentage of the baseline (non-drought) water purchase costs using the same percentages as the required water use cutbacks (10%, 20%, etc.).

Table 8-8: District 36 Water Purchase Cost Savings

Water Production/Purchase	Water Purchase Budget	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Supply Cost	$683,008	$649,131	$615,253	$581,376	$547,499	$513,622	$479,745
Savings in Water Purchase Costs		$33,877	$67,754	$101,632	$135,509	$169,386	$203,263

Table 8-9 shows the anticipated public outreach costs associated with notifying customers of required water use cutbacks. The costs were provided by the District.

Table 8-9: District 36 Drought Public Outreach Costs

Drought Costs	Baseline	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Drought Costs	$3,574	$179	$179	$357	$357	$1,251	$1,251

Table 810 shows the calculation of the percentage increase required during each drought stage. It sums the lost revenue, the water purchase cost savings and drought costs. The total is the net lost revenue during a drought. The drought revenue requirement is the sum of the expected drought revenue and the lost revenue. The percentage increase is the revenue requirement divided by the expected volumetric revenue. Looking at Stage 2 as an example, the 17.5% increase can be interpreted as follows: the District could expect $897,005 during a Stage 2 drought if customer curtailed water use. The District would need $1,053,680 to cover costs. Therefore, the District will increase the Quantity Charge rate by 17.5%.

Table 8-10: District 36 Final Drought Percentage Increase Calculation

Water Production/Purchase	Baseline	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Lost Revenue	$0	$112,126	$224,251	$336,377	$448,502	$560,628	$672,754
Water Purchase Costs/(Savings)	$0	$33,877	$67,754	$101,632	$135,509	$169,386	$203,263
Drought Costs	$3,574	$179	$179	$357	$357	$1,251	$1,251
Total Lost Revenue	**$3,574**	**$78,468**	**$156,757**	**$235,225**	**$313,514**	**$392,697**	**$470,986**
Expected Volumetric Revenue	$1,121,256	$1,009,130	$897,005	$784,879	$672,754	$560,628	$448,502
Drought Revenue Requirement	$1,124,830	$1,087,557	$1,053,680	$1,019,982	$986,105	$953,121	$919,244
% Increase		7.8%	17.5%	30.0%	46.6%	70.0%	105.0%

Proposed drought rates are shown in **Table 8-11.** Note that the District would increase the Quantity Charge rate that is current at the time of the drought by the percentages shown in **Table 8-10.**

Table 8-11: District 36 Proposed Drought Rates

Fiscal Year	Normal Conditions	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
FY 2026	$3.09	$3.33	$3.63	$4.02	$4.53	$5.25	$6.33
FY 2027	$3.18	$3.43	$3.74	$4.13	$4.66	$5.41	$6.52
FY 2028	$3.28	$3.53	$3.85	$4.26	$4.81	$5.58	$6.72
FY 2029	$3.38	$3.64	$3.97	$4.39	$4.95	$5.75	$6.93
FY 2030	$3.48	$3.75	$4.09	$4.52	$5.10	$5.92	$7.13

9. District 36 Bill Impacts

Table 9-1 shows single family residential monthly bill impacts for a 5/8" x 3/4" meter at low use (3 hcf), average use (19 hcf), and high use (40 hcf).

Table 9-1: District 36 Bill Impacts

Single Family Residential	Monthly Use (hcf)	Current Monthly Bill	Proposed Monthly Bill	Difference ($)	Difference (%)
Low Use	3	$27.23	$36.55	$9.32	34.2%
Average Use	19	$80.19	$90.47	$10.28	12.8%
High Use	40	$158.84	$161.24	$2.40	1.5%

10. District 37 Financial Plan

This section describes the water financial plan and the assumptions used to project operating and capital expenses, as well as reserve policies and debt coverage requirements that determine the overall rate revenue increases needed for a sustainable water district.

10.1. Inflationary Assumptions

The study period is from FY 2026 through FY 2030. **Table 10-1** shows the cost escalation factors assumed in the study. Inflationary assumptions were developed in consultation with District Staff and historical data. The capital inflation rate is based on Engineering News-Record Construction Cost Index (ENR CCI) average inflation in the past ten years. FY 2024 actual operating and maintenance (O&M) expenses are inflated using the factors shown in the FY 2025 Column of **Table 10-1**. Antelope Valley-East Kern Water Agency's (AVEK) Acton Water Treatment Plant treats imported water to the district. The 'Water Supply' line item represents AVEK historical year-over-year percent increases in wholesale water charges per acre-foot.

All Districts will continue the current inflationary pass-through based on the Consumer Price Index (CPI). However, as shown below, the cost for certain line items will likely exceed the CPI which over the long term has averaged approximately 3%. The difference between the inflationary pass throughs and the assumed inflationary factors below is recovered from the proposed rates and charges.

Table 10-1: District 37 Study Assumptions

Cost Escalation Factors	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
General	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Labor	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Utilities	6.5%	6.5%	4.5%	4.5%	4.5%	4.5%
Capital	6.9%	6.9%	5.0%	4.0%	3.0%	3.0%
Water Supply	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%

Two items that affect the projection of future water rate revenue are new account growth and annual water demand. District Staff do not anticipate significant growth. Therefore, this study assumes no account growth or growth in water use.

Table 10-2 shows the number of water accounts (excluding private fire) by meter size for the study period. The projected number of accounts is used to forecast the amount of fixed revenue the District can expect from Meter Service Charges. The number of accounts shown below are FY 2023 actuals provided by the District. The projected number of accounts remain the same for the study period because the District is expecting low or no growth.

Table 10-2: District 37 Water Accounts by Meter Size

Meter Size	FY 2023
3/4"	303
3/4"x1"	786
1"	270
1 1/2"	26
2"	27
2 1/2"	8
6"	5
8"	1
Total	**1,426**

10.2. Reserve Policies

District 37 maintains two reserves for operating and capital, respectively. The operating reserve provides funds for working capital for daily expenses in between billing cycles. The capital reserve provides funds so that the District can enter into construction contracts and have the funds readily available to pay contractors and for unforeseen project change orders.

The reserve targets for each fund are as follows:

- Operating Reserve – 25% of annual operating expenses
- Capital Replacement Reserve – 25% of the average annual capital improvement program expenditures over 5 years

The District's actual capital replacement reserve is 25% of annual capital expenses, Raftelis modeled 25% of the average capital expense over 5 years because this target fluctuates less and is more common.

10.3. Capital Improvement Plan

Table 10-3 shows the District's Capital Improvement Plan. These repairs are necessary to maintain the functional integrity of the District's water system. The District plans to finance its capital projects over the study period through rate revenue and reserves (also known as PAY-GO funding). The Capital Improvement Plan (CIP)shown below is adjusted for inflation and reduced by the capital accomplishment rate shown in Line 5. This assumes the District will complete 40% of its projects for the study period . The final adjusted annual CIP costs, accounting for the accomplishment rates, are shown in Line 6. The District plans to execute approximately $4.3 million in capital expenditures over five years after applying the accomplishment rate.

Table 10-3: District 37 Proposed Capital Improvement Plan

Capital Improvement Plan - Inflated	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
District 37 Advanced Meter Infrastructure (AMI)	$228,695	$240,129	$249,735	$257,227	$0
Acton 3220 P2 Tank 1.2MG	$571,737	$600,324	$624,337	$643,067	$7,285,947
District 37 Valve Replacement	$57,174	$0	$0	$0	$0
Total - Inflated CIP	**$857,605**	**$840,453**	**$874,071**	**$900,293**	**$7,285,947**
CIP Accomplishment Rate	40%	40%	40%	40%	40%
CIP Expense in Rate Study	$343,042	$336,181	$349,629	$360,117	$2,914,379

10.4. Financial Plan Without Revenue Adjustments

Table 10-4 shows the financial plan without revenue adjustments. The purpose of showing the financial plan without revenue increases is to show that revenue is not sufficient to cover costs as shown by the net cashflow at the bottom of the table.

As shown below, the resulting net cashflow under current rates is negative for FY 2026 through FY 2030. This demonstrates the need for additional rate increases to meet operating, capital, and debt-related costs.

Table 10-4: District 37 Financial Plan Without Revenue Adjustments

Cash Flow					FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenues					$1,775,960	$1,864,821	$1,864,821	$1,864,821	$1,864,821	$1,864,821
Revenues from Existing Rates										
Waterworks Dist Gen #37 - N49					$1,660,177	$1,749,039	$1,749,039	$1,749,039	$1,749,039	$1,749,039
Waterworks Dist ACO #37 - N50					$115,783	$115,783	$115,783	$115,783	$115,783	$115,783
Rev. Adj.		**% Adj.**	**Eff. Month**	**Effective**						
	FY 2025	0.0%	January	6	$0	$0	$0	$0	$0	$0
	FY 2026	0.0%	January	6		$0	$0	$0	$0	$0
	FY 2027	0.0%	January	6			$0	$0	$0	$0
	FY 2028	0.0%	January	6				$0	$0	$0
	FY 2029	0.0%	January	6					$0	$0
	FY 2030	0.0%	January	6						$0
Revenue Adjustments					$0	$0	$0	$0	$0	$0
Total Rate Revenue					$1,775,960	$1,864,821	$1,864,821	$1,864,821	$1,864,821	$1,864,821
Future Wholesale Water Purchase Pass-through						$15,794	$15,794	$48,572	$83,822	$121,731
Future Inflationary Pass-through						$49,500	$49,500	$151,471	$259,560	$374,134
Waterworks Dist Gen #37 - N49										
580 Property Taxes					$175,000	$176,750	$178,518	$180,303	$182,106	$183,927
586 Revenue - Use of Money & Prop					$56,000	$49,190	$42,487	$30,277	$17,408	$3,855
588 Intergvmtl Revenue - State					$1,000	$1,020	$1,040	$1,061	$1,082	$1,104
592 Charges for Services					$44,000	$44,440	$44,884	$45,333	$45,787	$46,244
594 Miscellaneous Revenue					$1,000	$1,010	$1,020	$1,030	$1,041	$1,051
Waterworks Dist ACO #37 - N50										
584 Fines Forfeitures & Penalties					$4,000	$4,040	$4,080	$4,121	$4,162	$4,204
586 Revenue - Use of Money & Prop					$56,000	$0	$0	$0	$0	$0
592 Charges for Services					$201,000	$203,010	$205,040	$207,091	$209,161	$211,253
Total Revenues					**$2,313,960**	**$2,409,575**	**$2,407,185**	**$2,534,080**	**$2,668,951**	**$2,812,325**
O&M Expenses										
Subtotal - District #37 - N49					$2,068,846	$2,190,783	$2,320,091	$2,457,227	$2,602,678	$2,756,961
Waterworks Dist Gen #37 - N50					$807	$856	$907	$962	$1,019	$1,081
Total O&M					**$2,069,653**	**$2,191,639**	**$2,320,998**	**$2,458,189**	**$2,603,698**	**$2,758,041**
Net Revenue					**$244,307**	**$217,936**	**$86,186**	**$75,891**	**$65,253**	**$54,284**
CIP Expenditures										
Pay-as-you-go					$0	$857,605	$840,453	$874,071	$900,293	$7,285,947
Total CIP					**$0**	**$857,605**	**$840,453**	**$874,071**	**$900,293**	**$7,285,947**
Total Expenditures					$2,069,653	$3,049,244	$3,161,452	$3,332,260	$3,503,991	$10,043,988
Net Operating Surplus/(Deficit)					**$244,307**	**($639,669)**	**($754,267)**	**($798,180)**	**($835,040)**	**($7,231,663)**

General Fund	Waterworks Dist Gen #37 - N49	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Beginning Balance - Fund N49		$1,456,000	$1,339,000	$1,234,959	$997,149	$747,008	$484,174
Net Cashflow		($187,668)	($153,230)	($280,296)	($280,418)	($280,242)	($279,731)
Interest Earnings		*$56,000*	*$49,190*	*$42,487*	*$30,277*	*$17,408*	*$3,855*
Ending Balance		**$1,324,332**	**$1,234,959**	**$997,149**	**$747,008**	**$484,174**	**$208,298**

Cash Flow			FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Target Reserve Balance								
Operating Reserve	25%	*of O&M Expenses*	$517,211	$547,696	$580,023	$614,307	$650,670	$689,240
Total Target Reserve			**$517,211**	**$547,696**	**$580,023**	**$614,307**	**$650,670**	**$689,240**
Target Reserve Variance			*$807,120*	*$687,263*	*$417,127*	*$132,701*	*($166,496)*	*($480,942)*

Accumulative Capital Outlay (ACO) Fund	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Beginning Balance - Fund N37	$1,994,000	$2,418,000	$1,882,371	$1,365,914	$817,876	$245,669
Net Cashflow	$319,975	($535,629)	($516,457)	($548,039)	($572,206)	($6,955,787)
Interest Earnings	*$56,000*	*$0*	*$0*	*$0*	*$0*	*$0*
Ending Balance	**$2,369,975**	**$1,882,371**	**$1,365,914**	**$817,876**	**$245,669**	**($6,710,118)**
Target Reserve Balance						
Capital Reserve	$173,621	$173,621	$173,621	$173,621	$173,621	$173,621
Total Target Reserve	**$173,621**	**$173,621**	**$173,621**	**$173,621**	**$173,621**	**$173,621**
Target Reserve Variance	*$2,196,354*	*$1,708,750*	*$1,192,293*	*$644,254*	*$72,048*	*($6,883,739)*
Total Net Cashflow	$244,307	($639,669)	($754,267)	($798,180)	($835,040)	($7,231,663)
Total Reserve Balances	$3,694,307	$3,117,331	$2,363,064	$1,564,883	$729,843	($6,501,820)

10.5. Proposed Financial Plan With Revenue Adjustments

Table 10-5 shows the proposed revenue adjustments and CIP accomplishment rate for each year of the study. The proposed financial plan implements the revenue adjustments on January 1 of each respective fiscal year beginning in FY 2026. The revenue adjustments assume the capital accomplishment rate of 40% in FY 2026 and for the duration of the study period. This allows the District to maintain reserves and minimize ratepayer bill impacts.

Table 10-5: District 37 Proposed Revenue Adjustments and Capital Accomplishment Rate

Fiscal Year	Effective Month	Revenue Adjustment	Capital Accomplishment Factor
FY 2026	January 2026	10%	40%
FY 2027	January 2027	3%	40%
FY 2028	January 2028	3%	40%
FY 2029	January 2029	3%	40%
FY 2030	January 2030	3%	40%

Table 10-6 shows the proposed financial plan incorporating the proposed revenue adjustments and CIP accomplishment rate from **Table 10-5.** The District will operate at a deficit only in FY 2026 and FY 2030 due to increases in CIP expenditures. The following figures show the financial plan in graphical format.

Table 10-6: District 37 Financial Plan With Revenue Adjustment

Cash Flow					FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenues					$1,775,960	$1,864,821	$1,864,821	$1,864,821	$1,864,821	$1,864,821
Revenues from Existing Rates										
Waterworks Dist Gen #37 - N49					$1,660,177	$1,749,039	$1,749,039	$1,749,039	$1,749,039	$1,749,039
Waterworks Dist ACO #37 - N50					$115,783	$115,783	$115,783	$115,783	$115,783	$115,783
Rev. Adj.		**% Adj.**	**Eff. Month**	**Effective**						
	FY 2025	0.0%	January	6	$0	$0	$0	$0	$0	$0
	FY 2026	10.0%	January	6		$93,241	$186,482	$186,482	$186,482	$186,482
	FY 2027	3.0%	January	6			$30,770	$61,539	$61,539	$61,539
	FY 2028	3.0%	January	6				$31,693	$63,385	$63,385
	FY 2029	3.0%	January	6					$32,643	$65,287
	FY 2030	3.0%	January	6						$33,623
Revenue Adjustments					$0	$93,241	$217,252	$279,714	$344,050	$410,316
Total Rate Revenue					$1,775,960	$1,958,062	$2,082,073	$2,144,535	$2,208,871	$2,275,137
Future Wholesale Water Purchase Pass-through						$15,794	$15,794	$48,572	$83,822	$121,731
Future Inflationary Pass-through						$49,500	$49,500	$151,471	$259,560	$374,134
Waterworks Dist Gen #37 - N49										
580 Property Taxes					$175,000	$176,750	$178,518	$180,303	$182,106	$183,927
586 Revenue - Use of Money & Prop					$56,000	$50,939	$50,130	$47,548	$47,071	$48,855
588 Intergvmtl Revenue - State					$1,000	$1,020	$1,040	$1,061	$1,082	$1,104
592 Charges for Services					$44,000	$44,440	$44,884	$45,333	$45,787	$46,244
594 Miscellaneous Revenue					$1,000	$1,010	$1,020	$1,030	$1,041	$1,051
Waterworks Dist ACO #37 - N50										
584 Fines Forfeitures & Penalties					$4,000	$4,040	$4,080	$4,121	$4,162	$4,204
586 Revenue - Use of Money & Prop					$56,000	$0	$0	$0	$0	$0
592 Charges for Services					$201,000	$203,010	$205,040	$207,091	$209,161	$211,253
Total Revenues					**$2,313,960**	**$2,504,565**	**$2,632,080**	**$2,831,065**	**$3,042,663**	**$3,267,641**
O&M Expenses										
Subtotal - District #37 - N49					$2,068,846	$2,190,783	$2,320,091	$2,457,227	$2,602,678	$2,756,961
Waterworks Dist Gen #37 - N50					$807	$856	$907	$962	$1,019	$1,081
Total O&M					**$2,069,653**	**$2,191,639**	**$2,320,998**	**$2,458,189**	**$2,603,698**	**$2,758,041**
Net Revenue					**$244,307**	**$312,926**	**$311,081**	**$372,876**	**$438,966**	**$509,600**
CIP Expenditures										
Pay-as-you-go					$0	$343,042	$336,181	$349,629	$360,117	$2,914,379
Total CIP					**$0**	**$343,042**	**$336,181**	**$349,629**	**$360,117**	**$2,914,379**
Total Expenditures					$2,069,653	$2,534,681	$2,657,180	$2,807,818	$2,963,815	$5,672,420
Net Operating Surplus/(Deficit)					**$244,307**	**($30,116)**	**($25,100)**	**$23,248**	**$78,848**	**($2,404,779)**

Water General Fund	Waterworks Dist Gen #37 - N49	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Beginning Balance - Fund N49		$1,456,000	$1,339,000	$1,324,160	$1,297,757	$1,327,233	$1,416,751
Net Cashflow		($187,668)	($65,779)	($76,533)	($18,071)	$42,447	$105,110
Interest Earnings		*$56,000*	*$50,939*	*$50,130*	*$47,548*	*$47,071*	*$48,855*
Ending Balance		**$1,324,332**	**$1,324,160**	**$1,297,757**	**$1,327,233**	**$1,416,751**	**$1,570,715**
Target Reserve Balance							

Cash Flow			FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Operating Reserve	25%	*of O&M Expenses*	$517,211	$547,696	$580,023	$614,307	$650,670	$689,240
Total Target Reserve			**$517,211**	**$547,696**	**$580,023**	**$614,307**	**$650,670**	**$689,240**
Target Reserve Variance			*$807,120*	*$776,464*	*$717,734*	*$712,926*	*$766,081*	*$881,475*

Water Accumulative Capital Outlay (ACO) Fund	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Beginning Balance - Fund N37	$1,994,000	$2,418,000	$2,402,724	$2,404,027	$2,397,798	$2,387,129
Net Cashflow	$319,975	($15,276)	$1,303	($6,229)	($10,669)	($2,558,744)
Interest Earnings	*$56,000*	*$0*	*$0*	*$0*	*$0*	*$0*
Ending Balance	**$2,369,975**	**$2,402,724**	**$2,404,027**	**$2,397,798**	**$2,387,129**	**($171,614)**
Target Reserve Balance						
Capital Reserve	25%	*of avg CIP over 5 Yrs*	$69,448	$69,448	$69,448	$69,448	$69,448	$69,448
Total Target Reserve			**$69,448**	**$69,448**	**$69,448**	**$69,448**	**$69,448**	**$69,448**
Target Reserve Variance			*$2,300,527*	*$2,333,275*	*$2,334,579*	*$2,328,350*	*$2,317,681*	*($241,063)*
Total Net Cashflow			$244,307	($30,116)	($25,100)	$23,248	$78,848	($2,404,779)
Total Reserve Balances			$3,694,307	$3,726,884	$3,701,784	$3,725,032	$3,803,880	$1,399,101

Figure 10-1 graphically illustrates the operating financial plan, which compares existing (current) and proposed revenues with projected expenses. The stacked bars show expenses, including O&M expenses, debt service, rate-funded CIP, and reserve funding. If the gray reserve funding bar falls above the x-axis, then the District is adding funds to its reserves. If the reserve funding bar falls below the x-axis, then the District is using funds from its reserves to cover expenses. Total revenues at existing and proposed rates are shown by the dashed and solid lines, respectively.

Figure 10-1: District 37 Proposed Financial Plan

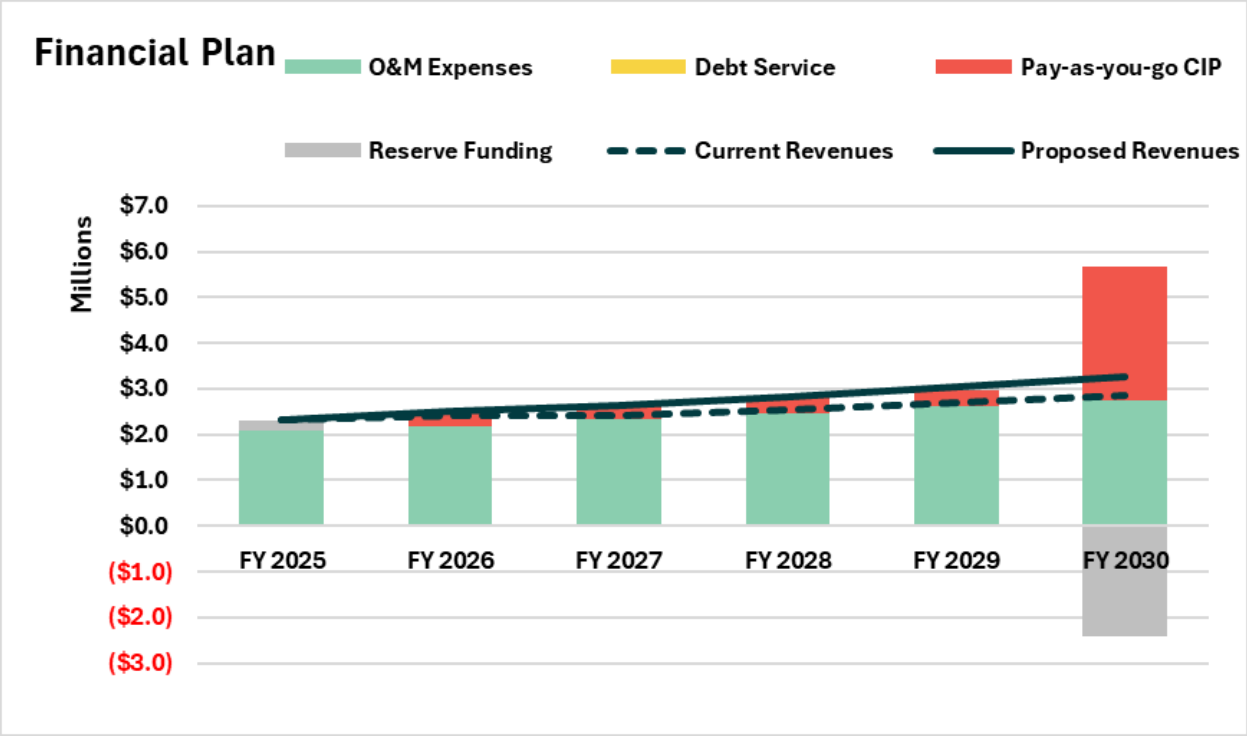


Figure 10-2 summarizes the projected CIP. The CIP is funded solely from rate revenue. The CIP expenses are inflated and are adjusted for the CIP accomplishment rate proposed in **Table 10-3**. The labels in the figure show the adjusted CIP expenditures per year after the accomplishment rate has been applied. The gray bars show the amount of CIP expenditures originally planned that will not be funded after the accomplishment rate is applied.

Figure 10-2: District 37 Proposed Capital Financing Plan

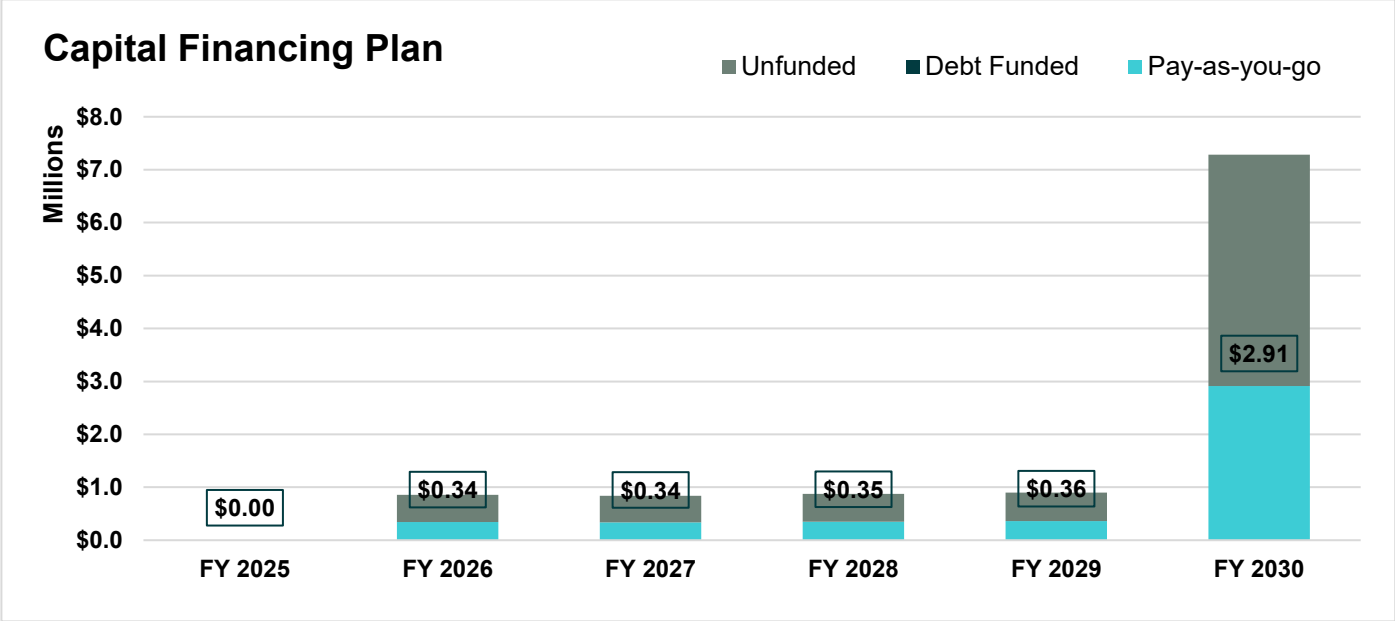
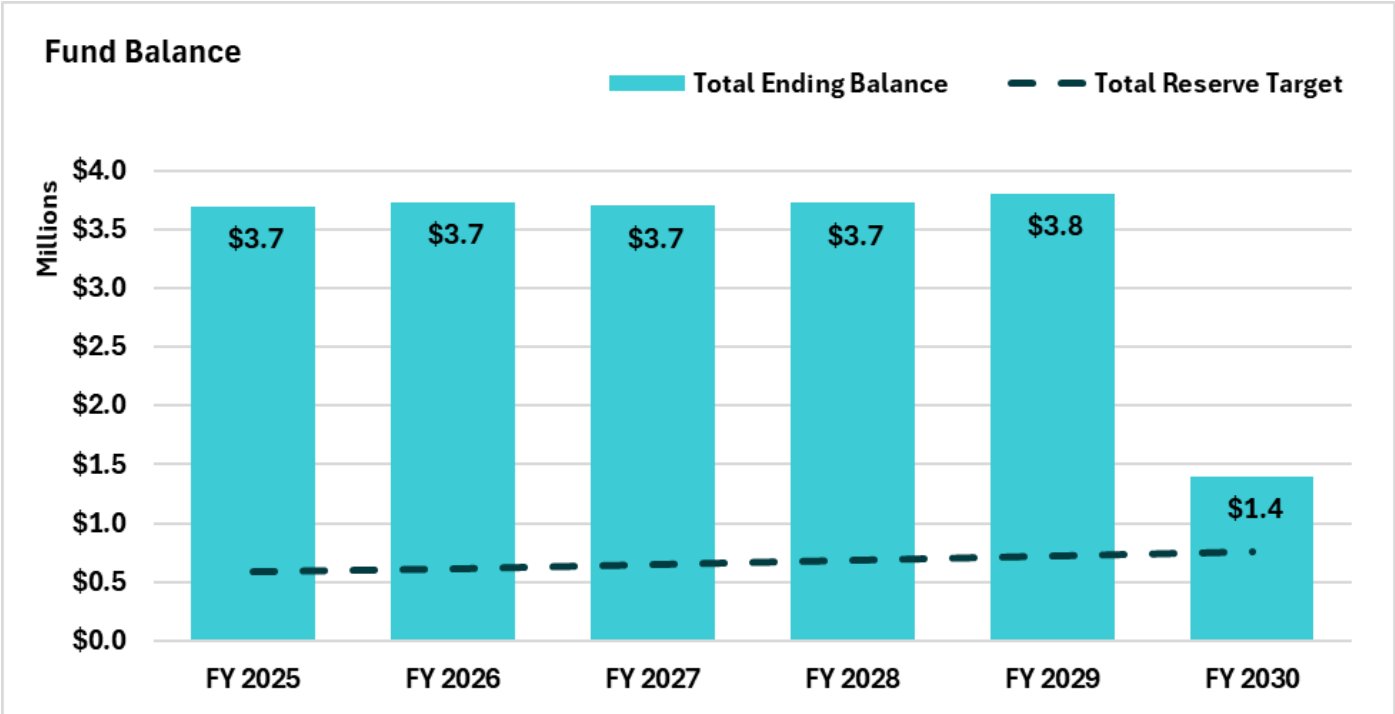


Figure 10-3 shows the combined fund (both the General Fund and the Accumulative Capital Outlay Fund) balances. Their combined reserve target is shown as the dashed lines. The combined ending balances for the General and ACO funds meet the reserve target in all years of the study. The combined fund balance assumes there can be transfers between the two funds.

Figure 10-3: District 37 Projected Fund Ending Balances



11. District 37 Cost of Service

11.1. Allocation of Functionalized Expenses to Cost Components

The COS analysis was developed for the purpose of complying with Proposition 218's requirement to establish rates that do not exceed the proportional cost of service on a parcel basis. In order to meet this requirement, the analysis uses the Base-Extra Capacity methodology as adjusted to meet District 37's particular circumstances. This methodology was developed by industry experts and professionals as a means to separate costs associated with average use, and those associated with above average – or extra-capacity-use, and to allocate costs accordingly. Further explanation and analysis of this methodology can be found in the AWWA's M1 Manual. The Base-Extra Capacity methodology was used to allocate system capacity designed to provide capacity to deliver water to fight fire, both through public hydrants and private fire lines.

District 37's operating costs were first functionalized because it allows the functionalized costs to be allocated to cost causation components. The functionalization is shown in **Appendix A**. To allocate the revenue requirement to the cost components we use the allocations shown in **Table 11-1**, which are based on the system-wide peaking factors. District staff provided the Max Day and Max Hour peaking factors (**Table 11-1**) for the water system, normalized to average day (Base) demand. The peaking factors were established in accordance with Section 64554 of the California Code of Regulations. Peaking factors are used to allocated costs to the Max Day and Max Hour cost components which are known as extra capacity. They are used to assign private fire capacity costs since fire capacity is a subset of extra capacity. Portions of a water system, such as tanks and distribution lines, are designed for Max Day and Max Hour flows – a portion of which are for fire flows. For example, a tank is often designed to meet Max Day flows plus fire flow. Allocating costs to Max Day and Max Hour cost components allows for an estimate of the cost associated with dedicated fire capacity in a water system which is derived in this section.

The system-wide peaking factors are used to derive the base, max day and max hour cost component allocation bases (i.e., percentages) shown. To understand the interpretation of the percentages, we first establish that base costs are costs associated with serving water during average flows. If the base allocation basis is used to allocate an expense, the costs associated with that expense are to meet average daily demand (base) related costs. Expenses that are allocated to the cost causation components using the maximum day bases attribute 50% (1.00/2.00) of the demand (and therefore costs) to base (average daily demand) use and the remaining 50% to maximum day (peaking) use. Expenses allocated using the maximum hour bases assume 25% (1.00/4.00) of costs are due to base demands, 25% due to max day ((2.00-1.00)/4.00)), and 50% ((4.00-2.00)/4.00) are due to max hour costs. Collectively the maximum day and hour cost components are known as peaking costs. These allocation bases are used to allocate the functionalized costs, shown in Column A of **Table 11-2**, to the cost causation components, shown in the column headers of **Table 11-2.**

Table 11-1: District 37 System-Wide Peaking Factors and Allocation to Cost Components

Line No.	Allocation Basis	Peaking Factor	Base	Max Day	Max Hour	Total
1	Base	1.00	100%	0%	0%	100%
2	Max Day	2.00	50%	50%	0%	100%
3	Max Hour	4.00	25%	25%	50%	100%

The above allocations are used to allocate costs to extra capacity costs in the following sections. For example, distribution storage costs, as shown in **Table 11-2**, are allocated using the Max Day allocation bases in **Table 11-1**. As shown this implies that 50% of distribution storage costs are associated with Max Day flows - a subset of which is fire flow. Fire flow (capacity) and storage tanks and distribution lines must be sized to provide fire flow. Therefore, the purpose of the cost allocations below is to estimate the cost of dedicated fire capacity in a water system. This is derived in Section 11.4.

Table 11-2 shows the allocation of the District's functionalized O&M expenses to the cost causation components. The percentages shown in Lines 1-9, Columns C through H are used to allocate the functionalized costs to each cost causation component. The allocation basis is selected based on the type of cost (function) for each line item. For example, Distribution (Line 5) is allocated using the max hour basis; in proportion to max hour allocations identified in **Table 11-1**. This is because the distribution system must be sized and operated to meet max hour demands. Distribution storage costs are allocated using the max day basis since tanks are sized to meet max day demands. Certain cost bases are identical to the cost causation components – such as Meter Service – and are easily allocated to the cost component with the same name. Line 19 shows the result of the allocation of all expenses to the cost causation components. Line 20 shows the total percentage allocated to each cost component. The percentages in Line 20 are used to allocate the operating revenue requirement in **Table 11-4.**

Table 11-2: District 37 Allocation of O&M Expenses to Cost Causation Components

Line No.	Function	Allocation Basis	Supply	Base	Max Day	Max Hour	Meter	Private Fire Backflow Admin & Meter Reading	General	Total
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
1	Supply	Supply	100%							100%
2	Pumping	Max Day		100%						100%
3	Treatment	Max Day		50%	50%					100%
4	Distribution Storage	Max Day		50%	50%					100%
5	Distribution	Max Hour		25%	25%	50%				100%
6	Conservation	Base		100%						100%
7	Customer Service & Meter Reading	Cust Service Meter					100%	0%		100%
8	Meter Maint	Maintenance					100%	0%		100%
9	General/Admin	General						1.356%	99%	100%

Line No.	O&M Expenses	Allocation Basis	Supply	Base	Max Day	Max Hour	Meter	Private Fire Backflow Admin & Meter Reading	General	Total
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
10	Supply	Supply	$450,840							$450,840
11	Pumping	Max Day		$924,369						$924,369
12	Treatment	Max Day		$51,733	$51,733					$103,466
13	Distribution Storage	Max Day		$7,255	$7,255					$14,510
14	Distribution	Max Hour		$23,926	$23,926	$47,852				$95,705
15	Conservation	Base		$17,029						$17,029
16	Customer Service & Meter Reading	Cust Service Meter					$116,516			$116,516
17	Meter Maint	Maintenance					$66,172			$66,172
18	General/Admin	General						$5,454	$396,722	$402,176
19	**Total Allocation to Cost Components ($)**		**$450,840**	**$1,024,313**	**$82,914**	**$47,852**	**$182,688**	**$5,454**	**$396,722**	**$2,190,783**
20	**Allocation of O&M Expenses to Cost Components (%)**		**20.6%**	**46.8%**	**3.8%**	**2.2%**	**8.3%**	**0.2%**	**18.1%**	**100%**

Table 11-3 shows the allocation of capital assets to the cost components which is used to allocate the capital revenue requirement, shown in **Table 11-4**, Column C, to the cost components. The capital revenue requirement is allocated in proportion to the percentages shown in **Table 11-3**. Since the CIP for District 37 is distribution related, the max hour allocation was used as shown, Line 5 of **Table 11-3**.

Table 11-3: District 37 Allocation of Capital Assets to Cost Causation Components

Line No.	Asset Allocation (A)	Base (B)	Max Day (C)	Max Hour (D)	Total (E)
1	Distribution	25%	25%	50%	100%

11.2. Revenue Requirement Determination

Table 11-4 shows the revenue requirement determination. Line 17 shows the total revenue required from rates, calculated by subtracting revenue offsets (Line 13) and adjustments (Line 16) from the operating and capital revenue requirements (Line 3). Raftelis calculated the revenue requirement for FY 2026 which is known as the test year. Lines 4-12 show the revenue offsets from non-rate revenues. Line 14 decreases the revenue requirement by the anticipated amount shown that will be used from reserves in the test year. Line 15 increases (it subtracts a negative number) the revenue requirement to account for the fact that impending rate adjustment will take place in January, half-way through the fiscal year, and the rates need to be derived to collect a year's worth of revenue as opposed to 6 months' worth.

Table 11-4: District 37 Revenue Requirement Determination

Line No.	Revenue Requirement - FY 2026 (A)	Operating (B)	Capital (C)	Total (D)
	Revenue Requirements			
1	O&M Expenses	$2,191,639		$2,191,639
2	Rate Funded CIP		$343,042	$343,042
3	**Gross Revenue Requirement**	**$2,191,639**	**$343,042**	**$2,534,681**
	Pass-through Revenue			
4	Future Wholesale Water Purchase Pass-through	$15,794		$15,794
5	Future Inflationary Pass-through	$49,500		$49,500
	Revenue Offsets			
	Waterworks Dist Gen #37 - N49			
6	580 Property Taxes	$176,750		$176,750
7	586 Revenue - Use of Money & Prop	$50,939		$50,939
8	588 Intergvmtl Revenue - State	$1,020		$1,020
9	592 Charges for Services	$44,440		$44,440
10	594 Miscellaneous Revenue	$1,010		$1,010
	Waterworks Dist ACO #37 - N50			$0
11	584 Fines Forfeitures & Penalties	$4,040		$4,040
12	592 Charges for Services	$203,010		$203,010
13	**Total - Revenue Offsets**	**$546,503**	**$0**	**$546,503**
	Adjustments			
14	Adjustment for Cash Balance	$30,116		$30,116
15	Adjustments to Annualize RateIncrease	($93,241)		($93,241)
16	**Total - Adjustments**	**($63,125)**	**$0**	**($63,125)**
17	**Net Revenue Requirement**	**$1,708,261**	**$343,042**	**$2,051,304**

11.3. Equivalent Meters

The concept of equivalent meters is used to allocate meter-related and fixed capacity related costs to customers in proportion to their potential water use. Using equivalent meters, instead of a total meter count, to distribute costs, accounts for the fact that larger meters impose greater demands on the system and are more expensive to install, maintain, and replace than smaller meters. Equivalent meters are used in calculating the service charge which is a fixed charge.

The number of equivalent meters is based on meter hydraulic capacity. Equivalent meters represent the potential demand on the water system in terms of the base meter size – which is the smallest most common meter. To calculate the number of equivalent meters, hydraulic capacity ratios are calculated by dividing each meter's hydraulic capacity by the base meter hydraulic capacity. The capacity ratio is calculated using the meter's capacity in gallons per minute (GPM) provided in the AWWA M1 Manual Principles of Water Rates, Fees, and Charges (7th Edition).

The base meter is the most common meter, in this case, a 3/4-inch x 1-inch meter. **Table 11-5** shows the number of meters by class and meter size. **Table 11-6** shows the calculation of the number of equivalent meters. Column B in **Table 11-6**, shows the hydraulic capacity ratios, which is the potential flow through each meter size compared to a 5/8-inch or ¾-inch meter as established by the American Water Works Association (AWWA) hydraulic capacity ratios. For example, the flow through a 2-inch meter is 5 times that of a 3/4-inch meter. **Table 11-6** shows the total equivalent meters in Column I. It is calculated by taking the number of meters by size in **Table 11-5** (Column B-G) and multiplying by the corresponding capacity ratio, Column B in **Table 11-6**. The total equivalent meters is used as the denominator in developing the monthly fixed service charges.

Table 11-5: District 37 Number of Meters

Line No.	Meter Size (A)	Number of Meters: Residential Single Family (B)	Multi-Family (C)	Construction (D)	Government (E)	Industrial (F)	Commercial (G)	Total (H)
1	3/4"	290		12				**302**
2	3/4"x1"	774	2	11				**787**
3	1"	255	2	11	2			**270**
4	1.5"	19		5	1	1		**26**
5	2"	2	3	11	11			**27**
6	2.5"				1		7	**8**
7	6"		2		2		1	**5**
8	8"			1				**1**
9	**Total**	**1,340**	**9**	**51**	**17**	**1**	**8**	**1,426**

Table 11-6: District 37 Number of Equivalent Meters

Line No.	Meter Size (A)	Capacity Ratio (B)	Number of Equivalent Meters: Residential Single Family (C)	Multi-Family (D)	Construction (E)	Government (F)	Industrial (G)	Commercial (H)	Total (I)
1	3/4"	1.0	290		12				**302**
2	3/4"x1"	1.0	774	2	11				**787**
3	1"	2.0	510	4	22	4			**540**
4	1.5"	3.0	57		15	3	3		**78**
5	2"	5.0	10	15	55	55			**135**
6	2.5"	7.0				7		49	**56**
7	6"	33.0		66		66		33	**165**
8	8"	53.0			53				**53**
9	**Total**		**1,641**	**87**	**168**	**135**	**3**	**82**	**2,116**

11.4. Private Fire Cost Determination

Water systems deliver water to property in sufficient quantities and pressure to fight fires in two ways: public fire hydrants which are designed to deliver water to properties within their perimeter, and private fire lines for private fire structures with sprinkler systems for fire suppression that are designed to deliver water to a single parcel or structure.

The peaking factors and cost allocations to the max day and max hour cost components are used to calculate private fire costs. Raftelis uses the potential flow of private fire lines and public hydrants, as recommended by the AWWA, to determine the share of total fire costs allocated to private fire connections and public connections (hydrants).

Table 11-7 shows the potential demand for private and public fire lines. Each fire connection size has a potential fire demand, much like the hydraulic capacity factor of a water meter. The count of connections by size (Column D) is multiplied by the fire flow demand factor (Column C) to derive total equivalent fire demand units (Column E). The Hazen-Williams equation is used to calculate equivalent potential demand in Column C by raising the pipeline's diameter to the power of 2.63.

Table 11-7: District 37 Private Fire Connections

Line No.	Private Fireline Size (A)	Private Fire Connection Size (B)	Potential Demand (C)	Number of Private Fire Connections (D)	Private Fire Potential Demand (E)
1	.75	3/4"	0.47		
2	1	1"	1.00		
3	1.5	1.5"	2.90		
4	2	2"	6.19		
5	3	3"	17.98		
6	4	4"	38.32	3	115
7	6	6"	111.31	3	334
8	8	8"	237.21	4	949
9	10	10"	426.58	2	853
10	12	12"	689.04		
11	**Total Fire Lines**			**12**	**2,251**
Line No.	**Public Fireline Size (A)**	**Public Fireline Connection Size (B)**	**Potential Demand (C)**	**Number of Hydrants (D)**	**Public Fire Potential Demand (E)**
12	6	6"	111.31	430	47,864
13	**Total Fire Flow Potential Demand**				**50,115**
14	**Percent Allocated to Private Fire Flow**				**4.5%**
15	**Percent Allocated to Public Fire Flow**				**95.5%**
16	**Total Fire Capacity**				**100.0%**

Table 11-7 also shows the equivalent potential demand from public fire hydrants in E12. The potential demand for a fire hydrant is based on the diameter of the main raised to the power of 2.63 to calculate the potential demand shown in Column C. The total equivalent potential demand (Column E) is calculated by multiplying the number of hydrants (Column D) by the potential demand (Column C). Lines 14 and 15 show

the proportion of fire capacity (which is a subset of *extra* capacity) allocated to private fire lines and public hydrants.

Table 11-8 derives the portion of *extra* capacity that is for public and private fire flow in Line 11 and 12. Line 1 and 2 show flow and duration assumptions for a fire of 2,500 gallons per minute for 2 hours. Line 3 derives the potential max day fire capacity by converting 2,500 GPM to gallons per hour, then multiplying by the two-hour duration of a typical fire and then converting to hcf per day as shown in B3. C3 is the max hour capacity, multiplying 2,500 gpm by 24 hours less the capacity already allocated to Max Day in Column B. Line 5 shows the percentage of the District's extra capacity allocated to private fire as derived in E14 of **Table 11-7**. Line 7 is the private fire capacity in hcf/day derived by multiplying Line 3 by Line 5. Line 10 adds the domestic potable water extra capacity so that we may calculate the proportion of capacity for private fire which is shown in Line 12. It is derived as Line 7 divided by Line 10. These percentages are used to assign costs to private fire customers.

Table 11-8: District 37 Calculation of Fire Service Capacity

Line No.	Fire Flow Capacity (A)	Fire 1 (B)	Fire 2 (C)
1	**Hours for Fire**	2.0	
2	**Gals/minute**	2,500	
		Max Day	Max Hour*
3	Capacity Demanded for Fire (hcf/day)	401	4,412
4	Cost to Public Fire	95.5%	95.5%
5	Cost to Private Fire	4%	4%
6	Public Fire	383	4,214
7	Private Fire	18	198
8	Total Fire Flow Capacity	401	4,412
9	Potable Water Demand Extra Capacity	1,507	4,520
10	Total Extra Capacity - Fire and Potable (hcf/day) * In excess of Max Day	1,908	8,932
11	**Public Fire**	**20.1%**	**47.2%**
12	**Private Fire**	**0.9%**	**2.2%**
13	**Total Fire Flow**	**21.0%**	**49.4%**

11.5. Units of Service

The end goal of a cost-of-service analysis is to distribute the revenue requirement to each cost component and then to each customer class. To do so, we must first calculate the units of service. **Table 11-9** shows the derivation of the units of service which are used in calculating unit costs. Projected FY 2026 water use was divided by 365 days to determine daily use (Column B & C). The max day and max hour capacities are calculated by multiplying the average daily use by the max day or max hour peaking factor. This results in the total max day capacity, with extra capacity calculated by subtracting the average daily use from the total max day capacity. The same calculations are performed for the total max hour and extra max hour capacity. The values shown are rounded to the nearest hcf. Columns J and K show the total number of customers and equivalent meters for potable water. Equivalent meter counts were derived in **Table 11-6**.

Table 11-9: District 37 Units of Service

Line No.	Customer Class (A)	Annual Use (hcf) (B)	Average Daily Use (hcf/day) (C)	Max Day			Max Hour			Number of Equiv. Meters (J)	Number of Customers (K)	Number of Private Fire Customers (L)
				Peaking Factor (D)	Total Capacity (hcf/day) (E)	Extra Capacity (hcf/day) (F)	Peaking Factor (G)	Total Capacity (hcf/day) (H)	Extra Capacity (hcf/day) (I)			
1	All Classes	661,464	1,812	2.00	3,624	1,812	4.00	7,249	5,437	2,116	1,426	12

11.6. Revenue Requirement Allocation to Cost Component

Table 11-10 shows the allocation of the revenue requirement to the cost components. Line 1 shows the allocation of the operating revenue requirement, from Line 17 of **Table 11-4**, to the cost components using the percentages on Line 20 of **Table 112**. Line 5 allocates General costs to all cost components in proportion to the percentages shown in Line 4 which is the proportion of each cost component not including general and admin costs. Line 7 reallocates public fire flow costs to the meter capacity cost component , meaning these costs will be collected through the fixed meter charge. It is calculated by the percentages shown in Line 11 of **Table 11-8** multiplied by the max day and max hour values in Line 6. The same calculation is done for private fire, but with the private fire percentages in Line 12 of **Table 11-8.** Line 10 shows a reallocation of capital costs that will be collected through the Facilities Construction Surcharge (ACO charge). Line 12 shows a reallocation of fixed base, max day and max hour costs to the meter component (charge). A portion of fixed capacity costs are collected through the fixed Service Charge so District 37 can meet its revenue stability goals. District 37 currently collects approximately 39% and proposes collecting approximately 35% fixed revenue. Line 13 shows the final cost allocation to the cost components. Line 14 shows the units of service, derived in **Table 11-9**, which are used to calculate the unit rates ($/hcf) in Line 15, such as the meter charge ($/year) in F15, and ACO charge ($/hcf) in I15. The meter charge is the cost in F13 divided by the units of service in F14 divided by 12. The rates are derived to collect the total amount shown in K13.

Table 11-10: District 37 Revenue Requirement Allocation to Cost Components

Line No.	Adjusted Cost of Service (A)	Supply (B)	Base (C)	Max Day (D)	Max Hour (E)	Meter (F)	Private Fire (G)	Private Fire Backflow Admin & Meter Reading (H)	Capital Facility Surcharge (I)	General (J)	Total (K)
1	Operating Revenue Requirement	$351,542	$798,707	$64,652	$37,313	$142,451		$4,252		$309,344	$1,708,261
2	Capital Revenue Requirement		$85,761	$85,761	$171,521						$343,042
3	**Total - Cost of Service**	**$351,542**	**$884,468**	**$150,413**	**$208,834**	**$142,451**	**$0**	**$4,252**		**$309,344**	**$2,051,304**
4	Allocation of General Costs (%)	20.2%	50.8%	8.6%	12.0%	8.2%	0.0%	0.2%			100.0%
5	Allocation of General Costs	$62,428	$157,067	$26,711	$37,086	$25,297	$0	$755		($309,344)	$0
6	**Total - Adjusted Cost of Service**	**$413,970**	**$1,041,535**	**$177,124**	**$245,920**	**$167,748**	**$0**	**$5,008**		**$0**	**$2,051,304**
7	Public Fire Prot. to Meter Charge			($35,566)	($116,012)	$151,577					
8	Private Fire Prot. to Private Fire			($1,673)	($5,456)		$7,128				
9	**Subtotal**	**$413,970**	**$1,041,535**	**$139,885**	**$124,452**	**$319,325**	**$7,128**	**$5,008**		**$0**	**$2,051,304**
10	**Facility Surcharge**		($100,196)	($13,457)					$113,653		
11	**Subtotal**	**$413,970**	**$941,339**	**$126,429**	**$124,452**	**$319,325**	**$7,128**	**$5,008**	**$113,653**	**$0**	**$2,051,304**
12	**Reallocation of Fixed Costs**		($317,043)	($42,581)	($41,916)	$401,540					
13	**Subtotal**	**$413,970**	**$624,296**	**$83,847**	**$82,537**	**$720,865**	**$7,128**	**$5,008**	**$113,653**	**$0**	**$2,051,304**
14	**Units of Service**	**661,464**	**661,464**	**661,464**	**661,464**	**2,116**	**2,251**	**144**	**661,464**		
		Use	Use	Use	Use	Equivalent Meters	Prvt Pot Demand	Annual Private Fire Bills	Use		
15	**Unit Rate**	**$0.63**	**$0.94**	**$0.13**	**$0.12**	**$340.67**	**$3.17**	**$34.77**	**$0.17**		

12. District 37 Rate Derivation

12.1. Existing Rate Structure and Rates

District 37's current rate structure consists of a fixed and volumetric component for all customers. The fixed service charges are a monthly Service Charge and Fire Line Service Charge. The Private Fire Service Charge is only for those customers with private fire flow connections. The Quantity Charges are uniform volumetric rates and are charged for water use in excess of 5 hcf per billing unit per month allowance. The District also has a uniform Facilities Construction (ACO) Surcharge rate per hcf on all water consumption for all customer classes. All outside District customers are charged a rate 1.5 times the equivalent inside District rate.

12.2. Monthly Service Charge

The fixed monthly Service Charge by meter size recovers customer costs, meter reading, meter maintenance costs and fixed costs associated with maintaining the water system. The fixed Service Charge recognizes the fact that the District incurs fixed costs related to maintaining/replacing meters and maintaining fixed assets such as distribution pipelines and distribution storage reservoirs. These costs are distributed to customers based on their potential demand based on meter size. A portion of these costs are meter maintenance costs which increase with meter size, as it takes less time and resources to repair and maintain smaller meters compared to a larger meter.

The Districts pass-through the increase in wholesaler water purchase costs and recently implemented a pass-through rate in May of FY 2025. The Districts will continue to pass-through wholesale and inflationary pass-through charges to recover the difference in projected operating expenditures and wholesale water purchases year over year due to wholesaler increases and inflation. The recently implemented May pass-through is included in the current monthly fixed Service Charge shown in **Table 12-1**.

Table 12-1 shows the current and proposed monthly fixed charge by meter size. The ***yearly*** meter charge, for a 5/8-inch or ¾-inch meter was derived in F15 of **Table 11-10**. The Meter Charge for larger meters is derived by multiplying the capacity ratio in Column C by the charge for a 3/4-inch meter. It reflects the fact that larger meters have the potential to demand more capacity compared to smaller meters. The potential capacity demanded is proportional to the potential flow through each meter size (as established by the AWWA hydraulic capacity ratios). The ratios, shown in Column C, show the potential flow through each meter size compared to the flow through a 3/4-inch meter. Allocating capacity costs by meter size is a common way to recover fixed costs and increase revenue stability. District 37's most common small meter is the ¾" (3/4" x 1") meter and it is common to assign capacity ratios based on the most common small meter. District 37 no longer issues 5/8" meters. Therefore, the ¾" meter is considered the baseline small meter

Table 12-1: District 37 Current & Proposed Monthly Fixed Charge

Line No.	Meter Size (A)	Meter Count (B)	AWWA Capacity Ratio (C)	Meter Costs (D)	Customer Costs	Proposed Monthly Charge ($ / Month) (E)	Current Monthly Charge ($ / Month) (F)	Difference ($) (G)	Difference (%) (H)
1	5/8"x3/4"		1.00	$28.39	$0.00	**$28.39**	**$28.389**	$0.00	0.0%
2	3/4"	302	1.00	$28.39	$0.00	**$28.39**	**$28.389**	$0.00	0.0%
3	3/4"x1"	787	1.00	$28.39	$0.00	**$28.39**	**$28.389**	$0.00	0.0%
4	1"	270	2.00	$56.78	$0.00	**$56.78**	**$56.777**	$0.00	0.0%
5	1.5"	26	3.00	$85.17	$0.00	**$85.17**	**$85.166**	$0.00	0.0%
6	2"	27	5.00	$141.95	$0.00	**$141.95**	**$141.943**	$0.01	0.0%
7	2.5"	8	7.00	$198.73	$0.00	**$198.73**	**$198.720**	$0.01	0.0%
8	3"		11.00	$312.28	$0.00	**$312.28**	**$312.275**	$0.00	0.0%
9	4"		17.00	$482.62	$0.00	**$482.62**	**$482.607**	$0.01	0.0%
10	6"	5	33.00	$936.85	$0.00	**$936.85**	**$936.825**	$0.02	0.0%
11	8"	1	53.00	$1,504.64	$0.00	**$1,504.64**	**$1,504.598**	$0.04	0.0%
12	10"		77.00	$2,185.99	$0.00	**$2,185.99**	**$2,185.925**	$0.06	0.0%
13	12"		100.00	$2,838.94	$0.00	**$2,838.94**	**$2,838.864**	$0.08	0.0%

12.3. Private Fire

Private Fire monthly fixed Service Charges are derived in **Table 12-2** by private fire line size. The yearly private fire charge per unit of potential demand was derived in G15 of **Table 11-10**. The proposed fire charges by connection size are derived in Column E in **Table 12-2** by multiplying the potential demand in Column C by the unit cost in G15 of **Table 11-10** divided by twelve. Column F adds a backflow and administration charge which was derived in Column H of **Table 11-10**.

Table 12-2: District 37 Current & Proposed Private Fire Charge

Line No.	Private Fire Connection Size (Inches) (A)	Count (B)	Potential Fire Capacity (C)	Potential Fire Demand (D)	Proposed Monthly Private Fire Charge (E)	Proposed Private Fire Backflow Admin & Meter Reading (F)	Total Private Fire Charge (G)	Current Monthly Private Fire Charge (H)
1	4"	3	38.32	114.96	$10.11	$34.77	$44.89	$82.328
2	6"	3	111.31	333.93	$29.38	$34.77	$64.15	$110.717
3	8"	4	237.21	948.83	$62.60	$34.77	$97.37	$139.106
4	10"	2	426.58	853.16	$112.58	$34.77	$147.35	$195.884
5	12"	0	689.04	-	$181.84	$34.77	$216.62	$309.440
6	**Total Fire Lines**	**12**						

12.4. Quantity Charge Rates ($/hcf)

The District's Quantity Charge (volumetric) rate is charged for water use beyond 5 hcf per billing unit per month. The District will discontinue this practice and charge for all water use. This lowers the Quantity Charge since the revenue required is divided by all water use instead of only water use above 5 hcf. The Quantity Charge (volumetric) rate recovers the cost components described below.

1. Water Supply
2. Pumping
3. Base costs
4. Peaking (max day and max hour costs)

Water Supply costs are associated with obtaining and treating water to make it ready for transmission and distribution.

Pumping costs are costs associated with pumping groundwater and pumping water through the distribution system.

Base costs are the operating and capital costs associated with delivering water to all customers at a constant average rate of use – also known as serving customers under average daily demand conditions.

Peaking costs, extra capacity or max day and max hour costs, represent costs incurred to meet customer peak demands more than a base use (or in excess of average daily demand). Thes costs are only identified to assess private fire service charges. Fire capacity is a subset of what is known as extra capacity.

Table 12-3 shows current and proposed inside District Quantity Charge rates. Because proposed rates no longer include a 5 hcf allowance, the Quantity Charge rate decreases compared to the current rate.

Table 12-3: District 37 Current & Proposed Quantity Charge Rate

Line No.	Description (A)	Proposed Inside District Rate ($ / hcf) (B)	Current Inside District Rate ($ / hcf) (C)	Difference (%) (D)
1	Volumetric Revenue Requirement	$1,204,651		
2	Volume Sold (hcf)	661,464		
3	**Quantity Charge Rate (All Classes, $ / hcf)**	**$1.82**	**$1.855**	**-1.8%**

12.5. Facilities Construction Surcharge Rate

The District also charges a uniform Facilities Construction Surcharge (ACO) rate to fund repair and replacement capital improvement projects. The costs collected via the ACO rate were identified in Line 10 of **Table 11-10**. District 37 currently recovers approximately 34% of capital related costs through the Facilities Construction Surcharge. The remainder of capital costs are recovered through the Service Charge and Quantity Charge. The portion of capital costs recovered from the Facilities Construction Surcharge is dedicated to capital projects. **Table 12-4** shows the current Facilities Construction Surcharge and the derivation of the proposed Facilities Construction Surcharge.

Table 12-4: District 37 Current & Proposed Facilities Construction Surcharge

Line No.	Description (A)	Proposed Inside District Rate ($ / hcf) (B)	Current Inside District Rate ($ / hcf) (C)	Difference (%) (D)
1	Facilitites Construction Surcharge Revenue Requirement	$113,653		
2	Volume Sold (hcf)	661,464		
3	**Facilities Construction (ACO) Surcharge**	**$0.17**	**$0.175**	**-1.8%**

12.6. Proposed Five Year Rates

Table 12-5 shows the propose five-year rates and charges. The rates and charges for FY 2026 were derived using the cost-of-service analysis above and the out years are derived by escalating the FY 2026 rates and charges.

Table 12-5: District 37 Proposed Five-Year Rate Schedule

Line No.	Rate Schedule			2026	2027	2028	2029	2030
1	Revenue Adjustments (%)	10.0%	3.0%		3.0%	3.0%		3.0%
2	Effective Month			January	January	January	January	January

Line No.	Monthly Service Charges	Current	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029	Proposed FY 2030
3	5/8"x3/4"	$28.389	$28.39	$29.24	$30.12	$31.02	$31.95
4	3/4"	$28.389	$28.39	$29.24	$30.12	$31.02	$31.95
5	3/4"x1"	$28.389	$28.39	$29.24	$30.12	$31.02	$31.95
6	1"	$56.777	$56.78	$58.48	$60.23	$62.04	$63.90
7	1.5"	$85.166	$85.17	$87.73	$90.36	$93.07	$95.86
8	2"	$141.943	$141.95	$146.21	$150.60	$155.12	$159.77
9	2.5"	$198.720	$198.73	$204.69	$210.83	$217.15	$223.66
10	3"	$312.275	$312.28	$321.65	$331.30	$341.24	$351.48
11	4"	$482.607	$482.62	$497.10	$512.01	$527.37	$543.19
12	6"	$936.825	$936.85	$964.96	$993.91	$1,023.73	$1,054.44
13	8"	$1,504.598	$1,504.64	$1,549.78	$1,596.27	$1,644.16	$1,693.48
14	10"	$2,185.925	$2,185.99	$2,251.57	$2,319.12	$2,388.69	$2,460.35
15	12"	$2,838.864	$2,838.94	$2,924.11	$3,011.83	$3,102.18	$3,195.25

Line No.	Private Fire Service Charges	Current	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029	Proposed FY 2030
16	4"	$82.328	$44.89	$46.23	$47.62	$49.05	$50.52
17	6"	$110.717	$64.15	$66.07	$68.05	$70.09	$72.19
18	8"	$139.106	$97.37	$100.30	$103.31	$106.41	$109.60
19	10"	$195.884	$147.35	$151.77	$156.32	$161.01	$165.84
20	12"	$309.440	$216.62	$223.11	$229.80	$236.69	$243.79

Line No.	Quantity Charges & Facilities Construction Surcharge	Current Inside District Rate ($ / hcf)	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029	Proposed FY 2030
21	Quantity Charge	$1.855	$1.82	$1.87	$1.93	$1.99	$2.05
22	Facilities Construction Surcharge Rate	$0.175	$0.17	$0.18	$0.19	$0.20	$0.21

12.7. Drought Rates

The steps involved in calculating drought rates are:

1. Calculate the expected decreased water use during each stage of a drought.
2. The decreased water use leads to decreased revenue. Step 2 involves estimating the lost revenue.
3. Step 3 estimates the District's water purchase cost savings and increased costs such as public outreach if applicable.
4. Step 4 sums the lost revenue and increased costs and compares it to projected drought revenue for each drought stage.
5. The percent difference between the two is the percent increase for each stage of the drought.

The drought surcharge is a percentage increase on the Quantity Charge rates. The following tables derive the drought percentage increase for each drought stage.

12.7.1. Decreased Water Use

Table 12-6 shows the projected water use at each drought stage. The percentage reductions are 10, 20, 30, 40, 50 and 60% respectively and are taken from the District's drought contingency plan.

Table 12-6: District 37 Projected Water Use for Each Drought Stage

Total Use	Baseline	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Total Use	661,464	595,318	529,171	463,025	396,878	330,732	264,586

12.7.2. Lost Revenue

Table 12-7 show the lost revenue for each stage of the drought. It is calculated by multiplying the Quantity Charge rate by the projected use in **Table 12-6**.

Table 12-7: District 37 Lost Revenue for Each Drought Stage

	Baseline	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Total Commodity Revenue	$1,203,864	$1,083,478	$963,092	$842,705	$722,319	$601,932	$481,546
Lost Revenue		$120,386	$240,773	$361,159	$481,546	$601,932	$722,319
% Change		10%	20%	30%	40%	50%	60%

12.7.3. Water Purchase Cost Savings and Increased Drought Costs

Table 12-8 shows the projected water purchase cost savings. During a drought the District purchases less water.

It is calculated as a percentage of the baseline (non-drought) water purchase costs using the same percentages as the required water use cutbacks (10%, 20%, etc.).

Table 12-8: District 37 Water Purchase Cost Savings

Water Production/Purchase	Water Purchase Budget	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Supply Cost	$450,422	$405,379	$360,337	$315,295	$270,253	$225,211	$180,169
Savings in Water Purchase Cost		$45,042	$90,084	$135,126	$180,169	$225,211	$270,253

Table 12-9 shows the anticipated public outreach costs associated with notifying customers of required water use cutbacks. The costs were provided by the District.

Table 12-9: District 37 Drought Public Outreach Costs

	Total	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Drought Costs	$3,404	$170	$170	$340	$340	$1,191	$1,191

Table 12-10 shows the calculation of the percentage increase required during each drought stage. It sums the lost revenue, the water purchase cost savings and drought costs. The total is the net lost revenue during a drought. The drought revenue requirement is the sum of the expected drought revenue and the lost revenue. The percentage increase is the revenue requirement divided by the expected volumetric revenue. Looking at Stage 2 as an example, the 15.9% increase can be interpreted as follows: the district could expect $963,092 during a Stage 2 drought if customers curtailed water use. It would need $158,993 to cover its costs. Therefore, it can increase its volumetric rate by 15.7%.

Table 12-10: District 37 Final Drought Percentage Increase Calculation

Water Production/Purchase	Baseline	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Lost Revenue	$0	$120,386	$240,773	$361,159	$481,546	$601,932	$722,319
Water Purchase Savings	$0	($45,042)	($90,084)	($135,126)	($180,169)	($225,211)	($270,253)
Drought Costs	$3,404	$170	$170	$340	$340	$1,191	$1,191
Total Lost Revenue	**$3,404**	**$75,514**	**$150,859**	**$226,373**	**$301,718**	**$377,913**	**$453,257**
Expected Revenue	$1,203,864	$1,083,478	$963,092	$842,705	$722,319	$601,932	$481,546
Drought Rev Requirement	$1,203,864	$1,158,993	$1,113,950	$1,069,078	$1,024,036	$979,845	$934,803
% Increase		**7.0%**	**15.7%**	**26.9%**	**41.8%**	**62.8%**	**94.1%**

Proposed drought rates are shown in **Table 12-11.** Note that the District would increase the Quantity Charge rate that is current at the time of the drought by the percentages shown in **Table 12-10.**

Table 12-11: District 37 Proposed Drought Rates

Fiscal Year	Normal Conditions	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
FY 2026	$1.82	$1.95	$2.11	$2.31	$2.58	$2.96	$3.53
FY 2027	$1.87	$2.00	$2.16	$2.37	$2.65	$3.04	$3.63
FY 2028	$1.93	$2.06	$2.23	$2.45	$2.74	$3.14	$3.75
FY 2029	$1.99	$2.13	$2.30	$2.52	$2.82	$3.24	$3.86
FY 2030	$2.05	$2.19	$2.37	$2.60	$2.91	$3.34	$3.98

13. District 37 Bill Impacts

Table 13-1 shows single family residential monthly bill impacts for a 5/8" x 3/4" meter at low use (17 hcf), average use (34 hcf), and high use (68 hcf).

Table 13-1: District 37 Bill Impacts

Single Family Residential Monthly Bill Impacts	Monthly Usage (hcf)	Current Monthly Bill	Proposed Monthly Bill	Difference ($)	Difference (%)
Low Use	17	$53.62	$62.22	$8.60	16.0%
Average Use	34	$88.13	$96.05	$7.92	9.0%
High Use	68	$157.15	$163.71	$6.56	4.2%

Appendix A: Functionalization of O&M for Districts 21, 36, & 37

Waterworks Dist Gen #21 - N18	Supply	Pumping	Treatment (If Applicable)	Distribution Storage	Distribution	Conservation	Customer Service & Meter Reading	Meter Maint	General/Admin
W001 - Water Quality Monitoring									
110 Labor					95%				5%
140 Contract Payments					95%				5%
150 Miscellaneous Charges					95%				5%
W002 - Purchased Water (Purchased from LADWP)									
150 Miscellaneous Charges	100%								
W004 - Administration Support									
110 Labor									100%
120 Equipment									100%
130 Materials									100%
140 Contract Payments									100%
150 Miscellaneous Charges									100%
999 No Genrl Reptg Catg (Do Not Budget)									100%
W005 - Customer Billing and Service									
110 Labor							75%		25%
120 Equipment									100%
130 Materials							85%		15%
140 Contract Payments							85%		15%
150 Miscellaneous Charges							85%		15%
999 No Genrl Reptg Catg (Do Not Budget)							85%		15%
W007 - OMR - Equipment									
110 Labor					80%				20%
120 Equipment					80%				20%
130 Materials					80%				20%
140 Contract Payments					80%				20%
150 Miscellaneous Charges					80%				20%
182 Capital Assets - Equipment					80%				20%
200 Operating Transfers					80%				20%
999 No Genrl Reptg Catg (Do Not Budget)					80%				20%
W008 - Mapping Services & Annexations									
110 Labor									100%
W010 - Claims&Litigatn, Pub. Rec Req&EWR									
150 Miscellaneous Charges									100%
W014 - Damage Claims									
110 Labor									100%
120 Equipment									100%
130 Materials									100%
150 Miscellaneous Charges									100%

W015 - OMR-Water Distribution Systems									
110 Labor					95%				5%
120 Equipment					95%				5%
130 Materials					41%			28%	31%
140 Contract Payments					90%			5%	5%
150 Miscellaneous Charges					95%				5%
W016 - OMR-Pumping Plants									
110 Labor		100%							
120 Equipment		100%							
130 Materials		100%							
140 Contract Payments		100%							
150 Miscellaneous Charges		100%							
W017 - Information Services									
110 Labor							45%		55%
120 Equipment							0%		100%
140 Contract Payments							50%		50%
150 Miscellaneous Charges							50%		50%
W018 - Other Charges - S & S									
110 Labor									100%
W020 - Water Supply Planning & Res Mgmt									
110 Labor	100%								
120 Equipment	100%								
140 Contract Payments	100%								
	100%								
W030 - Pumping Plants - Power									
150 Miscellaneous Charges		100%							
W043 - OMR-Tanks									
110 Labor				100%					
140 Contract Payments				100%					
150 Miscellaneous Charges				100%					
110 Labor						100%			
120 Equipment						100%			
140 Contract Payments						100%			
150 Miscellaneous Charges						100%			
Subtotal N18	**$95,673**	**$37,032**	**$0**	**$5,841**	**$115,377**	**$1,106**	**$17,887**	**$1,028**	**$29,911**
Waterworks Dist ACO #21 - N19									
W004 - Administration Support									
150 Miscellaneous Charges									100%
W013 - Construction of Water System Fac									
110 Labor					100%				
150 Miscellaneous Charges					100%				
Subtotal N19	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$219**
Total O&M	**$95,673**	**$37,032**	**$0**	**$5,841**	**$115,377**	**$1,106**	**$17,887**	**$1,028**	**$30,130**

District 36 Functionalization of O&M

Waterworks Dist Gen #36 - N46	Supply (WBMWD)	Pumping	Treatment (If Applicable)	Distribution Storage	Distribution	Conservation	Customer Service & Meter Reading	Meter Maint	General/Admin
W001 - Water Quality Monitoring									
110 Labor			30%		13%				57%
120 Equipment			100%						
130 Materials			100%						
140 Contract Payments									100%
150 Miscellaneous Charges									100%
W002 - Purchased Water									
150 Miscellaneous Charges	100%								
W004 – Administration Support									
110 Labor									100%
120 Equipment									100%
130 Materials									100%
140 Contract Payments									100%
150 Miscellaneous Charges									100%
999 No Genrl Reptg Catg (Do Not Budget)									100%
W005 - Customer Billing and Service									
110 Labor							90%		10%
120 Equipment									100%
130 Materials							90%		10%
140 Contract Payments							100%		0%
150 Miscellaneous Charges							90%		10%
999 No Genrl Reptg Catg (Do Not Budget)							100%		0%
110 Labor									100%
120 Equipment									100%
130 Materials									100%
140 Contract Payments									100%
150 Miscellaneous Charges									100%
182 Capital Assets - Equipment		12%	44%		44%				
200 Operating Transfers		12%	44%		44%				
999 No Genrl Reptg Catg (Do Not Budget)									100%
W008 - Mapping Services & Annexations									
110 Labor									100%
W010 - Claims&Litigatn, Pub. Rec Req&EWR									
150 Miscellaneous Charges									100%
170 Other Charges									100%
110 Labor					100%				
120 Equipment					100%				
130 Materials					100%				
150 Miscellaneous Charges					100%				
W015 - OMR-Water Distribution Systems									
110 Labor					41%			28%	31%

120 Equipment					41%			28%	31%
130 Materials					41%			28%	31%
140 Contract Payments					90%			5%	5%
150 Miscellaneous Charges					0%				100%
110 Labor		100%							
120 Equipment		100%							
130 Materials		100%							
140 Contract Payments		100%							
150 Miscellaneous Charges		100%							
999 No Genrl Reptg Catg (Do Not Budget)		100%							
W017 - Information Services									
110 Labor							45%		55%
120 Equipment									100%
140 Contract Payments							100%		
150 Miscellaneous Charges							100%		
W018 - Other Charges - S & S									
110 Labor									100%
W020 - Water Supply Planning & Res Mgmt									
110 Labor	5%								95%
120 Equipment									100%
140 Contract Payments									100%
150 Miscellaneous Charges									100%
170 Other Charges									100%
W030 - Pumping Plants - Power									
150 Miscellaneous Charges		100%							
W036 - New Water Service Engrng & Insp									
110 Labor							90%		10%
150 Miscellaneous Charges							90%		10%
110 Labor				100%					
140 Contract Payments				100%					
W043 - OMR-Tanks									
110 Labor				100%					
140 Contract Payments				100%					
150 Miscellaneous Charges				100%					
W044 - Water Conservation									
110 Labor						100%			
120 Equipment						100%			
140 Contract Payments						100%			
150 Miscellaneous Charges						100%			
Subtotal N46	**$683,059**	**$517,597**	**$86,557**	**$88,402**	**$256,048**	**$12,861**	**$134,389**	**$87,815**	**$452,248**

Waterworks Dist ACO #36 - N47

W004 - Administration Support									
150 Miscellaneous Charges									100%
W013 - Construction of Water System Fac									
110 Labor		50%		50%					
120 Equipment		50%		50%					
150 Miscellaneous Charges		50%		50%					

170 Other Charges				100%					
184 Capital Assets - Infrastructure		50%		50%					
200 Operating Transfers (removed 500k)									100%
Subtotal N47	**$0**	**$2,429**	**$0**	**$2,429**	**$0**		**$0**	**$0**	**$2,015**
Total O&M	**$683,059**	**$520,027**	**$86,557**	**$90,831**	**$256,048**	**$12,861**	**$134,389**	**$87,815**	**$454,263**

District 37 Functionalization of O&M

Waterworks Dist Gen #37 - N49	Supply	Pumping	Treatment (If Applicable)	Distribution Storage	Distribution	Conservation	Customer Service & Meter Reading	Meter Maint	General/Admin
WW01 - Water Quality Monitoring									
110 Labor			49%		5%				46%
130 Materials			100%						
140 Contract Payments									100%
150 Miscellaneous Charges			11%		11%				78%
999 No Genrl Reptg Catg (Do Not Budget)									100%
W002 - Purchased Water									
150 Miscellaneous Charges	100%								
W004 - Administration Support									
110 Labor									100%
120 Equipment									100%
130 Materials									100%
140 Contract Payments									100%
150 Miscellaneous Charges									100%
999 No Genrl Reptg Catg (Do Not Budget)									100%
W005 - Customer Billing and Service									
110 Labor							75%		25%
120 Equipment									100%
130 Materials							90%		10%
140 Contract Payments							100%		0%
150 Miscellaneous Charges							60%		40%
999 No Genrl Reptg Catg (Do Not Budget)							100%		0%
W007 - OMR - Equipment									
110 Labor									100%
120 Equipment									100%
130 Materials									100%
140 Contract Payments									100%
150 Miscellaneous Charges									100%
182 Capital Assets - Equipment		12%	44%		44%				
200 Operating Transfers		12%	44%		44%				
999 No Genrl Reptg Catg (Do Not Budget)									100%
W008 - Mapping Services & Annexations									
110 Labor									100%
120 Equipment									100%
W010 - Claims&Litigatn, Pub. Rec Req&EWR									
150 Miscellaneous Charges									100%
W014 - Damage Claims									
110 Labor					100%				
120 Equipment					100%				
130 Materials					100%				
150 Miscellaneous Charges					100%				

W015 - OMR-Water Distribution Systems									
110 Labor					27%			34%	38%
120 Equipment					28%			34%	38%
130 Materials					41%			28%	31%
140 Contract Payments					90%			5%	5%
150 Miscellaneous Charges									100%
W016 - OMR-Pumping Plants									
110 Labor		100%							
120 Equipment		100%							
130 Materials		100%							
140 Contract Payments		99%							1%
150 Miscellaneous Charges		50%							50%
W017 - Information Services									
110 Labor							25%		75%
120 Equipment									100%
140 Contract Payments							25%		75%
150 Miscellaneous Charges							25%		75%
W018 - Other Charges - S & S									
110 Labor									100%
W020 - Water Supply Planning & Res Mgmt									
110 Labor	5%								95%
120 Equipment									100%
140 Contract Payments									100%
150 Miscellaneous Charges									100%
W030 - Pumping Plants - Power									
150 Miscellaneous Charges		100%							
W036 - New Water Service Engrng & Insp									
110 Labor							50%		50%
120 Equipment							50%		50%
140 Contract Payments							50%		50%
150 Miscellaneous Charges							50%		50%
W042 - OMR-Wells									
110 Labor	100%								
120 Equipment	100%								
130 Materials	100%								
W043 - OMR-Tanks									
110 Labor				100%					
140 Contract Payments				100%					
150 Miscellaneous Charges				100%					
W044 - Water Conservation									
110 Labor						100%			
120 Equipment						100%			
140 Contract Payments						100%			
150 Miscellaneous Charges						100%			
999 No Genrl Reptg Catg (Do Not Budget)						100%			
Subtotal - District #37 - N49	**$450,840**	**$924,369**	**$103,466**	**$14,510**	**$95,705**	**$17,029**	**$116,516**	**$66,172**	**$402,176**
Waterworks Dist Gen #37 - N50									
W004 - Administration Support									
150 Miscellaneous Charges									100%

W013 - Construction of Water System Fac									
110 Labor				67%	33%				
150 Miscellaneous Charges				67%	33%				
184 Capital Assets - Infrastructure					100%				
200 Operating Transfers									100%
Waterworks Dist Gen #37 - N50	**$0**	**$0**	**$0**	**$59**	**$30**	**$0**	**$0**	**$0**	**$767**
Total Expenses	**$450,840**	**$924,369**	**$103,466**	**$14,569**	**$95,734**	**$17,029**	**$116,516**	**$66,172**	**$402,943**