

**CITY OF OXNARD**

**Potable and Recycled  
Water Rate Study  
(Water Cost of Service Study)**

**FINAL REPORT / March 16, 2023**

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March 16, 2023

Mr. Michael Wolfe  
Public Works Director  
305 West Third Street  
Oxnard, California 93030

**Subject: Potable and Recycled Water Rate Design Study (Water Cost of Service Study)**

Dear Mr. Wolfe:

Raftelis is pleased to provide this Potable and Recycled Water Rate Study (Study) to the City of Oxnard (City) to establish rates that are equitable and aligned with Proposition 218.

The primary study objectives include the following:

- » Develop financial plans for the water enterprise to ensure financial sufficiency, meet operation and maintenance (O&M) costs, and ensure sufficient funding for capital improvement plan needs
- » Maintain operating reserve funds
- » Review current rate structures and develop rates that are equitable and fair to customer classes

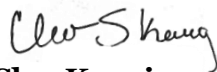
The report summarizes our findings regarding potable and recycled water rates. It has been a pleasure working with you and your staff, including Abraham Maldonado who provided much support during this study.

Sincerely,

**RAFTELIS FINANCIAL CONSULTANTS, INC.**

A handwritten signature in blue ink that reads 'Steve Gagnon'.

**Steve Gagnon, PE (AZ)**  
Project Manager (PM)

A handwritten signature in blue ink that reads 'Cleo Koenig'.

**Cleo Koenig**  
Associate Consultant

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Appendix A: Percentages Used to Allocate O&M Expenses and Assets to Cost Components

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# 1. Executive Summary

## 1.1. Study Background

The City contracted with Raftelis Financial Consultants (Raftelis) to conduct a Potable and Recycled Water Rate Study (Study). The Study includes a five-year financial plan, a cost of service analysis, and the development of water rates.

The City wishes to establish fair and equitable rates that:

- » Meet the City's fiscal needs in terms of operational expenses and capital investment to maintain the water system
- » Proportionately allocate the costs of providing service in alignment with California Constitution Article XIII D, Section 6 (commonly referred to as Proposition 218)

## 1.2. Current Rates

The City's current rates are shown below. There is a monthly fixed charge by meter size and by class and a volumetric rate per one hundred cubic feet (hcf)<sup>1</sup> that varies by class.

### 1.2.1. Current Fixed Meter and Fire Charges

Currently, the City charges the fixed meter charges shown in Table 1-1. Proctor & Gamble (P&G) is charged the Commercial fixed charge and recycled accounts are charged the Commercial fixed charge.

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<sup>1</sup> One hcf is approximately 748 gallons.

**Table 1-1: Current Monthly Fixed Meter Charges**

Line	Meter Size	Single Family	Multifamily	Commercial, Industrial, & Irrigation	Ocean View Commercial	Oceanview Agricultural
1	3/4"	\$20.60	\$18.87	\$15.42	\$20.60	
2	1"	\$32.14	\$29.26	\$23.50	\$32.14	
3	1.5"	\$60.76	\$55.02	\$43.54	\$60.76	
4	2"	\$95.25	\$86.05	\$67.68	\$95.25	
5	3"	\$204.56	\$184.44	\$144.20		\$144.20
6	4"	\$348.18	\$313.69	\$244.73		\$244.73
7	6"	\$721.80	\$649.95	\$506.26		\$506.26
8	8"	\$1,037.83	\$934.38	\$727.49		\$727.49
9	10"	\$1,670.07	\$1,503.40	\$1,170.06		\$1,170.06

Private fire customers are also charged a monthly private fire service charge based on service line size, as shown in Table 1-2 below. These customers are mostly Commercial, Industrial, or City customers.

**Table 1-2: Current Fire Service Charge**

Line	Fire Service Size	Current Rate
1	3/4"	\$3.66
2	1"	\$4.95
3	1.5"	\$8.13
4	2"	\$11.96
5	3"	\$24.10
6	4"	\$40.07
7	6"	\$81.59
8	8"	\$116.71
9	10"	\$186.98

**1.2.2. Current Potable Volumetric Rates**

Customers are charged a volumetric rate per hcf. One hcf is equal to approximately 748 gallons. Volumetric rates are separated by customer class, and further separated by meter size where applicable. Currently, P&G’s two 10-inch meters are charged the Commercial & Industrial (3” meter or larger) volumetric rate.

**Table 1-3: Current Volumetric Rates (\$ / hcf)**

Line	Customer Class	Tier Range	Current Rate
1	Single Family		
2	Tier 1	0-9	\$3.31
3	Tier 2	>9-15	\$5.08
4	Tier 3	>15	\$6.05
5			
6	Multi-Family (per dwelling unit)		
7	Tier 1	0-8	\$3.53
8	Tier 2	>8	\$5.67
9			
10	Commercial & Industrial (2" meter or smaller)		
11	Tier 1	0-62	\$3.22
12	Tier 2	>62	\$5.68
13			
14	Commercial & Industrial (3" meter or larger)		
15	Uniform Rate		\$4.47
16			
17	Irrigation (2" meter or smaller)		
18	Tier 1	0-24	\$3.32
19	Tier 2	>24	\$5.91
20			
21	Irrigation (3" meter or larger)		
22	Uniform Rate		\$5.08
23			
24	Ocean View Commercial (2" meter or smaller)		
25	Tier 1	0-9	\$3.31
26	Tier 2	>9-15	\$5.08
27	Tier 3	>15	\$6.05
28			
29	Ocean View Agriculture (3" meter or larger)		
30	Uniform Rate		\$1.16

**1.2.3. Current Recycled Fixed Charges**

The fixed charge for recycled customers is the same as Commercial customers shown in Table 1-1.

**1.2.4. Current Recycled Volumetric Rates**

There are currently two recycled customer classes: Irrigation and Commercial & Industrial. The current rates are shown below in Table 1-4.

**Table 1-4: Current Recycled Volumetric Rates**

Line	Customer Class	Current Rates
1	Irrigation (Golf Course)	\$3.52
2	Commercial / Industrial	\$3.34

## 1.3. Proposed Rates

### 1.3.1. Revenue Adjustments

This study proposes to increase revenue as shown in Table 1-5. The basis for the proposed revenue adjustments is discussed in Section 3 – Financial Plan. Revenue adjustments are not the same as rate increases. The revenue adjustments in Table 1-5 describes the overall total increase in rates revenue, and a cost of service and rate design will set rates for each customer class. Certain customer classes may increase or decrease more than the revenue adjustments, however the overall increase in revenue will be as shown in Table 1-5.

**Table 1-5: Proposed Revenue Adjustments**

July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
9.5%	9.5%	5.0%	5.0%	5.0%

### 1.3.2. Proposed Potable Fixed Charges

Table 1-6 and Table 1-7 show the proposed five-year rates. The charges for the first year (July 1, 2023) were developed using a cost of service analysis. The remaining charges increase the July 1, 2023 charge by the revenue adjustments in Table 1-5. Due to their location (of their two 10-inch meters) and usage, Proctor & Gamble (P&G) was evaluated separately and now has their own fixed monthly meter charge.

**Table 1-6: Proposed Potable Five-Year Fixed Charges**

Line	Meter Size	Current Rate	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
1	5/8" or 3/4"	\$20.60	\$22.78	\$24.94	\$26.19	\$27.50	\$28.87
2	1"	\$32.14	\$33.47	\$36.65	\$38.48	\$40.41	\$42.43
3	1 1/2"	\$60.76	\$60.20	\$65.92	\$69.21	\$72.68	\$76.31
4	2"	\$95.25	\$92.27	\$101.04	\$106.09	\$111.39	\$116.96
5	3"	\$204.56	\$193.84	\$212.25	\$222.87	\$234.01	\$245.71
6	4"	\$348.18	\$327.49	\$358.60	\$376.53	\$395.36	\$415.13
7	6"	\$721.80	\$674.96	\$739.08	\$776.04	\$814.84	\$855.58
8	8"	\$1,037.83	\$968.98	\$1,061.03	\$1,114.08	\$1,169.79	\$1,228.28
9	10"	\$1,670.07	\$1,557.02	\$1,704.94	\$1,790.18	\$1,879.69	\$1,973.68
10	10" - P&G		\$579.29	\$634.33	\$666.04	\$699.35	\$734.31

**Table 1-7: Proposed Five-Year Fire Service Line Charges**

Line	Fire Protection - Connection Size	Current Rate	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
1	3/4"	\$3.66	\$4.79	\$5.25	\$5.51	\$5.78	\$6.07
2	1"	\$4.95	\$4.97	\$5.44	\$5.71	\$6.00	\$6.30
3	1.5"	\$8.13	\$5.62	\$6.15	\$6.46	\$6.78	\$7.12
4	2"	\$11.96	\$6.73	\$7.37	\$7.74	\$8.12	\$8.53
5	3"	\$24.10	\$10.72	\$11.74	\$12.33	\$12.94	\$13.59
6	4"	\$40.07	\$17.62	\$19.29	\$20.26	\$21.27	\$22.34
7	6"	\$81.59	\$42.35	\$46.37	\$48.69	\$51.13	\$53.68
8	8"	\$116.71	\$85.01	\$93.09	\$97.74	\$102.63	\$107.76
9	10"	\$186.98	\$149.18	\$163.35	\$171.52	\$180.10	\$189.10

### 1.3.3. Proposed Potable Volumetric Rates

Table 1-8 shows the proposed five-year rates. The first year (July 1, 2023) rates are based on a cost of service analysis. The remaining rates increase the July 1, 2023 rates by the revenue adjustments in Table 1-5. P&G's rates (for their 10"-inch meters) are based on its direct connection to Calleguas Municipal Water District<sup>2</sup>.

<sup>2</sup> P&G also has two smaller meters that use the City's distribution system. These connections are charged as all other commercial or irrigation customers depending on the type of connection.

**Table 1-8: Proposed Five-Year Volumetric Rates**

Line	Volumetric Rate	Tier Breakpoint	Current Rate	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
1	SFR							
2	Tier 1	0-9	\$3.31	\$4.43	\$4.85	\$5.09	\$5.35	\$5.62
3	Tier 2	>9-15	\$5.08	\$4.59	\$5.03	\$5.28	\$5.54	\$5.82
4	Tier 3	>15	\$6.05	\$4.85	\$5.31	\$5.58	\$5.86	\$6.15
5								
6	MFR							
7	Tier 1	0-8	\$3.53	\$4.42	\$4.84	\$5.08	\$5.34	\$5.60
8	Tier 2	>8	\$5.67	\$4.58	\$5.02	\$5.27	\$5.53	\$5.81
9								
10	Commercial <=2"							
11	Tier 1	0-62	\$3.22	\$4.47	\$4.89	\$5.14	\$5.40	\$5.67
12	Tier 2	>62	\$5.68	\$4.53	\$4.96	\$5.21	\$5.47	\$5.74
13	Commercial >=3"		\$4.47	\$4.77	\$5.22	\$5.48	\$5.76	\$6.05
14								
15	Industrial/City <=2"							
16	Tier 1	0-24	\$3.22	\$4.53	\$4.96	\$5.21	\$5.47	\$5.74
17	Tier 2	>24	\$5.68	\$4.75	\$5.20	\$5.46	\$5.73	\$6.02
18	Industrial >=3"		\$4.47	\$4.89	\$5.35	\$5.62	\$5.90	\$6.20
19	City >=3"		\$4.47	\$4.70	\$5.15	\$5.40	\$5.67	\$5.96
20								
21	Irrigation <=2"							
22	Tier 1	0-24	\$3.32	\$4.47	\$4.89	\$5.14	\$5.40	\$5.67
23	Tier 2	>24	\$5.91	\$4.69	\$5.14	\$5.39	\$5.66	\$5.95
24	Irrigation >=3"		\$5.08	\$4.76	\$5.21	\$5.47	\$5.75	\$6.03
25								
26	Oceanview Commercial							
27	Tier 1	0-9	\$3.31	\$4.87	\$5.33	\$5.60	\$5.88	\$6.17
28	Tier 2	>9-15	\$5.08	\$5.04	\$5.52	\$5.79	\$6.08	\$6.39
29	Tier 3	>15	\$6.05	\$4.84	\$5.30	\$5.56	\$5.84	\$6.14
30								
31	P&G		\$4.47	\$4.18	\$4.57	\$4.80	\$5.04	\$5.29
32	Construction		\$4.47	\$4.89	\$5.35	\$5.62	\$5.90	\$6.20

**1.3.4. Proposed Recycled Fixed Charges**

Table 1-9 shows the proposed five-year rates. The rates for July 1, 2023 are based on a cost of service analysis. The remaining rates are increased by the revenue adjustments in Table 1-5. The fixed charges for recycled are equal to the proposed potable rates.

**Table 1-9: Proposed Recycled Five-Year Fixed Charges**

Line	Meter Size	Current Rate	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
1	4"	\$244.73	\$327.49	\$358.60	\$376.53	\$395.36	\$415.13
2	6"	\$506.26	\$674.96	\$739.08	\$776.04	\$814.84	\$855.58
3	8"	\$727.49	\$968.98	\$1,061.03	\$1,114.08	\$1,169.79	\$1,228.28
4	12"		\$2,305.43	\$2,524.45	\$2,650.67	\$2,783.20	\$2,922.36

**1.3.5. Proposed Recycled Volumetric Rates**

Table 1-10 shows the proposed five-year recycled rates. The rate for July 1, 2023 are based on a cost of service analysis and the rates for the remaining years are increased by the revenue adjustments shown in Table 1-5.

**Table 1-10: Proposed Five-Year Volumetric Rates**

Line	Customer Class	Current Rate	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
1	Irrigation (Golf Course)	\$3.52	\$3.60	\$3.94	\$4.14	\$4.35	\$4.57
2	Commercial / Industrial	\$3.34	\$3.60	\$3.94	\$4.14	\$4.35	\$4.57

## 2. Introduction

### 2.1. Agency Overview

The City of Oxnard is located in the southwest portion of Ventura County, approximately halfway between Los Angeles and Santa Barbara. The City's Public Works Department provides services pertaining to water, wastewater, recycled water, and solid waste utilities throughout the City. The City provides potable water to approximately 43,000 service connections. The water system service area includes, the City, most of the incorporated area of the City of Oxnard and portions of unincorporated Ventura County. It does not include a small portion of southwest of Oxnard, in which approximately 50 service connections are served by the Port Hueneme Water Agency (PHWA) and two small mutual water agencies. The City does convey State imported water to PHWA through a wheeling agreement.

The City blends water from these three sources:

- 1) City groundwater, which is managed by the Fox Canyon Groundwater Management Agency,
- 2) United Water Conservation District, and
- 3) Calleguas Municipal Water District.

Water sources converge at six Blending Stations (BS) and blended water is distributed to customers, except P&G, which is directly fed from a transmission line supplying Calleguas Municipal Water District water. Additionally, Oxnard produces recycled water at its Advanced Water Purification Facility (AWPF) and delivers recycled water for agricultural, industrial use, and golf course irrigation.

### 2.2. Study Overview

Public water agencies in California typically conduct cost-of-service and rate studies to ensure that there is a strong nexus between rates charged to customers and costs incurred to provide service, as required by Proposition 218. The City engaged Raftelis to conduct this Potable and Recycled Water Rate Study, which includes a five-year Financial Plan, to develop proposed rates that balance the City's financial goals, affordability, and Proposition 218 compliance.



### 3. Financial Plan

The Financial Plan assesses whether future revenue is sufficient to cover all water system expenses, which includes operating, capital, debt service and reserve funding. Raftelis projected annual expenses and revenues, modeled reserve balances, capital expenditures and calculated debt service coverage ratios to estimate the amount of additional rate revenue needed per year.

#### 3.1. Inflationary Assumptions

The Study uses Fiscal Year (FY) 2024 as the budget year and the test year. The test year is a term used to describe the year of revenues and expenses used to establish rates. The study period is from FY 2024 to FY 2028. To ensure that the study reasonably projects future costs, Raftelis makes informed assumptions about inflationary factors for the cost to serve water, as shown in Table 3-1. The inflationary assumptions shown below were used to inflate the FY 2024 budget each year up to FY 2028. Water purchase costs escalation, shown in lines 4 through 7, are estimated from historical data and for modeling purposes. The City will pass through water purchase costs once it knows actual wholesale rates from the wholesalers shown in lines 4 through 7.

**Table 3-1: O&M Inflationary Assumptions**

Line	Inflationary Factor	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	General	6.0%	3.0%	3.0%	3.0%	3.0%
2	Salary	8.0%	7.9%	5.0%	5.0%	5.0%
3	Benefits	0.7%	0.5%	5.0%	5.0%	5.0%
4	Fixed Cost - United	14.8%	14.8%	14.8%	14.8%	14.8%
5	Fixed Cost - Calleguas CRC & RTS	3.6%	3.6%	3.6%	3.6%	3.6%
6	United, Weighted Volumetric	7.0%	7.0%	7.0%	7.0%	7.0%
7	Calleguas Volumetric	3.2%	3.2%	3.2%	3.2%	3.2%
8	Water Supply - City	7.9%	7.9%	7.9%	7.9%	7.9%
9	Utilities	5.0%	5.0%	5.0%	5.0%	5.0%
10	Capital	7.0%	3.0%	3.0%	3.0%	3.0%

#### 3.2. Projected Annual Water Use & Accounts

City staff provided total annual water use for each customer class for FY 2022. Raftelis worked closely with City staff to project water use over the study period. Water use projections depend on two key assumptions: new connection growth and water demand per connection. There is no assumed water demand growth, though accounts are expected to grow as shown in Table 3-2.

**Table 3-2: Expected Account Growth**

Line	Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	Single Family	0.3%	0.3%	0.3%	0.3%	0.3%
2	Multi-Family	0.3%	0.3%	0.3%	0.3%	0.3%

### 3.3. Current Rates

Table 3-7 shows revenue from current rates and charges. The revenue in lines 1, 2 and 3 of Table 3-7 was calculated by multiplying all accounts by the charge for each meter size and all volumetric use by the volumetric rate. The current meter charges and volumetric rates are described below.

#### 3.3.1. Current Fixed Meter and Fire Charges

The City charges the fixed meter charges as shown below in Table 3-3. Proctor & Gamble (P&G) is charged the Commercial fixed charge and recycled accounts are also charged the Commercial fixed charge.

**Table 3-3: Current Monthly Fixed Meter Charges**

Line	Meter Size	Single Family	Multifamily	Commercial, Industrial, & Irrigation	Ocean View Commercial	Oceanview Agricultural
1	3/4"	\$20.60	\$18.87	\$15.42	\$20.60	
2	1"	\$32.14	\$29.26	\$23.50	\$32.14	
3	1.5"	\$60.76	\$55.02	\$43.54	\$60.76	
4	2"	\$95.25	\$86.05	\$67.68	\$95.25	
5	3"	\$204.56	\$184.44	\$144.20		\$144.20
6	4"	\$348.18	\$313.69	\$244.73		\$244.73
7	6"	\$721.80	\$649.95	\$506.26		\$506.26
8	8"	\$1,037.83	\$934.38	\$727.49		\$727.49
9	10"	\$1,670.07	\$1,503.40	\$1,170.06		\$1,170.06

Private fire customers are also charged a monthly fire service line charge based on service line size, as shown in Table 3-4 below. Private fire customers are Commercial, Industrial or City customers.

**Table 3-4: Current Fire Service Charge**

Line	Fire Service Size	Current Rate
1	3/4"	\$3.66
2	1"	\$4.95
3	1.5"	\$8.13
4	2"	\$11.96
5	3"	\$24.10
6	4"	\$40.07
7	6"	\$81.59
8	8"	\$116.71
9	10"	\$186.98

#### 3.3.2. Current Potable Volumetric Rates

Customers are charged a volumetric rate per hcf (approximately 748 gallons) of use. These rates are by customer class, and by meter size as shown in Table 3-5. Currently, P&G’s two 10” meters are currently charged the 3” meter or larger Commercial and Industrial rate<sup>3</sup>.

<sup>3</sup> P&G also has two smaller meters which are charged as all other customers depending on the type of connection.

**Table 3-5: Current Volumetric Rates**

Line	Customer Class	Tier Range	Current Rate
1	Single Family		
2	Tier 1	0-9	\$3.31
3	Tier 2	>9-15	\$5.08
4	Tier 3	>15	\$6.05
5			
6	Multi-Family (per dwelling unit)		
7	Tier 1	0-8	\$3.53
8	Tier 2	>8	\$5.67
9			
10	Commercial & Industrial (2" meter or smaller)		
11	Tier 1	0-62	\$3.22
12	Tier 2	>62	\$5.68
13			
14	Commercial & Industrial (3" meter or larger)		
15	Uniform Rate		\$4.47
16			
17	Irrigation (2" meter or smaller)		
18	Tier 1	0-24	\$3.32
19	Tier 2	>24	\$5.91
20			
21	Irrigation (3" meter or larger)		
22	Uniform Rate		\$5.08
23			
24	Ocean View Commercial (2" meter or smaller)		
25	Tier 1	0-9	\$3.31
26	Tier 2	>9-15	\$5.08
27	Tier 3	>15	\$6.05
28			
29	Ocean View Agriculture (3" meter or larger)		
30	Uniform Rate		\$1.16

**3.3.3. Current Recycled Volumetric Rates**

Recycled volumetric rates are shown in Table 3-6.

**Table 3-6: Current Recycled Volumetric Rates**

Line	Customer Class	Current Rates
1	Irrigation (Golf Course)	\$3.52
2	Commercial / Industrial	\$3.34

The rates and charges shown in the preceding tables were multiplied by the number of accounts for all classes and by volumetric use to calculate the revenue shown in lines 1 through 6 of Table 3-7.

Table 3-7: Combined Water and Recycled Revenues

Line		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	Potable Water Revenue	\$54,203,676	\$54,297,647	\$54,391,901	\$54,486,438	\$54,581,258
2	Potable Revenue Increases	\$5,149,349	\$10,806,589	\$14,086,211	\$17,540,550	\$21,178,691
3	Recycled Water Revenue	\$309,619	\$455,345	\$455,345	\$455,345	\$455,345
4	Recycled Revenue Increases	\$29,414	\$90,625	\$117,924	\$146,587	\$176,684
5	Recycled Agricultural Agreement Revenue	\$1,584,958	\$1,864,908	\$1,916,079	\$1,968,654	\$2,022,671
6	Oceanview >=3" (Set by Ordinance)	\$641,294	\$691,825	\$746,337	\$805,145	\$868,586
7	Pass-through Revenue	\$0	\$1,042,888	\$2,140,267	\$3,295,266	\$4,511,211
8	Other Revenue	\$2,080,734	\$2,090,436	\$2,100,186	\$2,109,985	\$2,119,832
9	Transfer from Gen Fund - Inf Use Fee	\$4,026,438	\$0	\$0	\$0	\$0
10	Interest Income	\$134,404	\$91,226	\$90,291	\$106,594	\$123,983
<b>11</b>	<b>Total</b>	<b>\$68,159,885</b>	<b>\$71,431,490</b>	<b>\$76,044,540</b>	<b>\$80,914,563</b>	<b>\$86,038,261</b>

### 3.4. O&M Expenses

The City’s O&M budget is shown by fiscal year in Table 3-8, and the total in line 8 matches the total in line 20 of Table 3-11. FY 2024 is the year with which rates were calculated (this is known as the test year). The Financial Plan study period is from FY 2024 to FY 2028. The O&M budget incorporates the inflationary factors shown in Table 3-1.

**Table 3-8: O&M Expenses**

Line	Category	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	<b>Potable O&amp;M</b>					
2	Purchased Water	\$24,906,030	\$26,174,400	\$27,371,438	\$28,629,309	\$29,951,439
3	Proctor & Gamble Water Purchase Cost	\$2,746,093	\$2,834,590	\$2,925,939	\$3,020,232	\$3,117,564
4	Water Operation & Maintenance (601)	\$21,508,230	\$22,242,410	\$23,004,189	\$23,793,604	\$24,611,727
5						
6	<b>Recycled O&amp;M</b>					
7	Water Operating (601)	\$3,605,417	\$3,740,510	\$3,899,500	\$4,065,616	\$4,239,191
8	<b>Total</b>	<b>\$52,765,770</b>	<b>\$54,991,911</b>	<b>\$57,201,067</b>	<b>\$59,508,762</b>	<b>\$61,919,921</b>

### 3.5. Capital Improvement Plan (CIP)

Table 3-9 shows the City’s detailed five-year CIP along with the anticipated funding sources at the bottom of the table. Lines 14 and 15 show an execution factor and the resulting CIP. The City is delaying capital expenditures to minimize customer bill impacts and to account for the current staff resources available to deliver projects. Lines 18 and 19 show the assumed rate funded CIP for both potable and recycled.

Table 3-9: CIP Expenses

Line	CIP	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	Recycled Water: Aquifer Storage and Recovery (ASR) Completion	\$2,140,000	\$1,102,100			
2	Water Distribution: Automated Meter Infrastructure Replacement	\$12,840,000	\$11,021,000			
3	Water Distribution: CMWD Transmission Main	\$1,787,204		\$11,351,630	\$29,230,447	\$18,064,416
4	Water Distribution: Hobson and Kamala Cast Iron Pipe Replacement	\$695,500	\$8,265,750	\$8,513,723		
5	Water Production: Blending Station 1 ATS and Panel Replacement	\$642,000				
6	Water Production: Blending Station Upgrades	\$267,500				
7	Water Production: Chemical Tank Replacements	\$802,500				
8	Water Production: Desalter Upgrades and Brine Minimization	\$1,605,000	\$1,102,100	\$1,135,163	\$2,338,436	
9	Water Production: System SCADA Improvements	\$1,070,000	\$826,575			
10	Water Distribution: Distribution Building and Water Campus Paving					\$602,147
11	Water Production: Land Acquisition			\$5,675,815		
12	Total (Before Execution Factors)	\$21,849,704	\$22,317,525	\$26,676,331	\$31,568,883	\$18,666,564
13						
14	Execution Factors (For Potable Water Capital Only)	35%	25%	15%	20%	40%
15	Total After Execution Factors	\$9,038,396	\$6,405,956	\$4,001,450	\$6,313,777	\$7,466,625
16						
17	<b>Funding</b>					
18	Water Rate Funded Capital	\$6,898,396	\$5,303,856	\$4,001,450	\$6,313,777	\$7,466,625
19	Recycled Rate Funded	\$2,140,000	\$1,102,100	\$0	\$0	\$0
20	<b>Total Rate Funded</b>	<b>\$9,038,396</b>	<b>\$6,405,956</b>	<b>\$4,001,450</b>	<b>\$6,313,777</b>	<b>\$7,466,625</b>

## 3.6. Proposed Financial Plan & Revenue Adjustments

### 3.6.1. Financial Plan Without Revenue Adjustments

It is useful to examine debt coverage ratios and reserve balances if the City did not implement revenue increases (rate increases) to show the importance of increasing revenue to keep up with costs. Figure 3-1 shows reserve balances without revenue increases. Figure 3-2 shows debt coverage ratios without revenue increases. Figure 3-1 shows negative reserve balances and Figure 3-2 shows the City would be in technical default of bond covenants without revenue increases. The below graphs assume the City would execute CIP projects and incur expenses as described in Sections 3.4 and 3.5. The green line is 25% of the maximum annual debt service. Per bond covenants the City must maintain a reserve equal to at least 25% of maximum annual debt (MAD) service as shown by the green line. The yellow line is the minimum operating reserve. The City endeavors to maintain 25% of operating expenses in reserve. The black line includes the MAD plus the operating reserve target and a capital reserve target equal to one year of annual asset depreciation (\$4.9M). The City does not have an official capital reserve target; however, one industry common capital reserve target is one year of asset depreciation.

Figure 3-1: Reserve Balances Without Revenue Increases

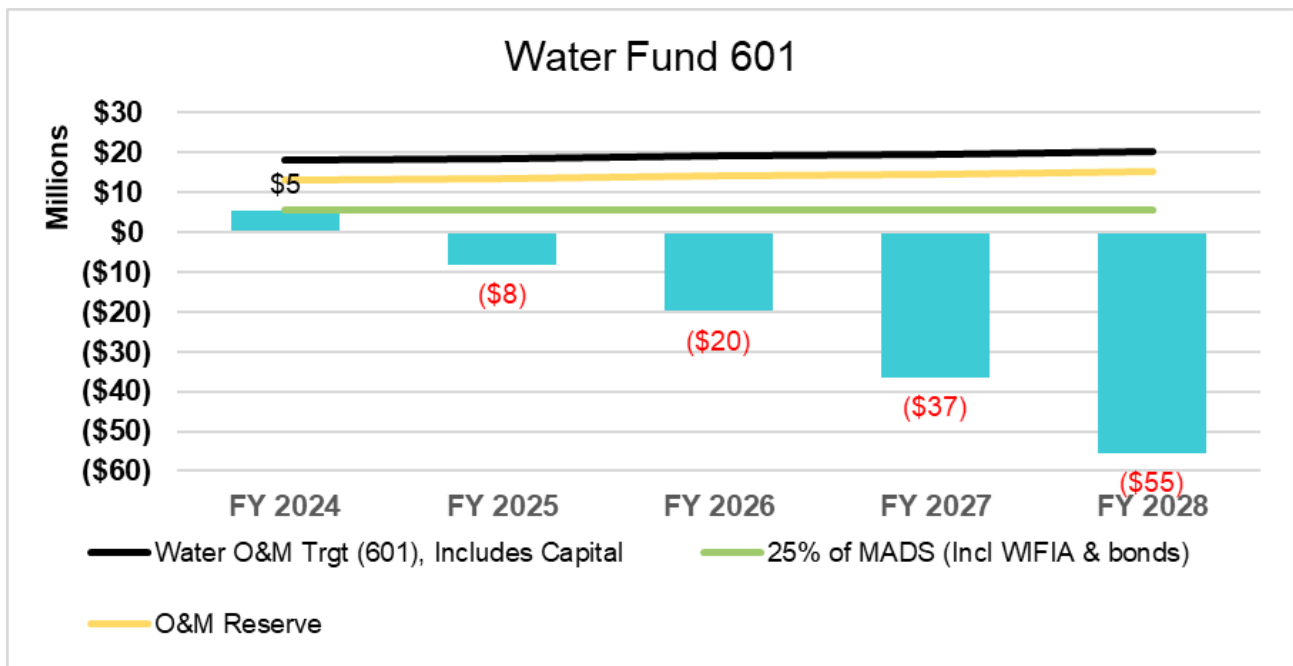
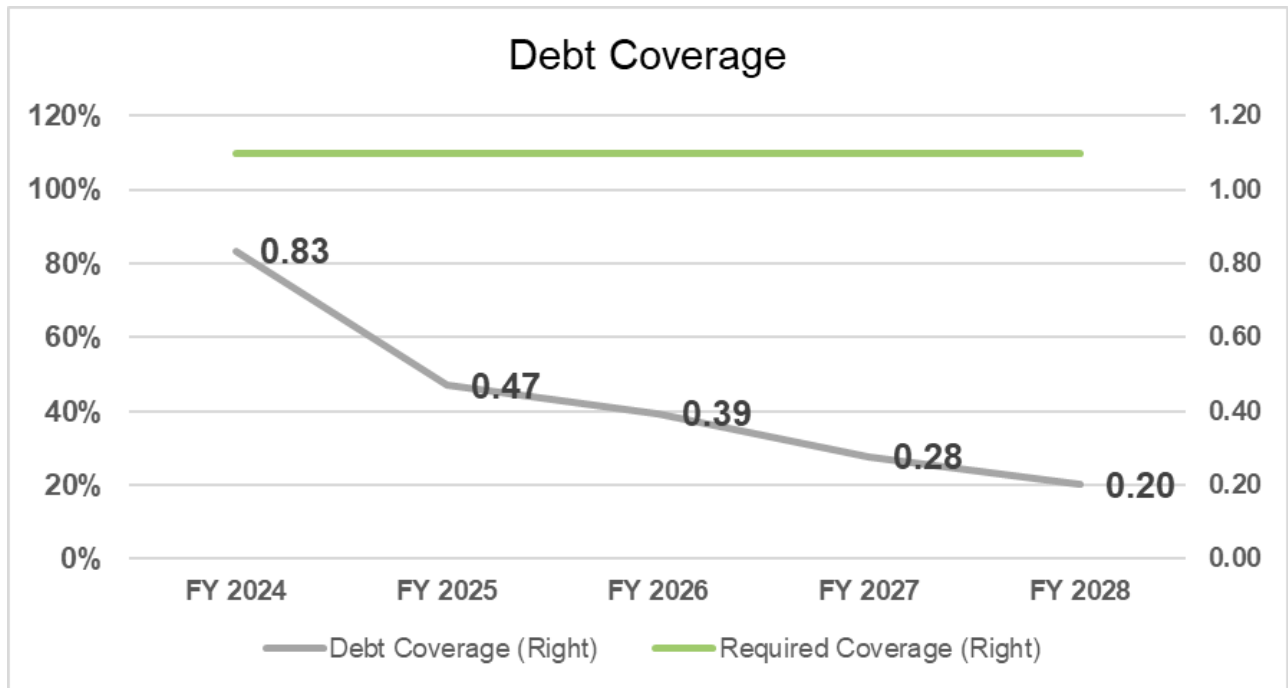


Figure 3-2: Debt Coverage Ratios Without Revenue Increases



### 3.6.2. Financial Plan with Revenue Adjustments

To fund operating and capital expenses, strive to attain reserve targets, and meet debt coverage requirements, the City is proposing revenue increases as shown in Table 3-10. The financial plan assumes the revenue adjustment occurs annually on July 1<sup>st</sup>, 2023. The City can implement revenue adjustments that are lower than those shown but cannot implement revenue adjustments that are higher without a public hearing.

Table 3-10: Proposed Rate Revenue Adjustments

FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
9.5%	9.5%	5.0%	5.0%	5.0%

Figure 3-3 shows yearly ending reserve balances with proposed revenue adjustments. Figure 3-4 displays the debt coverage ratios with proposed revenue adjustments. Reserve targets, depicted by the green, yellow, and black lines were described in Section 3.6.1.



Figure 3-3: Reserve Balances with Revenue Adjustments

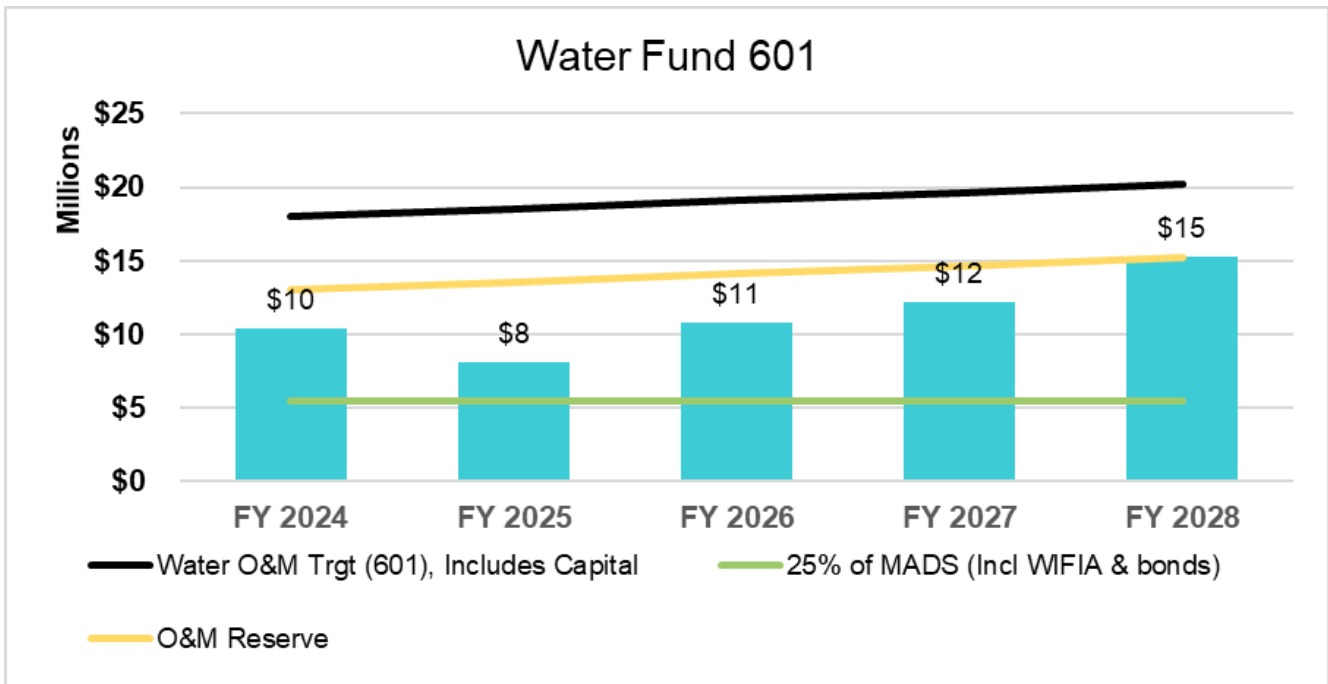


Figure 3-4: Debt Coverage Assuming Proposed Revenue Adjustments

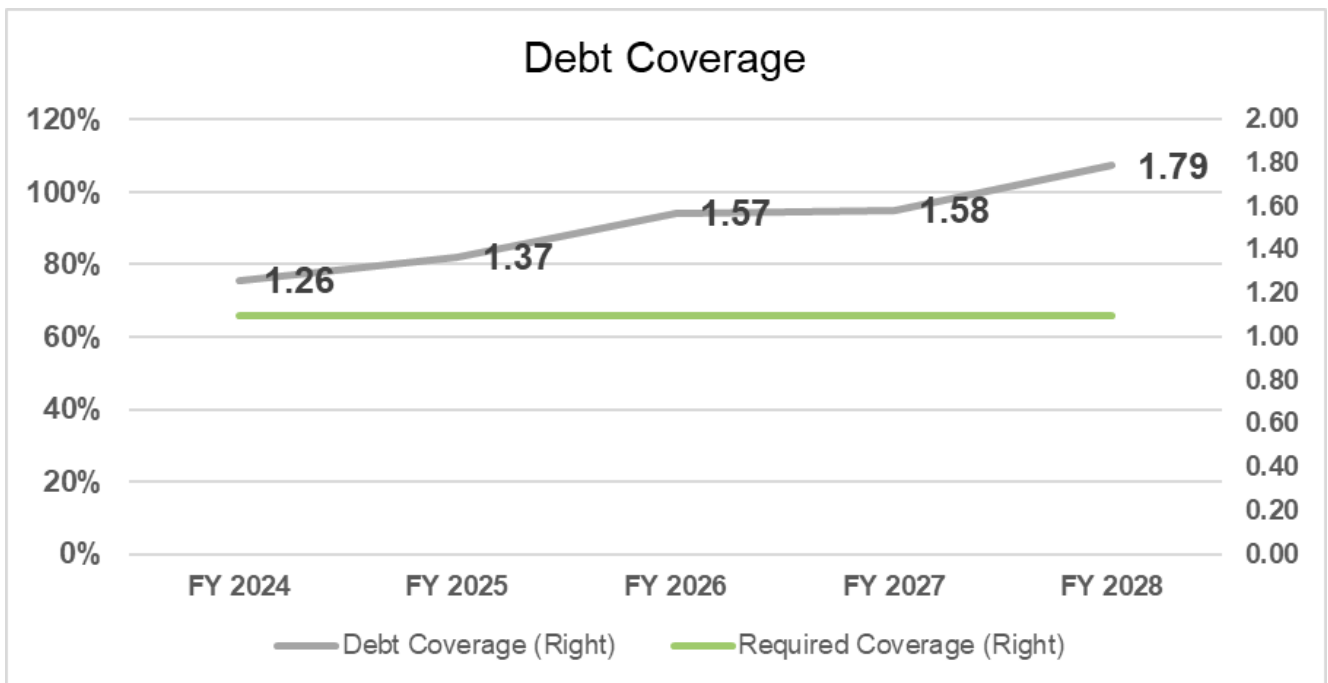


Table 3-11 shows the calculation of reserve balances shown in Figure 3-3. Line 2 shows the starting balance. The ending balance is calculated by adding revenue (line 14) and subtracting expenses, which includes operating expenses, debt service and capital expenses shown in lines 20 and 25 respectively.

Table 3-11: Combined Water and Recycled Cashflow

Line		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1						
2	<b>Starting Water Fund (601) Cash Balance</b>	<b>\$16,596,937</b>	<b>\$10,418,191</b>	<b>\$7,918,258</b>	<b>\$10,230,296</b>	<b>\$11,195,196</b>
3						
4	Potable Water Revenue	\$54,203,676	\$54,297,647	\$54,391,901	\$54,486,438	\$54,581,258
5	Potable Revenue Increases	\$5,149,349	\$10,806,589	\$14,086,211	\$17,540,550	\$21,178,691
6	Recycled Water Revenue	\$309,619	\$455,345	\$455,345	\$455,345	\$455,345
7	Recycled Revenue Increases	\$29,414	\$90,625	\$117,924	\$146,587	\$176,684
8	Recycled Agricultural Agreement Revenue	\$1,584,958	\$1,864,908	\$1,916,079	\$1,968,654	\$2,022,671
9	Oceanview >=3" (Set by Ordinance)	\$641,294	\$691,825	\$746,337	\$805,145	\$868,586
10	Pass-through Revenue	\$0	\$1,042,888	\$2,140,267	\$3,295,266	\$4,511,211
11	Other Revenue	\$2,080,734	\$2,090,436	\$2,100,186	\$2,109,985	\$2,119,832
12	Transfer from Gen Fund - Inf Use Fee	\$4,026,438	\$0	\$0	\$0	\$0
13	Interest Income	\$134,404	\$91,226	\$90,291	\$106,594	\$123,983
14	<b>Subtotal</b>	<b>\$68,159,885</b>	<b>\$71,431,490</b>	<b>\$76,044,540</b>	<b>\$80,914,563</b>	<b>\$86,038,261</b>
15						
16	<b>Expenses</b>					
17	Purchased Water (Including P&G Water)	\$27,652,123	\$29,008,990	\$30,297,377	\$31,649,541	\$33,069,003
18	Potable O&M Expenses	\$21,508,230	\$22,242,410	\$23,004,189	\$23,793,604	\$24,611,727
19	Recycled Water Expenses	\$3,605,417	\$3,740,510	\$3,899,500	\$4,065,616	\$4,239,191
20	<b>Subtotal Expenses</b>	<b>\$52,765,770</b>	<b>\$54,991,911</b>	<b>\$57,201,067</b>	<b>\$59,508,762</b>	<b>\$61,919,921</b>
21						
22	<b>Debt Service</b>					
23	Potable & Recycled	\$12,534,465	\$12,533,557	\$12,529,986	\$14,127,125	\$14,121,496
24	Potable & Recycled Capital Projects	\$9,038,396	\$6,405,956	\$4,001,450	\$6,313,777	\$7,466,625
25	<b>Subtotal Debt &amp; Capital</b>	<b>\$21,572,862</b>	<b>\$18,939,513</b>	<b>\$16,531,435</b>	<b>\$20,440,902</b>	<b>\$21,588,122</b>
26						
27	Net Yearly Cash Flow	(\$6,178,746)	(\$2,499,934)	\$2,312,038	\$964,900	\$2,530,218
28						
29	<b>Ending Balance (601) Fund</b>	<b>\$10,418,191</b>	<b>\$7,918,258</b>	<b>\$10,230,296</b>	<b>\$11,195,196</b>	<b>\$13,725,414</b>
30						
31	Operating Reserve Target (25% of O&M)	\$13,010,738	\$13,559,649	\$14,104,373	\$14,673,393	\$15,267,926
32	Capital Reserve (100% of Annual Depreciation)	\$4,972,367	\$4,972,367	\$4,972,367	\$4,972,367	\$4,972,367
33	<b>Subtotal O&amp;M and Capital Reserve</b>	<b>\$17,983,105</b>	<b>\$18,532,017</b>	<b>\$19,076,740</b>	<b>\$19,645,761</b>	<b>\$20,240,293</b>
34	<b>25% of Max Annual Debt Service</b>	<b>\$5,469,900</b>	<b>\$5,469,900</b>	<b>\$5,469,900</b>	<b>\$5,469,900</b>	<b>\$5,469,900</b>

## 4. Potable Cost of Service Analysis

This section details the cost of service (COS) analysis performed for the test year FY 2024. A cost of service analysis allocates total costs (also known as the rate revenue requirement) to customer classes. The test year is the year used to set rates and perform a COS analysis. The COS analysis allocates costs to customer classes based on their use of and burden on the City's water system.

### 4.1. Methodology

The methodology utilized to develop the COS analysis and to apportion the rate revenue requirement (Section 4.4) to each customer class and tier is informed by Proposition 218 and the processes outlined in the AWWA Manual M1.

COS analyses are unique to each water system. However, there are five steps in every COS analysis to recover costs from customers in a proportional and defensible manner:

1. **Cost functionalization:** Operation and Maintenance ("O&M") expenses and capital assets are categorized by their function in the system. Sample functions may include supply, treatment, distribution, transmission, customer service, etc.
2. **Cost causation component allocation:** Functionalized costs are then allocated to cost causation components based on their burden on the system. The cost causation components include commodity, demand, meter service, customer service, amongst others. The revenue requirement is allocated accordingly to the cost causation components and results in the total revenue requirement for each cost causation component.
3. **Development of Units of Service:** Each class has unit demand characteristics that determine their share of costs in later steps. These units include maximum day (peaking) water use, number of accounts, number of ¾" equivalent capacity meters, and annual water use.
4. **Unit cost development:** The revenue requirement for each cost causation component is divided by the appropriate units of service to determine the unit cost for each cost causation component.
5. **Revenue requirement distribution:** The unit cost is utilized to distribute the revenue requirement for each cost causation component to customer classes based on each customer class's individual service units.

### 4.2. Functionalization and Allocation of Expenses to Cost Components

The first step in a COS analysis is to functionalize the O&M expenses and capital assets and then allocate the functionalized expenses to cost components. Cost functionalization is required to best allocate costs to the cost components. The cost components are then distributed to customer classes in proportion to how each class uses the system. This study uses the following functions:

- » **Supply:** purchased water from Calleguas and United, as well as city well production costs
- » **Treatment:** costs associated with the City's water treatment system
- » **Distribution:** costs associated with the City's water distribution system
- » **Customer Service:** costs of meter reading, billing, and other customer services
- » **Meters Maintenance:** costs of meter maintenance/repair

- » **General & Admin:** costs for general administration and operational expenses or any other costs that do not clearly relate to a specific functional category
- » **Backflow:** costs of maintaining backflow devices
- » **P&G Supply:** the cost of Calleguas water supply for P&G use

A summary of functionalized O&M expenses is shown below in Table 4-1.

**Table 4-1: O&M Expenses by Function**

Line	Category	FY 2024 O&M Cost (All Potable Funds)
1	Volumetric Supply	\$22,043,310
2	Fixed/Other Supply	\$4,604,278
3	Treatment	\$2,559,891
4	Distribution	\$5,359,758
5	Customer Service	\$3,297,334
6	Meter Maintenance	\$1,758,237
7	General & Admin	\$8,185,314
8	Backflow	\$91,574
9	P&G Supply	\$2,746,093
<b>10</b>	<b>Total O&amp;M Expenses</b>	<b>\$50,645,788</b>

After functionalization of costs, we allocate the functionalized costs to cost causation components. Each cost causation component is a cost center that is recovered from users based on how they cause the costs in each cost center. This study uses the following cost causation components:

- » **Supply:** costs associated with purchasing water
- » **Base:** costs associated with meeting base demand
- » **Max Day:** costs associated with meeting peak day use
- » **Max Hour:** costs associated with meeting peak hour use
- » **Customer Service:** costs related to providing customer service and billing customers
- » **Meter Maintenance & Direct Fire Costs:** costs related to repairing and maintaining meters
- » **Backflow:** costs associated with maintaining backflow devices and preventing water contamination
- » **General & Administrative:** administrative costs
- » **Private Fire:** costs associated with fighting private fires
- » **P&G Supply:** P&G specific supply costs

To allocate costs to cost causation components we must identify system wide peaking factors which are shown in Table 4-2. The system-wide peaking factors are used to derive the cost component allocation bases (i.e., percentages) shown in columns C through F of Table 4-2. Functionalized expenses are then allocated to the cost components using these allocation bases. To understand the interpretation of the percentages shown in columns C through F, we must first establish the base use as the average daily demand during the year. Base use is assigned 1.0.

As an example, the functionalized expenses that are allocated to the cost components using the max day basis (line 2) attribute 67% (1.00/1.50) of the demand (and therefore costs) to base (average daily demand) use and the remaining 33% to max day (peaking) use. Expenses allocated using the maximum hour basis assume 44% (1.00/2.25) of costs are due to base demands with the remaining proportion of costs allocated to the

maximum day (22%) and maximum hour (33%) cost components. Collectively the maximum day and hour cost components are known as **peaking costs**. These allocation bases are used to assign the functionalized costs in Table 4-9 to the cost components.

**Table 4-2: System Wide Peaking Factors and Allocation to Cost Components**

Line	Potable (A)	Peaking Factors (B)	Base (C)	Max Day (D)	Max Hour (E)	Total (F)	Monthly to Max Day Conversion (G)	Max Day to Max Hour Conversion (H)
1	Base	1.00	100%			100%		
2	Max Day	1.50	67%	33%		100%		
3	Max Hour	2.25	44%	22%	33%	100%		
4	System Wide Monthly Peaking Factor	1.17					1.28	1.50

### 4.3. Units of Service

Units of service are used to assign costs to each customer class. Each customer class has unique water use characteristics, identified through their units of service, which are used to assign costs, ensuring that each class pays their share of costs in proportion to the impacts their water use characteristics place on the water system.

#### 4.3.1. Water Use and Peaking Units<sup>4</sup>

Table 4-3 shows the derivation of the units of service and line 31 shows the total units of service. The most pertinent of which are in columns C, I and L. These are used to assign costs to each class. Peaking costs are costs associated with meeting the maximum day and maximum hour demands of customers. To meet the maximum day and hour demands a water system must be sized to deliver water during those times. This means infrastructure (pumps and pipes) must be sized (upsized) to deliver water during peak times of use. Larger infrastructure is more costly to install and maintain than smaller infrastructure. The degree to which each class is responsible for this upsizing of infrastructure is reflected in their peaking factor. A peaking factor is calculated for each class as the maximum monthly use divided by the average monthly use using data provided by the City. Column C is the projected FY 2024 potable water use, which is divided by 365 days to get the average daily usage in column D. Column E shows the monthly peaking factor for each class calculated using the billing data provided by the City. Column E and column D are multiplied to get the average day in the maximum month (column F). The average day in the average month is multiplied by the max day system wide peaking factor in column G (also shown in column G, Table 4-2) to get the total max day capacity in column H. The difference between the average day in the maximum month (column F) and the total max day capacity (column H) results in the max day extra capacity used for the max day unit costs in Table 4-12. To develop the max hour extra capacity (column L), the total max day capacity in column H is multiplied by the peaking factor in column J (taken from Table 4-2) to get the total max hour capacity (column K). The total max hour capacity (column K) is subtracted from the total max day capacity (column H) to get the final max hour extra capacity (column L), which is used in Table 4-12 for the max hour unit costs.

<sup>4</sup> Note that most calculations in the Excel model were not rounded. Therefore, performing the same calculations with a calculator will yield a slightly different result.

Table 4-3: Extra Capacity Calculations

Line	Customer Class (A)	Tier Width (hcf) (B)	Annual Use (hcf) (C)	Average Daily Usage (D=C/365)	Monthly Peaking Factor (E)	Average Day in the Max Month (F=D*E)	Max Month to Max Day Peaking Factor (G)	Total Max Day Capacity (H=F*G)	Max Day Extra Capacity (I=H-F)	Max Day to Max Hour Peaking Factor (J)	Total Max Hour Capacity (K=H*J)	Max Hour Extra Capacity (L=K-H)
1	<b>Single Family Residential</b>											
2	Tier 1	0-9	2,769,091	7,587	1.06	8,078	1.28	10,357	2,770	1.50	15,535	5,178
3	Tier 2	9-15	622,296	1,705	1.35	2,297	1.28	2,945	1,240	1.50	4,417	1,472
4	Tier 3	15+	314,911	863	1.80	1,551	1.28	1,989	1,126	1.50	2,983	994
5												
6	<b>Multifamily Residential</b>											
7	Tier 1	0-8	1,346,495	3,689	1.06	3,899	1.28	4,998	1,309	1.50	7,497	2,499
8	Tier 2	8+	231,860	635	1.32	841	1.28	1,078	443	1.50	1,617	539
9												
10	<b>Commercial &lt;=2"</b>											
11	Tier 1	0-62	775,093	2,124	1.13	2,404	1.28	3,082	958	1.50	4,622	1,541
12	Tier 2	62+	167,043	458	1.24	567	1.28	727	269	1.50	1,091	364
13	<b>Commercial &gt;=3"</b>		819,300	2,245	1.66	3,725	1.28	4,775	2,531	1.50	7,163	2,388
14												
15	<b>Industrial/City &lt;=2"</b>											
16	Tier 1	0-62	69,739	191	1.25	238	1.28	305	114	1.50	458	153
17	Tier 2	62+	16,121	44	1.62	71	1.28	92	47	1.50	137	46
18	<b>Industrial &gt;=3"</b>		476,289	1,305	1.87	2,436	1.28	3,123	1,818	1.50	4,684	1,561
19	<b>City &gt;=3"</b>		24,162	66	1.54	102	1.28	131	64	1.50	196	65
20												
21	<b>Irrigation &lt;=2"</b>											
22	Tier 1	0-24	716,584	1,963	1.14	2,244	1.28	2,876	913	1.50	4,315	1,438
23	Tier 2	24+	229,667	629	1.53	961	1.28	1,232	603	1.50	1,848	616
24	<b>Irrigation &gt;=3"</b>		463,932	1,271	1.64	2,090	1.28	2,679	1,408	1.50	4,019	1,340
25												
26	<b>Oceanview Commercial</b>											
27	Tier 1	0-9	10,092	28	1.83	51	1.28	65	37	1.50	97	32
28	Tier 2	9-15	1,750	5	2.12	10	1.28	13	8	1.50	20	7
29	Tier 3	15+	1,632	4	1.77	8	1.28	10	6	1.50	15	5
30												
31	<b>Total</b>		<b>9,056,058</b>	<b>24,811</b>		<b>31,572</b>		<b>40,477</b>	<b>15,666</b>		<b>60,715</b>	<b>20,238</b>

### 4.3.2. Number of Accounts by Meter Size and Equivalent Meters

Customer units include the number of accounts and number of 3/4” equivalent meters for each customer class and are used to develop the City’s monthly fixed charges. Table 4-4 shows the projected number of accounts by meter size for FY 2024.

**Table 4-4: Total Accounts for FY 2024**

Line	Meter Size	Total Accounts
1	5/8" or 3/4"	27,780
2	1"	10,539
3	1 1/2"	1,471
4	2"	1,371
5	3"	217
6	4"	107
7	6"	51
8	8"	17
9	10"	1
<b>10</b>	<b>Total</b>	<b>41,554</b>

Table 4-5 shows the equivalent meter calculation. Equivalent meters are used to allocate meter-related and extra capacity costs by meter size. Larger meters impose larger demands, are more expensive to install, maintain, and replace than smaller meters. Equivalent meter units are based on AWWA-rated hydraulic capacities and represent the potential demand on the water system relative to a base meter size. Capacity ratios are calculated by dividing larger meter capacities by the base meter capacity. The base meter in this study is a 3/4-inch meter. AWWA capacity ratios (column C) are calculated by dividing the capacity of each meter size (column B) by the capacity of a 3/4-inch meter (column B, Line 1). The projected potable and recycled meters (column D) are multiplied by the capacity ratios (column C) to achieve the total equivalent meters. The total equivalent meters are shown in column E.

**Table 4-5: Total Equivalent Meters**

Line	Meter Size (A)	AWWA Capacity (B)	AWWA Capacity Ratios (C)	Total Meters (D)	Total Equivalent Meters (E)
1	5/8" or 3/4"	30	1.00	27,780	27,780
2	1"	50	1.67	10,539	17,564
3	1 1/2"	100	3.33	1,471	4,902
4	2"	160	5.33	1,371	7,311
5	3"	350	11.67	217	2,532
6	4"	600	20.00	107	2,141
7	6"	1250	41.67	51	2,126
8	8"	1800	60.00	17	1,020
9	10"	2900	96.67	1	97
<b>10</b>	<b>Total</b>			<b>41,554</b>	<b>65,475</b>

### 4.3.3. Fire Protection Units

Water systems provide two types of fire protection: public fire protection (i.e., fire hydrants) and private fire protection (i.e. fire lines for private structures that may supply standpipes or sprinklers). Raftelis analyzed the potential fire demand through public fire hydrants and private fire connections to allocate the total fire protection cost. The City provided Raftelis with a count of fire hydrants and private fire line connections.



### 4.3.3.1. Fire Protection Capacity

Table 4-6 shows the calculation of the capacity associated with Fire Protection based on assumptions regarding the duration and flow associated with typical fires. The max day fire protection capacity is calculated for each fire and then added together in columns C and D, line 3 of Table 4-6 using this formula:

$$\text{Max Day Fire Capacity (hcf/day)} = \text{Duration of Fire (hrs)} \times \text{Water Use Rate (gpm)} \times 60 \text{ mins/hr} \div 748.05 \text{ gallons/hcf}$$

The max hour fire protection capacity shown in column D, line 3 of Table 4-6 is calculated for each fire as:

$$\text{Max Hour Fire Capacity (hcf/hour)} = \text{Water Use Rate (gpm)} \times 60 \text{ mins/hr} \times 24 \text{ hr/day} \div 748.05 \text{ gallons/hcf} - \text{Max Day Fire Capacity (hcf/day)}$$

We assumed two fires needing 4 hours and 4,000 gallons per minute. This (4 hrs and 4,000 gpm) is the fire flow and duration for a medium sized commercial and industrial building, as specified in Table 105.1 found in Appendix A of the Ventura County Water Works Manual. The total capacity requirement in column E, Line 4 represents a peak demand, similar to the maximum day peaking costs for other classes determined in Table 4-3.

**Table 4-6: Fire Protection Requirements**

Line	Fire Service Requirement (A)	Units (B)	Fire 1 (C)	Fire 2 (D)	Total (E)
1	Fire Duration	Hours	4	4	
2	Flow Rate	Gal./minute	4000	4000	
3			<b>Max Day</b>	<b>Max Hour</b>	
4	<b>Fire Protection Capacity</b>		<b>2,567</b>	<b>12,834</b>	<b>15,401</b>

### 4.3.3.2. Public and Private Fire Connections

Table 4-7 shows the calculation of equivalent fire demand associated with public hydrants and private fire lines. Each connection size has a fire flow demand factor similar to the hydraulic capacity factor of a water meter. The diameter of the connection (in inches) is raised to the 2.63 power to determine the fire flow demand factor.<sup>5</sup> The fire flow demand factor is multiplied by the number of connections by size to calculate equivalent fire demand. Total equivalent fire demand for public fire lines are shown in line 1 and the total equivalent fire demand for private fire lines is shown in Line 14. The resulting potential fire demand for public and private connections, and therefore the cost allocation for public fire and private fire costs, is shown in column E. The percentages are the proportion of the demand for public and private connections.

<sup>5</sup> Hazen-Williams equation for pipe flow



**Table 4-7: Potential Fire Demand Unit Costs**

Line	Connection Size (A)	Fire Demand Ratios (B)	Public Fire Connections (C)	Public Potential Demand (D)	% of Total Fire Protection Cost (E)
1	6"	111.31	4,725	525,944	79%
2					
3	Connection Size	Fire Demand Ratios	Private Fire Connections	Private Potential Demand	% of Total Fire Protection Cost
4	3/4"	0.47	7	3	
5	1"	1.00	5	5	
6	1.5"	2.90	2	6	
7	2"	6.19	339	2,098	
8	3"	17.98	22	396	
9	4"	38.32	613	23,490	
10	6"	111.31	444	49,422	
11	8"	237.21	210	49,813	
12	10"	426.58	36	15,357	
13	12"	689.04	1	689	
14	<b>Total Private</b>		<b>1,679</b>	<b>141,279</b>	<b>21%</b>
15	<b>Total Public and Private</b>		<b>6,404</b>	<b>667,223</b>	<b>100%</b>

### 4.4. Rate Revenue Requirement

Table 4-8 shows rate revenue requirement for FY 2024. The revenue requirement is split into operating and capital, which are allocated to cost components based the overall allocation of O&M expenses and capital assets respectively (Table 4-11). Lines 2 through 4 of Table 4-8 equal the expenses in lines 17 and 18 in Table 3-11. Lines 5 and 6 include expenses for security contamination prevention and water resource fee (fund 606) expenses<sup>6</sup>. Lines 7 and 8 are debt service and capital expenses for potable water. Lines 9, 10 and 11 are recycled system operating expenses, debt service and capital expenses. The revenue offsets in lines 14-22 are *non-rate* revenue that lower the revenue required from *water rates* such as interest earnings, ordinance rates (rates set by contract), and other revenues that are applied as offsets to the final *rate* revenue requirement. The adjustment for cash balance (Line 25 and Line 26) is equal to FY 2024 projected net cash change for the potable and recycled utilities, which is totaled in line 27. These cash adjustments are subtracted from the rate revenue requirement – therefore the \$5.8 million is subtracted, meaning the City is using reserves. This is why the reserve balance decreases in Figure 3-3 from FY 2024 to FY 2025. The final *rate* revenue requirement (Line 28) is calculated as follows:

$$\text{Total revenue required from rates (Line 28)} = \text{Revenue requirements (Line 12)} - \text{Non-Rate Revenue (Line 22)} - \text{Adjustments (Line 27)}$$

<sup>6</sup> These expenses are not shown in Table 3-11 because Table 3-11 shows the cash flow for Fund 601 only, the water operating fund.

Table 4-8: Total Rate Revenue Requirement

Line	FY 2024	Operating	Capital	Subtotal Potable & Recycled
<b>1</b>	<b>Revenue Requirements (Expenses)</b>			
2	Purchased Water	\$24,906,030		\$24,906,030
3	Proctor & Gamble Water Purchase Cost	\$2,746,093		\$2,746,093
4	Water Operation & Maintenance (601)	\$21,508,230		\$21,508,230
5	Water Resource Fee (606)	\$357		\$357
6	Security Contamination Prevention (608)	\$1,144,672		\$1,144,672
7	Existing Debt Service		\$6,688,016	\$6,688,016
8	Rate Funded Capital Projects		\$6,898,396	\$6,898,396
9	Recycled O&M Expenses	\$3,605,417		\$3,605,417
10	Recycled Existing Debt Service		\$5,846,449	\$5,846,449
11	Recycled Rate Funded Capital Projects		\$2,140,000	\$2,140,000
12	Total Revenue Requirements	\$53,910,798	\$21,572,862	\$75,483,660
13				
<b>14</b>	<b>Less: Revenue Offsets</b>			
15	Oceanview >=3" (Set by Ordinance)	\$641,294		\$641,294
16	Potable Water Operating Non-Rate Revenue (601)	\$2,065,659		\$2,065,659
17	Transfer from Gen Fund-Infrastructure Use Fund	\$4,026,438		\$4,026,438
18	Interest Income	\$372,500		\$372,500
19	Recycled Revenue (Oceanview Ordinance Ag)	\$339,033		\$339,033
20	Recycled Agricultural Agreement (Contract Rates)	\$1,584,958		\$1,584,958
21	Recycled Water Operating (601)	\$15,075		\$15,075
22	Total Revenue Offsets	\$9,044,957	\$0	\$9,044,957
23				
<b>24</b>	<b>Less: Adjustments</b>			
25	Potable Adjustment for Cash Balance		-\$3,828,730	-\$3,828,730
26	Recycled Adjustment for Cash Balance		\$9,652,800	\$9,652,800
27	Total Adjustments	\$0	\$5,824,071	\$5,824,071
<b>28</b>	<b>Revenue Requirement from Rates</b>	<b>\$44,865,841</b>	<b>\$15,748,791</b>	<b>\$60,614,632</b>

Table 4-9 shows the allocation of the functionalized O&M costs (as functionalized in Table 4-1) to the cost components. The functionalized costs are shown in the 2<sup>nd</sup> column from the left. The allocation of functionalized costs is based on percentages shown in Appendix A. The max day and max hour percentages in Appendix A are derived from Table 4-2. The resulting percentages in line 11 of Table 4-9 are used to allocate the operating revenue requirement from Table 4-8 to the cost components. This process is repeated with the assets, as shown in Table 4-10, which is used to allocate capital costs to the cost causation components. The percentages shown in line 8, of Table 4-10, are used to allocate the capital revenue requirement (shown in Table 4-8) to the cost components.

**Table 4-9: O&M Cost Causation Allocation**

Line	Function (\$)	Supply	Base	Max Day	Max Hour	Customer Service	Meter Maintenance	Backflow	Gen & Admin	P&G Supply	TOTAL
1	Volumetric Supply	\$22,043,310									\$22,043,310
2	Fixed/Other Supply		\$4,604,278								\$4,604,278
3	Treatment		\$1,706,594	\$853,297							\$2,559,891
4	Distribution		\$2,382,115	\$1,191,057	\$1,786,586						\$5,359,758
5	Customer Service					\$3,297,334					\$3,297,334
6	Meter Maintenance						\$1,758,237				\$1,758,237
7	Gen & Admin								\$8,185,314		\$8,185,314
8	Backflow							\$91,574			\$91,574
9	P&G Supply									\$2,746,093	\$2,746,093
10	<b>Total O&amp;M Expenses</b>	<b>\$22,043,310</b>	<b>\$8,692,986</b>	<b>\$2,044,354</b>	<b>\$1,786,586</b>	<b>\$3,297,334</b>	<b>\$1,758,237</b>	<b>\$91,574</b>	<b>\$8,185,314</b>	<b>\$2,746,093</b>	<b>\$50,645,788</b>
11	<b>Percent Allocation</b>	<b>43.5%</b>	<b>17.2%</b>	<b>4.0%</b>	<b>3.5%</b>	<b>6.5%</b>	<b>3.5%</b>	<b>0.2%</b>	<b>16.2%</b>	<b>5.4%</b>	<b>100%</b>

**Table 4-10: Asset Cost Causation Allocation**

Line	Asset Allocation (\$)	Supply	Base	Max Day	Max Hour	Meter Maintenance	Direct Fire Protection	General & Admin	Asset Summary
1	Supply	\$4,645,588							\$4,645,588
2	Treatment		\$96,237,415	\$48,118,707					\$144,356,122
3	Distribution		\$66,251,894	\$33,125,947	\$49,688,921				\$149,066,762
4	Meter					\$11,253,381			\$11,253,381
5	Fire						\$1,718,500		\$1,718,500
6	General & Admin							\$13,774,742	\$13,774,742
7	<b>Total Asset Expenses</b>	<b>\$4,645,588</b>	<b>\$162,489,309</b>	<b>\$81,244,655</b>	<b>\$49,688,921</b>	<b>\$11,253,381</b>	<b>\$1,718,500</b>	<b>\$13,774,742</b>	<b>\$324,815,096</b>
8	<b>Percent Allocation</b>	<b>1.4%</b>	<b>50.0%</b>	<b>25.0%</b>	<b>15.3%</b>	<b>3.5%</b>	<b>0.5%</b>	<b>4.2%</b>	<b>100.0%</b>

## 4.5. Adjustments to Cost of Service

Table 4-11 shows the allocation of the revenue requirement, developed in Table 4-8, to the cost components. The operating revenue requirement shown in Table 4-8 is allocated to the cost components using the resulting O&M allocation from Line 11 in Table 4-9. Similarly, the capital revenue requirement is allocated to the cost components using the asset allocation from line 8 of Table 4-10. In lines 5 and 6, General and Administrative costs are redistributed in proportion to the resulting allocation of the other cost components. Total fire protection costs are allocated to public and private fire protection in proportion to the percentages shown in Table 4-7. Public fire protection costs are reallocated to the meter service cost component in line 8 and public fire protection is reallocated in line 9 of Table 4-7. Line 11 is an allocation of meter costs from the total meter costs to P&G, which is derived using the percent of P&G equivalent meters from the total equivalent meters in Table 4-5. In line 13, of Table 4-11, we allocate a portion of capacity related costs and a portion of base costs to the meter capacity component so that the City can collect approximately 29% of costs through a fixed charge. This is a common reallocation of extra capacity (peaking) costs, which are fixed in nature, to collect fixed costs in proportion to meter size as opposed to water use.

**Table 4-11: Revenue Requirement Allocation to Cost Components**

Line		Supply	Base	Max Day	Max Hour	Customer Service	Meter Maintenance & Direct Fire Costs	Backflow	Gen & Admin	Private Fire	P & G Volumetric	P&G Meter Maintenance	Total
1	Operating Expenses	\$19,527,619	\$7,700,900	\$1,811,043	\$1,582,692	\$2,921,026	\$1,557,578	\$81,123	\$7,251,166	\$0	\$2,432,695		\$44,865,841
2	Capital Expenses	\$225,243	\$7,878,360	\$3,939,180	\$2,409,187	\$0	\$628,947		\$667,874	\$0			\$15,748,791
4	<b>Total Cost of Service</b>	<b>\$19,752,862</b>	<b>\$15,579,259</b>	<b>\$5,750,222</b>	<b>\$3,991,879</b>	<b>\$2,921,026</b>	<b>\$2,186,525</b>	<b>\$81,123</b>	<b>\$7,919,040</b>	<b>\$0</b>	<b>\$2,432,695</b>		<b>\$60,614,632</b>
5	Allocation of General Cost (%)	37.5%	29.6%	10.9%	7.6%	5.5%	4.1%	0.2%		0%	4.6%		100.0%
6	Allocation of General Cost	\$2,968,440	\$2,341,235	\$864,138	\$599,896	\$438,969	\$328,589	\$12,191	-	\$0	\$365,583		
									\$7,919,040				
7	Subtotal	\$22,721,302	\$17,920,495	\$6,614,360	\$4,591,775	\$3,359,995	\$2,515,114	\$93,314	\$0	\$0	\$2,798,278		\$60,614,632
8	Allocation of Public Fire to Meter			-\$733,985	-\$1,404,605		\$2,138,590						\$0
9	Allocation to Private Fire			-\$197,163	-\$377,306					\$574,469			\$0
10	Subtotal	\$22,721,302	\$17,920,495	\$5,683,212	\$2,809,864	\$3,359,995	\$4,653,704	\$93,314	\$0	\$574,469	\$2,798,278		\$60,614,632
11	P&G Meter Allocation						-\$6,871					\$6,871	
12	Subtotal	\$22,721,302	\$17,920,495	\$5,683,212	\$2,809,864	\$3,359,995	\$4,646,834	\$93,314	\$0	\$574,469	\$2,798,278	\$6,871	\$60,614,632
13	Allocation Peak or Base Cost to Meter Capacity		-\$2,688,074	-\$3,523,591	-\$1,742,116		\$7,953,781						\$0
<b>14</b>	<b>Adjusted Cost of Service</b>	<b>\$22,721,302</b>	<b>\$15,232,420</b>	<b>\$2,159,620</b>	<b>\$1,067,748</b>	<b>\$3,359,995</b>	<b>\$12,600,615</b>	<b>\$93,314</b>	<b>\$0</b>	<b>\$574,469</b>	<b>\$2,798,278</b>	<b>\$6,871</b>	<b>\$60,614,632</b>

## 4.6. Unit Cost of Service

Table 4-12 shows the calculation of unit costs. *Units of service* previously developed in Table 4-3 (supply, max day and hour), Table 4-5 (customer service and meter equivalencies), and Table 4-7 (private fire) are divided into the costs allocated to each cost causation component shown at the bottom of Table 4-11 and restated in column B of Table 4-12. The unit cost identifies, for example, the total purchased water cost per unit of water sold, or the total customer service cost per customer. Once these unit costs are identified, they can be proportionally assigned to each customer class to reflect their unique characteristics.

**Table 4-12: Unit Cost Calculation**

Line	Category (A)	Costs (B)	Units of Service (C)	Unit Cost (D)	Units (E)
1	Supply	\$22,721,302	9,056,058	\$2.51	\$/hcf
2	Base Delivery	\$15,232,420	9,056,058	\$1.68	\$/hcf
3	Max Day	\$2,159,620	15,666	\$137.86	\$/hcf
4	Max Hour	\$1,067,748	20,238	\$52.76	\$/hcf
5	Customer Service	\$3,359,995	41,554	\$80.86	\$/No. of Customers
6	Meter Maintenance & Direct Fire Costs	\$12,600,615	65,378	\$192.73	\$/Eq. Meters
7	Backflow	\$93,314	1,679	\$55.58	\$/Private Fire Line
8	Private Fire	\$574,469	141,279	\$4.07	\$/Private Fire Demand
9	P & G Volumetric	\$2,798,278	670,028	\$4.18	\$/hcf
10	P&G Meter Maintenance	\$6,871	97	\$71.08	\$/Eq. Meter
<b>11</b>	<b>Total (Total of Column C*Column D)</b>			<b>\$60,614,632</b>	

Unit costs developed in Table 4-12 are used to distribute costs to each customer class based on their units of service which were derived in Table 4-3, Table 4-5, and Table 4-7. The unit costs are multiplied by the service units for each cost causation component to derive the cost to each class for each cost component. For example, in line 2, the tier 1 Single Family Residential (SFR) supply cost takes the unit cost from Table 4-12 in column D, line 1 of \$2.51 and multiplies it by the SFR tier 1 projected FY 2024 use from Table 4-3 in column C, line 2 of 2.769 million hcf, resulting in the total of \$6.9 million of supply costs for SFR tier 1. The total cost of service for each class is shown in Table 4-13; this total represents the costs the utility incurs to provide service to each customer class. The totals shown in Table 4-13 are used to design and calculate rates for each class. For example, adding lines 1 through 4 in Table 4-13 yields \$27.3 million. The rates designed in Section 5 collect this exact amount for Single Family customers through a combination of fixed charges and volumetric rates.

Table 4-13: Cost to Serve by Class

Line	Customer Class	Supply	Base	Max Day	Max Hour	Meter Maintenance & Direct Fire Costs	Customer Service	Backflow	Private Fire	P & G Volumetric	P&G Meter Maintenance	Proposed Cost of Service
1	SFR					\$7,851,706	\$2,807,378					\$10,659,084
2	Tier 1	\$6,947,544	\$4,657,652	\$381,894	\$273,204							\$12,260,294
3	Tier 2	\$1,561,318	\$1,046,712	\$170,911	\$77,679							\$2,856,619
4	Tier 3	\$790,101	\$529,685	\$155,230	\$52,463							\$1,527,479
5												
6	MFR					\$1,145,114	\$170,719					\$1,315,833
7	Tier 1	\$3,378,305	\$2,264,824	\$180,496	\$131,852							\$5,955,478
8	Tier 2	\$581,728	\$389,992	\$61,021	\$28,433							\$1,061,174
9												
10	Commercial <=2"					\$1,165,909	\$198,752					\$1,364,661
11	Tier 1	\$1,944,679	\$1,303,718	\$132,083	\$81,292							\$3,461,771
12	Tier 2	\$419,103	\$280,968	\$37,146	\$19,181							\$756,398
13	Commercial >=3"	\$2,055,592	\$1,378,074	\$348,892	\$125,974	\$698,980	\$15,363					\$4,622,875
14												\$10,205,705
15	Industrial/City <=2"					\$144,486	\$20,053					\$164,539
16	Tier 1	\$174,971	\$117,301	\$15,759	\$8,056							\$316,087
17	Tier 2	\$40,448	\$27,116	\$6,526	\$2,414							\$76,504
18	Industrial >=3"	\$1,194,990	\$801,124	\$250,605	\$82,376	\$82,554	\$1,698					\$2,413,347
19	City >=3"	\$60,623	\$40,642	\$8,874	\$3,444	\$36,941	\$889					\$151,412
20												
21	Irrigation <=2"					\$1,011,401	\$134,145					\$1,145,546
22	Tier 1	\$1,797,882	\$1,205,305	\$125,881	\$75,877							\$3,204,945
23	Tier 2	\$576,226	\$386,304	\$83,103	\$32,501							\$1,078,134
24	Irrigation >=3"	\$1,163,989	\$780,341	\$194,154	\$70,681	\$247,341	\$7,116					\$2,463,622
25												
26	Oceanview Commercial					\$8,994	\$1,698					\$10,692
27	Tier 1	\$25,319	\$16,974	\$5,124	\$1,710							\$49,127
28	Tier 2	\$4,391	\$2,944	\$1,138	\$344							\$8,817
29	Tier 3	\$4,094	\$2,744	\$785	\$268							\$7,891
30												
31	Private Fire							\$93,314	\$574,469			\$667,783
32												
33	P&G									\$2,798,278	\$6,871	\$2,805,149
34	<b>Total</b>	<b>\$22,721,302</b>	<b>\$15,232,420</b>	<b>\$2,159,620</b>	<b>\$1,067,748</b>	<b>\$12,600,615</b>	<b>\$3,359,995</b>	<b>\$93,314</b>	<b>\$574,469</b>	<b>\$2,798,278</b>	<b>\$6,871</b>	<b>\$60,614,632</b>

# 5. Proposed Potable Rates

## 5.1. Proposed Rate Structure Changes

Most agencies implement fixed charges that are the same *for each class* by meter size. This study proposes to implement fixed meter charges that are the same for each class and vary by meter size (only). The City purchases water or otherwise pays fees to obtain water from three sources; in ascending order of cost, they are:

1. Groundwater from Fox Canyon Groundwater Management Agency (FCGMA)
2. Groundwater from United Water Conservation District (UWCD)
3. Imported water from Calleguas Municipal Water District (CMWD)

The City's proposed rate structure reflects the City's water system operations, which blends the water purchased from the three sources above into a singular supply rate (the supply rate is shown in Table 5-7). This singular supply rate is the same for each tier. From an operational perspective, the distribution system delivers the same blended water to tier 1, 2 and 3 customers and other classes. The proposed rate structure reflects the way the system is operated.

The rate structure for Proctor and Gamble (P&G) for their 10-inch connections reflect their direct connection to CMWD water through a transmission main. P&G does not use the City's distribution system.

Based on the peaking characteristics (i.e., extra capacity) of each class, discussed in Section 4, Raftelis recommends separating the Industrial customers from the Commercial class. Raftelis also recommends separating City  $\geq 3$ " customers from Industrial customers and creating a separate City  $\geq 3$ " volumetric rate due to their peaking factors. This section details the proposed potable rate calculations. The proposed rates are calculated directly from the results of the COS analysis (Section 4).

## 5.2. Proposed Fixed Charges

Table 5-1 shows the derivation of the fixed charge. The components of the fixed meter charge shown in line 1 of column E, F and G are the charges for the smallest meter size. The meter service charge in line 1, column E is calculated by taking the total meter maintenance costs and dividing it by the total number of equivalent meters. This charge (\$16.04) is then multiplied by the hydraulic equivalency meter ratio to develop meter service costs by meter size as shown in column E, lines 3 through 11. The customer billing charge is calculated by dividing the customer service costs by the number of accounts and bills per year. It is the same for each meter size. The meter service and customer billing components are added together to create the FY 2024 proposed monthly fixed charge for each meter size shown in column G.



**Table 5-1: Fixed Charge Calculation for All Classes Except P&G**

Line	Meter Size (A)	Hydraulic Equivalency Meter Ratio (B)	Number of Meters (C)	Equivalent Meter (D)	Meter Service (E)	Customer Billing & Meter Reading (F)	Proposed Monthly Fixed Charge (G)
1					\$16.04	\$6.74	\$22.78
2							
3	5/8" or 3/4"	1.00	27,780	27,780	\$16.04	\$6.74	\$22.78
4	1"	1.67	10,539	17,564	\$26.73	\$6.74	\$33.47
5	1 1/2"	3.33	1,471	4,902	\$53.46	\$6.74	\$60.20
6	2"	5.33	1,371	7,311	\$85.53	\$6.74	\$92.27
7	3"	11.67	217	2,532	\$187.10	\$6.74	\$193.84
8	4"	20.00	107	2,141	\$320.75	\$6.74	\$327.49
9	6"	41.67	51	2,126	\$668.23	\$6.74	\$674.96
10	8"	60.00	17	1,020	\$962.24	\$6.74	\$968.98
11	10"	96.67	1	97	\$1,550.28	\$6.74	\$1,557.02

Table 5-2 shows the fixed charge component for P&G. P&G meter service costs are based on meter maintenance and the standard billing and meter reading costs. Total meter service costs are derived in line 10 of Table 4-11. A portion of this total meter service cost is allocated to P&G based on P&G’s portion of equivalent meters, which is about 0.15% of the total equivalent meters.

**Table 5-2: P&G Fixed Charge Calculation**

Line	P&G Fixed Charge	Hydraulic Equivalency Meter Ratio	Number of Meters	Equivalent Meter	Meter Service	Customer Billing & Meter Reading	Proposed Monthly Fixed Charge
1					\$5.92	\$6.74	\$12.66
2	Meter Size						
3	10"	96.67	1	96.7	\$572.56	\$6.74	\$579.29

Table 5-3 shows the private fire fixed monthly charge derivation, which is both the monthly private fire protection costs and the backflow prevention program costs. The monthly private fire protection in line 1 is calculated by taking the total fire protection cost (from Table 4-13) and dividing by the total number of equivalent fire lines and by 12 to create a monthly charge. This charge (\$0.34) is then multiplied by the fire demand ratio to develop monthly private fire protection costs by meter size as shown in column E. The backflow prevention charge is calculated by dividing the backflow prevention cost (from Table 4-13) by the number of fire lines and by 12 to create a monthly charge. The private fire protection and backflow prevention components are added together to create the FY 2024 proposed monthly private fire fixed charge for each fire line size.

**Table 5-3: Fire Fixed Charge Calculation**

Line	Private Fire Meter (A)	Fire Demand Ratio (B)	Number of Lines (C)	Equivalent Lines (D)	Monthly Private Fire Protection (E)	Backflow Prevention Program (F)	Proposed Monthly Private Fire (G)
1					\$0.34	\$4.63	\$4.97
2	Line Size - Private Fire						
3	3/4"	0.47	7	3	\$0.16	\$4.63	\$4.79
4	1"	1.00	5	5	\$0.34	\$4.63	\$4.97
5	1.5"	2.90	2	6	\$0.98	\$4.63	\$5.62
6	2"	6.19	339	2,098	\$2.10	\$4.63	\$6.73
7	3"	17.98	22	396	\$6.09	\$4.63	\$10.72
8	4"	38.32	613	23,490	\$12.98	\$4.63	\$17.62
9	6"	111.31	444	49,422	\$37.72	\$4.63	\$42.35
10	8"	237.21	210	49,813	\$80.38	\$4.63	\$85.01
11	10"	426.58	36	15,357	\$144.55	\$4.63	\$149.18
12	12"	689.04	1	689	\$233.48	\$4.63	\$238.11

Table 5-4 shows the five-year potable fixed charges. The charge for July 1, 2023 is based on a cost of service analysis and subsequent charges are increased by the revenue adjustments in Table 3-10. Table 5-5 shows the five-year private fire charges which were derived in a similar manner.

**Table 5-4: Proposed Potable Five-Year Fixed Charges**

Line	Meter Size	Current Rate	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
1	5/8" or 3/4"	\$20.60	\$22.78	\$24.94	\$26.19	\$27.50	\$28.87
2	1"	\$32.14	\$33.47	\$36.65	\$38.48	\$40.41	\$42.43
3	1 1/2"	\$60.76	\$60.20	\$65.92	\$69.21	\$72.68	\$76.31
4	2"	\$95.25	\$92.27	\$101.04	\$106.09	\$111.39	\$116.96
5	3"	\$204.56	\$193.84	\$212.25	\$222.87	\$234.01	\$245.71
6	4"	\$348.18	\$327.49	\$358.60	\$376.53	\$395.36	\$415.13
7	6"	\$721.80	\$674.96	\$739.08	\$776.04	\$814.84	\$855.58
8	8"	\$1,037.83	\$968.98	\$1,061.03	\$1,114.08	\$1,169.79	\$1,228.28
9	10"	\$1,670.07	\$1,557.02	\$1,704.94	\$1,790.18	\$1,879.69	\$1,973.68
10	12"		\$2,305.43	\$2,524.45	\$2,650.67	\$2,783.20	\$2,922.36
11							
12	10" - P&G		\$579.29	\$634.33	\$666.04	\$699.35	\$734.31

**Table 5-5: Proposed Five-Year Private Fire Charges**

Line	Fire Protection - Connection Size	Current Rate	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
1	3/4"	\$3.66	\$4.79	\$5.25	\$5.51	\$5.78	\$6.07
2	1"	\$4.95	\$4.97	\$5.44	\$5.71	\$6.00	\$6.30
3	1.5"	\$8.13	\$5.62	\$6.15	\$6.46	\$6.78	\$7.12
4	2"	\$11.96	\$6.73	\$7.37	\$7.74	\$8.12	\$8.53
5	3"	\$24.10	\$10.72	\$11.74	\$12.33	\$12.94	\$13.59
6	4"	\$40.07	\$17.62	\$19.29	\$20.26	\$21.27	\$22.34
7	6"	\$81.59	\$42.35	\$46.37	\$48.69	\$51.13	\$53.68
8	8"	\$116.71	\$85.01	\$93.09	\$97.74	\$102.63	\$107.76
9	10"	\$186.98	\$149.18	\$163.35	\$171.52	\$180.10	\$189.10

### 5.3. Proposed Volumetric Rates

To develop volumetric rates for each class, we must first derive the peaking rate, which is a component of the total volumetric rate. The total volumetric rate is the sum of the supply rate, the delivery rate, and the peaking rates. The supply and delivery rates were derived in lines 1 and 2 of Table 4-12. Table 5-6 shows the peaking rate derivation, which divides the peaking costs by class by each classes' use. The peaking costs by class are obtained by adding the max day and max hour columns in Table 4-13.

**Table 5-6: Peaking Rate Derivation**

Line	Peaking Rate Calculation	Peaking Costs (\$)	Use (hcf)	Peaking Unit Cost (\$ / hcf)
1	SFR			
2	Tier 1	\$655,099	2,769,091	\$0.24
3	Tier 2	\$248,589	622,296	\$0.40
4	Tier 3	\$207,693	314,911	\$0.66
5				
6	MFR			
7	Tier 1	\$312,349	1,346,495	\$0.23
8	Tier 2	\$89,454	231,860	\$0.39
9				
10	Commercial <=2"			
11	Tier 1	\$213,375	775,093	\$0.28
12	Tier 2	\$56,327	167,043	\$0.34
13	Commercial >=3"	\$474,865	819,300	\$0.58
14				
15	Industrial/City <=2"			
16	Tier 1	\$23,814	69,739	\$0.34
17	Tier 2	\$8,940	16,121	\$0.55
18	Industrial >=3"	\$332,981	476,289	\$0.70
19	City >=3"	\$12,318	24,162	\$0.51
20				
21	Irrigation <=2"			
22	Tier 1	\$201,757	716,584	\$0.28
23	Tier 2	\$115,604	229,667	\$0.50
24	Irrigation >=3"	\$264,835	463,932	\$0.57
25				
26	Oceanview Commercial			
27	Tier 1	\$6,833	10,092	\$0.68
28	Tier 2	\$1,482	1,750	\$0.85
29	Tier 3	\$1,053	1,632	\$0.65
30				
<b>31</b>	<b>Total</b>	<b>\$3,227,369</b>	<b>9,056,058</b>	

Table 5-7 shows the derivation of the total volumetric rate by adding the supply, delivery, and peaking component to create the FY 2024 proposed volumetric rates. The supply and delivery components are derived in Table 4-12 and the peaking costs are derived in Table 5-6. P&G is also shown, though is only charged a supply rate for the direct water supply from Calleguas Municipal Water District.

**Table 5-7: Proposed Volumetric Rate Calculation**

Line	Customer Classes	Tier Breakpoints	Supply Component (\$ / HCF)	Delivery Component (\$/ HCF)	Peaking Component	Proposed Total Rate (\$/ HCF)
1	SFR					
2	Tier 1	0-9	\$2.51	\$1.68	\$0.24	\$4.43
3	Tier 2	9-15	\$2.51	\$1.68	\$0.40	\$4.59
4	Tier 3	15+	\$2.51	\$1.68	\$0.66	\$4.85
5						
6	MFR					
7	Tier 1	0-8	\$2.51	\$1.68	\$0.23	\$4.42
8	Tier 2	8+	\$2.51	\$1.68	\$0.39	\$4.58
9						
10	Commercial <=2"					
11	Tier 1	0-62	\$2.51	\$1.68	\$0.28	\$4.47
12	Tier 2	62+	\$2.51	\$1.68	\$0.34	\$4.53
13	Commercial >=3"		\$2.51	\$1.68	\$0.58	\$4.77
14						
15	Industrial/City <=2"					
16	Tier 1	0-62	\$2.51	\$1.68	\$0.34	\$4.53
17	Tier 2	62+	\$2.51	\$1.68	\$0.55	\$4.75
18	Industrial >=3"		\$2.51	\$1.68	\$0.70	\$4.89
19	City >=3"		\$2.51	\$1.68	\$0.51	\$4.70
20						
21	Irrigation <=2"					
22	Tier 1	0-24	\$2.51	\$1.68	\$0.28	\$4.47
23	Tier 2	24+	\$2.51	\$1.68	\$0.50	\$4.69
24	Irrigation >=3"		\$2.51	\$1.68	\$0.57	\$4.76
25						
26	Oceanview Commercial					
27	Tier 1	0-9	\$2.51	\$1.68	\$0.68	\$4.87
28	Tier 2	9-15	\$2.51	\$1.68	\$0.85	\$5.04
29	Tier 3	15+	\$2.51	\$1.68	\$0.65	\$4.84
30						
31	P&G		\$4.18			\$4.18

Table 5-8 shows the proposed five-year rates. The rates for July 1, 2023 were derived based on the cost of service analysis in Section 4. Subsequent year rates are increased by the revenue adjustments in Table 3-10.

**Table 5-8: Proposed Five Year Volumetric Rate**

Line	Volumetric Rate	Tier Breakpoint	Current Rate	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
1	SFR							
2	Tier 1	0-9	\$3.31	\$4.43	\$4.85	\$5.09	\$5.35	\$5.62
3	Tier 2	>9-15	\$5.08	\$4.59	\$5.03	\$5.28	\$5.54	\$5.82
4	Tier 3	>15	\$6.05	\$4.85	\$5.31	\$5.58	\$5.86	\$6.15
5								
6	MFR							
7	Tier 1	0-8	\$3.53	\$4.42	\$4.84	\$5.08	\$5.34	\$5.60
8	Tier 2	>8	\$5.67	\$4.58	\$5.02	\$5.27	\$5.53	\$5.81
9								
10	Commercial <=2"							
11	Tier 1	0-62	\$3.22	\$4.47	\$4.89	\$5.14	\$5.40	\$5.67
12	Tier 2	>62	\$5.68	\$4.53	\$4.96	\$5.21	\$5.47	\$5.74
13	Commercial >=3"		\$4.47	\$4.77	\$5.22	\$5.48	\$5.76	\$6.05
14								
15	Industrial/City <=2"							
16	Tier 1	0-24	\$3.22	\$4.53	\$4.96	\$5.21	\$5.47	\$5.74
17	Tier 2	>24	\$5.68	\$4.75	\$5.20	\$5.46	\$5.73	\$6.02
18	Industrial >=3"		\$4.47	\$4.89	\$5.35	\$5.62	\$5.90	\$6.20
19	City >=3"		\$4.47	\$4.70	\$5.15	\$5.40	\$5.67	\$5.96
20								
21	Irrigation <=2"							
22	Tier 1	0-24	\$3.32	\$4.47	\$4.89	\$5.14	\$5.40	\$5.67
23	Tier 2	>24	\$5.91	\$4.69	\$5.14	\$5.39	\$5.66	\$5.95
24	Irrigation >=3"		\$5.08	\$4.76	\$5.21	\$5.47	\$5.75	\$6.03
25								
26	Oceanview Commercial							
27	Tier 1	0-9	\$3.31	\$4.87	\$5.33	\$5.60	\$5.88	\$6.17
28	Tier 2	>9-15	\$5.08	\$5.04	\$5.52	\$5.79	\$6.08	\$6.39
29	Tier 3	>15	\$6.05	\$4.84	\$5.30	\$5.56	\$5.84	\$6.14
30								
31	P&G		\$4.47	\$4.18	\$4.57	\$4.80	\$5.04	\$5.29
32	Construction		\$4.47	\$4.89	\$5.35	\$5.62	\$5.90	\$6.20

### 5.4. Oceanview Rates

The City will update the Oceanview Agricultural rates for customers over 3” yearly based on the following calculations shown in Table 5-9. The components include:

- » Oxnard Hueneme Rate Component
- » The United Freeman In-Lieu of Replenishment Charge Zone B
- » The United District Wide In-Lieu of Replenishment Charge (Agricultural)
- » Fox Canyon Groundwater Management Agency Extraction Charge

- » Pro-Rate Portion of Peak Capacity Charge
- » Administrative Overhead Charge

The Administrative Overhead Charge is a 10% additional charge for handling the agreement rate customers. The resulting charge is shown in \$/acre-feet (\$/AF) and is converted to \$/hcf.

**Table 5-9: Oceanview Agricultural Rate Agreement**

<b>Rate Component</b>	<b>Cost</b>
OH Rate Component	\$363.17
United Freeman In-Lieu of Replenishment Charge Zone B	\$41.17
United District Wide In-Lieu of Replenishment Charge (AG)	\$66.48
United Fixed Well Replacement Charge	\$13.14
Fox Canyon Groundwater Management Agency Extraction Charge	\$40.00
Pro Rata Portion of Peak Capacity Charge	\$88.81
Subtotal	\$612.77
Administrative Overhead Charge	\$61.28
Total Volumetric Rate (\$ / AF)	\$674.04
<b>Total Volumetric Rate (\$ / hcf)</b>	<b>\$1.55</b>

# 6. Recycled Water Cost of Service Analysis

This section details the cost of service (COS) analysis performed for recycled water service for the test year FY 2024. The test year is the year used to set rates. The COS analysis allocates the overall rate revenue requirement to customer classes based on their proportion of use of and burden on the City’s recycled water system.

## 6.1. Number of Customers by Meter Size and Equivalent Meters

The number of accounts and number of 3/4” equivalent meters for each customer class are used to develop the Recycled fixed charges. Table 6-1 shows the number of accounts by meter size for FY 2024. Note Table 6-1 does not include the Agricultural recycled customers whose rates are set by contract.

**Table 6-1: Total Accounts for FY 2024**

Line	Meter Size	Total Accounts
1	5/8" or 3/4"	
2	1"	
3	1 1/2"	
4	2"	
5	3"	
6	4"	1
7	6"	1
8	8"	3
9	10"	
10	12"	
<b>11</b>	<b>Total</b>	<b>5</b>

Table 6-2 shows the calculation of the total number of equivalent meters. Equivalent meters are used to allocate meter-related and extra capacity costs by meter size. Larger meters impose larger demands, are more expensive to install, maintain, and replace than smaller meters. Equivalent meter units are based on AWWA hydraulic capacities and represent the potential demand on the water system relative to a base meter size. Capacity ratios are calculated by dividing larger meter capacities by the base meter capacity. The base meter in this study is a 3/4-inch meter. AWWA capacity ratios (column C) are calculated by dividing the capacity of each meter size (column B) by the capacity of a 3/4-inch meter (column B, Line 1). The recycled meters (column D) are multiplied by the capacity ratios (column C) to achieve the total equivalent meters in column E.



**Table 6-2: Total Equivalent Meters**

Line	Meter Size (A)	AWWA Capacity (B)	AWWA Capacity Ratios (C)	Meters (D)	Total Equivalent Meters (E)
1	5/8" or 3/4"	30	1.00		
2	1"	50	1.67		
3	1 1/2"	100	3.33		
4	2"	160	5.33		
5	3"	350	11.67		
6	4"	600	20.00	1	20
7	6"	1250	41.67	1	42
8	8"	1800	60.00	3	180
9	10"	2900	96.67		
10	12"	4300	143.33		
<b>11</b>	<b>Total</b>			<b>5</b>	<b>242</b>

## 6.2. Revenue Requirement

Table 6-3 shows the rate revenue requirement for FY 2024 for customers within the City’s service boundaries. The revenue requirement is split into operating and capital requirements. The expenses (Lines 1-5) are equal to FY 2024 expenses as shown in Table 3-11 (and Table 4-8). The revenue offsets (Line 7-10) include Oceanview Agricultural customer revenue, whose rates are set by contract, and other miscellaneous revenues that are applied as offsets to the final *rate* revenue requirement. The final rate revenue requirement (Line 15) is calculated as follows:

*Total revenue required from rates (Line 15) = Revenue requirements (Line 5) - Non-Rate Revenue (Line 10) – Adjustments for cash balance (Line 13)*

**Table 6-3: Total Recycled Revenue Requirement**

Line	FY 2024	Operating	Capital	Subtotal Potable & Recycled
1	<b>Revenue Requirements</b>			
2	Recycled O&M Expenses	\$3,605,417		\$3,605,417
3	Recycled Existing Debt Service		\$5,846,449	\$5,846,449
4	Recycled Rate Funded Capital Projects		\$2,140,000	\$2,140,000
5	Total Revenue Requirements	\$3,605,417	\$7,986,449	\$11,591,866
6				
7	<b>Less: Revenue Offsets</b>			
8	Recycled Agricultural Agreement (Contract Rates)	\$1,584,958		\$1,584,958
9	Recycled Water Operating (601)	\$15,075		\$15,075
10	Total Revenue Offsets	\$1,600,033	\$0	\$1,600,033
11				
12	<b>Less: Adjustments</b>			
13	Recycled Adjustment for Cash Balance		\$9,652,800	\$9,652,800
14	Total Adjustments	\$0	\$9,652,800	\$9,652,800
15	<b>Revenue Requirement from Rates</b>	<b>\$2,005,384</b>	<b>-\$1,666,351</b>	<b>\$339,033</b>

### 6.3. Fixed Charges and Volumetric Rates

The City sets the recycled fixed charge equal to the Commercial fixed charge. The fixed charge recovers the same costs as the potable fixed charge: customer service costs, meter maintenance, and extra capacity costs. The remaining revenue (not collected by the fixed charge) is recovered from the volumetric rates. Table 6-4 shows the calculation of the volumetric revenue requirement.

**Table 6-4: Revenue Remaining for Commodity Costs**

Line	Cost Causation Requirement	Cost
1	Total Revenue Requirement	\$339,033
2	Meter Revenue	\$46,913
3	<b>Remaining Revenue for Commodity Costs (Line 1 – Line 2 = Line 3)</b>	<b>\$292,120</b>

The remaining volumetric revenue requirement is divided by estimated recycled water sales to yield the final volumetric rate as shown in Section 7 and in Table 6-5.

**Table 6-5: Unit Volumetric Costs**

Line	Category	Costs	Units of Service	Unit Cost	Units
1	Total Volumetric Cost	\$292,120	81,083	\$3.60	\$/hcf

# 7. Proposed Recycled Rates

This section details the proposed recycled rate calculations.

## 7.1. Proposed Recycled Fixed Charges

Table 7-1 shows the recycled fixed charge derivation. The proposed fixed charges for recycled meters is the same as the potable meters, they are also calculated the same way- by adding the meter service charge and the customer billing charge for each meter size- to create the FY 2024 proposed monthly fixed charge. Line 1 shows the derivation of the fixed charge for the smallest meter size (5/8 or 3/4 inch) to which the meter ratios are applied to derive the larger meter sizes for the meter service component as shown in lines 3 through 6. The customer billing component is added, which is the same for all meter sizes, to yield the total charge.

**Table 7-1: Recycled Fixed Charge Calculation**

Line	Meter Size	Hydraulic Equivalency Meter Ratio	Meter Service	Customer Billing & Meter Reading	Proposed Monthly Fixed Charge
1		1.00	\$16.04	\$6.74	\$22.78
2	Meter Size - All Classes				
3	4"	20.00	\$320.75	\$6.74	\$327.49
4	6"	41.67	\$668.23	\$6.74	\$674.96
5	8"	60.00	\$962.24	\$6.74	\$968.98
6	12"	143.33	\$2,298.70	\$6.74	\$2,305.43

Table 7-2 shows the proposed five-year rates. The charge for July 1, 2023 is derived using a cost of service analysis (above) and the remaining charges are increased by revenue adjustments in Table 3-10.

**Table 7-2: Proposed Five Year Fixed Charges**

Line	Meter Size	Current Rate	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
1	4"	\$244.73	\$327.49	\$358.60	\$376.53	\$395.36	\$415.13
2	6"	\$506.26	\$674.96	\$739.08	\$776.04	\$814.84	\$855.58
3	8"	\$727.49	\$968.98	\$1,061.03	\$1,114.08	\$1,169.79	\$1,228.28
4	12"		\$2,305.43	\$2,524.45	\$2,650.67	\$2,783.20	\$2,922.36

## 7.2. Proposed Volumetric Rates

The recycled volumetric rates were derived in Table 6-5. Table 7-3 shows the proposed five-year rates. The rate for July 1, 2023 was derived using a cost of service analysis in previous sections and the remaining rates are increased by revenue adjustments in Table 3-10.

**Table 7-3: Proposed Five Year Volumetric Rates**

Line	Customer Class	Current Rate	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
1	Irrigation (Golf Course)	\$3.52	\$3.60	\$3.94	\$4.14	\$4.35	\$4.57
2	Commercial / Industrial	\$3.34	\$3.60	\$3.94	\$4.14	\$4.35	\$4.57

## 8. Bill Impacts

Section 8 demonstrates the customer bill impacts for each user class assuming the revenue adjustments and proposed rates derive in Sections 6 and 7. Table 8-1 shows the proposed potable bill impacts for the most common meter size of each class and the average use for each class.

The potable bill impacts are a function of the blended water supply rate. The proposed rate structure described in Section 5.1 are the reasons for dissimilar bill impacts amongst customer classes. P&G has a different supply rate than the other classes as they are connected directly to Calleguas Municipal Water District and do not use the City's distribution system.

**Table 8-1: Proposed Potable Bill Impacts**

Line	Customer Class	Current Bill	Proposed Bill	\$ Change	% Change
1	Single Family Residential	\$50.39	\$62.65	\$12.26	24.3%
2	Multifamily Residential	\$91.41	\$108.77	\$17.36	19.0%
3	Commercial <=2"	\$131.34	\$183.70	\$52.36	39.9%
4	Commercial >=3"	\$2,008.19	\$2,182.93	\$174.74	8.7%
5	Industrial/City <=2"	\$165.90	\$232.34	\$66.44	40.0%
6	Industrial >=3"	\$7,231.34	\$7,970.56	\$739.22	10.2%
7	City >=3"	\$966.68	\$1,058.64	\$91.96	9.5%
8	Irrigation <=2"	\$295.11	\$316.80	\$21.69	7.4%
9	Irrigation >=3"	\$2,445.44	\$2,350.12	-\$95.32	-3.9%
10	Oceanview Commercial	\$30.53	\$37.39	\$6.86	22.5%
11	P&G	\$273,445	\$254,968	-\$18,477	-6.8%
12	Construction	\$1,827	\$1,930	\$103	5.6%

The recycled bill impacts are shown in Table 8-2. The proposed impact for the newly blended recycled rate is largely a function of the blended volumetric rate and is based on the most common meter size and the average use for each class.

**Table 8-2: Proposed Recycled Bill Impacts**

Line	Customer Class	Current Bill	Proposed Bill	\$ Change	% Change
1	Irrigation - Golf Course	\$36,055.36	\$37,871.69	\$1,088.84	3.0%
2	Industrial - New Indy	\$1,994	\$2,514.39	\$520.28	26.1%

# 9. Drought Rates

## 9.1. Drought Rate Background

This section derives drought rates that City Council can implement during a water supply shortage (a drought). This section describes the water shortage stages, corresponding revenue impacts, drought rate calculations, and a summary of proposed volumetric rates at each stage.

The City can establish drought rates to:

- » Recover lost revenue due to decreased consumption during a drought; and
- » Encourage water conservation to meet the desired conservation goals for each drought stage.

The City may be subject to penalties from the State Water Resources Control Board if it does not reach future mandated water use reductions. Drought Rates help maximize the probability that the City will escape penalties. Drought Rates will still be needed to recoup lost revenues as City customers curtail their water consumption.

### Revenue Collection during a Drought

Water shortage emergencies can have significant impacts on an agency's financial stability because customers use less water and revenue decreases. The City's costs (also known as the revenue requirement) also decrease during a drought because it purchases less water. However, the City's revenue decreases more than its costs do. Most of the City's costs are fixed (salaries, benefits, debt service, etc.). Drought Rates are required to recover lost revenue to cover its fixed costs. Drought rates are a mechanism to maintain revenue stability and achieve debt coverage requirements during a water shortage emergency.

### Customer Bills during a Drought

Provided that customers cut back their water use in line with the drought cutback goal, their total water bill should be equal to or lower than their bill during "normal" water/rainfall years. Conversely, those that do not cut back consumption will face higher charges.

## 9.2. Derivation of Drought Rates

Drought rates recover lost revenue (net of water purchase cost savings) during each water shortage emergency stage. To calculate drought rates, Raftelis:

1. Determined the lost revenue at each stage of reduction.
2. Accounted for volumetric water purchase cost savings which offsets a portion of the revenue loss.
3. Divided the net revenue loss at each stage by the respective estimated sales volume.

Table 9-1 shows the assumed reduction in water sales by customer class and tier at each drought stage.

**Table 9-1: Estimated Cutback in Use by Percentage Reduction**

Line	Customer Class	Tier Breakpoint	FY 2024 Estimated Water Use (HCF)	Up to 10%		Up to 20%		Up to 30%		Up to 40%		Up to 50%		Up to 60%	
				Estimated Cutback (%)	Estimated Cutback (HCF)	Estimated Cutback (%)	Estimated Cutback (HCF)	Estimated Cutback (%)	Estimated Cutback (HCF)	Estimated Cutback (%)	Estimated Cutback (HCF)	Estimated Cutback (%)	Estimated Cutback (HCF)		
1	<b>SFR</b>		3,706,299												
2	Tier 1	0-9	2,769,091	5%	138,455	15%	415,364	18%	498,436	30%	830,727	40%	1,107,637	50%	1,384,546
3	Tier 2	9-15	622,296	10%	62,230	30%	186,689	45%	280,033	60%	373,378	65%	404,493	75%	466,722
4	Tier 3	15+	314,911	25%	78,728	50%	157,456	80%	251,929	90%	283,420	95%	299,166	100%	314,911
5															
6	<b>MFR</b>		1,578,355												
7	Tier 1	0-8	1,346,495	2%	26,930	7%	94,255	12%	161,579	20%	269,299	20%	269,299	28%	377,019
8	Tier 2	8+	231,860	10%	23,186	20%	46,372	35%	81,151	45%	104,337	50%	115,930	65%	150,709
9															
10	<b>Commercial &lt;=2"</b>		942,136												
11	Tier 1	0-62	775,093	0%	0	5%	38,755	15%	116,264	18%	139,517	25%	193,773	35%	271,283
12	Tier 2	62+	167,043	10%	16,704	10%	16,704	30%	50,113	45%	75,169	55%	91,873	95%	158,690
13	<b>Commercial &gt;=3"</b>		819,300	5%	40,965	20%	163,860	30%	245,790	45%	368,685	55%	450,615	65%	532,545
14															
15	<b>Industrial/City &lt;=2"</b>		85,860												
16	Tier 1	0-62	69,739	0%	0	5%	3,487	10%	6,974	20%	13,948	30%	20,922	35%	24,408
17	Tier 2	62+	16,121	10%	1,612	20%	3,224	30%	4,836	40%	6,449	55%	8,867	65%	10,479
18	<b>Industrial &gt;=3"</b>		476,289	25%	119,072	20%	95,258	40%	190,515	55%	261,959	60%	285,773	80%	381,031
19	<b>City &gt;=3"</b>		24,162	25%	6,041	20%	4,832	30%	7,249	40%	9,665	50%	12,081	65%	15,706
20															
21	<b>Irrigation &lt;=2"</b>		946,251												
22	Tier 1	0-24	716,584	15%	107,488	25%	179,146	30%	214,975	45%	322,463	55%	394,121	70%	501,609
23	Tier 2	24+	229,667	25%	57,417	50%	114,834	60%	137,800	75%	172,250	85%	195,217	100%	229,667
24	<b>Irrigation &gt;=3"</b>		463,932	15%	69,590	30%	139,180	35%	162,376	50%	231,966	60%	278,359	95%	440,736
25															
26	<b>Oceanview Commercial</b>		11,842												
27	Tier 1	0-9	10,092	5%	505	15%	1,514	18%	1,816	30%	3,027	40%	4,037	55%	5,550
28	Tier 2	9-15	1,750	10%	175	30%	525	45%	788	60%	1,050	65%	1,138	75%	1,313
29	Tier 3	15+	1,632	25%	408	50%	816	80%	1,305	90%	1,468	95%	1,550	100%	1,632
30															
31	<b>Oceanview Agricultural (Set by Ordinance)</b>		552,840	10%	55,284	20%	110,568	30%	165,852	40%	221,136	50%	276,420	60%	331,704
32	<b>Total Cutback - hcf</b>				<b>804,788</b>		<b>1,772,837</b>		<b>2,579,784</b>		<b>3,689,914</b>		<b>4,411,270</b>		<b>5,600,259</b>
34	<b>Total Cutback - %</b>				<b>8%</b>		<b>18%</b>		<b>27%</b>		<b>38%</b>		<b>46%</b>		<b>58%</b>

Table 9-2 shows the total consumption charge revenue at each stage, calculated by multiplying projected water sales (Table 9-1) by the proposed volumetric rate (Table 5-8) for each class. The total estimated lost revenue is shown in line 32.

**Table 9-2: Calculation of Lost Revenue**

Line	Customer Class	FY 2024 Proposed Rate	Up to 10%	Up to 20%	Up to 30%	Up to 40%	Up to 50%	Up to 60%
1	<b>SFR</b>							
2	Tier 1	\$4.43	\$613,354	\$1,840,061	\$2,208,073	\$3,680,122	\$4,906,830	\$6,133,537
3	Tier 2	\$4.59	\$285,634	\$856,902	\$1,285,353	\$1,713,804	\$1,856,621	\$2,142,255
4	Tier 3	\$4.85	\$381,830	\$763,660	\$1,221,856	\$1,374,588	\$1,450,954	\$1,527,320
5								
6	<b>MFR</b>							
7	Tier 1	\$4.42	\$119,030	\$416,606	\$714,181	\$1,190,302	\$1,190,302	\$1,666,422
8	Tier 2	\$4.58	\$106,192	\$212,384	\$371,672	\$477,864	\$530,959	\$690,247
9								
10	<b>Commercial &lt;=2"</b>							
11	Tier 1	\$4.47	\$0	\$173,233	\$519,700	\$623,640	\$866,167	\$1,212,633
12	Tier 2	\$4.53	\$75,670	\$75,670	\$227,011	\$340,516	\$416,186	\$718,868
13	<b>Commercial &gt;=3"</b>	\$4.77	\$195,403	\$781,612	\$1,172,418	\$1,758,627	\$2,149,433	\$2,540,239
14								
15	<b>Industrial/City &lt;=2"</b>							
16	Tier 1	\$4.53	\$0	\$15,796	\$31,592	\$63,183	\$94,775	\$110,570
17	Tier 2	\$4.75	\$7,658	\$15,315	\$22,973	\$30,631	\$42,117	\$49,775
18	<b>Industrial &gt;=3"</b>	\$4.89	\$582,263	\$465,810	\$931,621	\$1,280,978	\$1,397,431	\$1,863,241
19	<b>City &gt;=3"</b>	\$4.70	\$28,391	\$22,713	\$34,069	\$45,425	\$56,782	\$73,816
20								
21	<b>Irrigation &lt;=2"</b>							
22	Tier 1	\$4.47	\$480,470	\$800,783	\$960,939	\$1,441,409	\$1,761,722	\$2,242,192
23	Tier 2	\$4.69	\$269,285	\$538,570	\$646,283	\$807,854	\$915,568	\$1,077,139
24	<b>Irrigation &gt;=3"</b>	\$4.76	\$331,248	\$662,495	\$772,911	\$1,104,159	\$1,324,991	\$2,097,902
25								
26	<b>Oceanview Commercial</b>							
27	Tier 1	\$4.87	\$2,457	\$7,372	\$8,846	\$14,744	\$19,658	\$27,030
28	Tier 2	\$5.04	\$882	\$2,646	\$3,969	\$5,293	\$5,734	\$6,616
29	Tier 3	\$4.84	\$1,974	\$3,948	\$6,318	\$7,107	\$7,502	\$7,897
30								
31	<b>Oceanview Agricultural (Set by Ordinance)</b>	\$1.55	\$85,546	\$171,092	\$256,638	\$342,184	\$427,730	\$513,276
32	<b>Total Lost Revenue</b>		<b>\$3,567,286</b>	<b>\$7,826,669</b>	<b>\$11,396,424</b>	<b>\$16,302,431</b>	<b>\$19,421,463</b>	<b>\$24,700,978</b>
33	<b>Percent of Commodity Revenue Lost</b>		<b>8%</b>	<b>19%</b>	<b>27%</b>	<b>39%</b>	<b>46%</b>	<b>59%</b>

As water sales decrease by stage, the City’s volumetric water purchase costs will also decrease. Table 9-3 shows the reduction in water purchase costs as water demand is reduced at each stage. The assumed curtailment in water use was determined previously in Table 9-1. The total amount saved due to decreased water purchase costs is shown in line 5.

**Table 9-3: Drought Savings**

Line	Description	FY 2022	Up to 10%	Up to 20%	Up to 30%	Up to 40%	Up to 50%	Up to 60%
1	<b>Water Supply Costs</b>	<b>\$24,906,030</b>						
2	Cutback (%)		8%	18%	26.8%	38.4%	46%	58%
3	Total Drought Savings		\$2,085,991	\$4,595,151	\$6,686,737	\$9,564,167	\$11,433,906	\$14,515,736
4								
5	<b>Drought Volumetric Revenue Requirement - All Classes</b>		<b>\$39,950,561</b>	<b>\$37,441,400</b>	<b>\$35,349,815</b>	<b>\$32,472,384</b>	<b>\$30,602,645</b>	<b>\$27,520,815</b>

Table 9-4 shows the derivation of the proposed drought rates. Net revenue loss (line 3) in each stage is determined by subtracting the projected water purchase cost savings (Table 9-3) from the projected lost revenue (Table 9-2). Drought rates recover the anticipated reduction in net revenues during each water shortage stage by applying the percentage increase (line 6) to volumetric rates to recoup the lost revenue. The percentage increase needed for each drought stage is calculated by dividing the net lost revenue (line 3) by the expected drought revenue (line 4). This percentage increase is applied to the proposed volumetric (Table 5-8) rates to yield the drought rates. Lines 8-38 show the drought rate for each stage, the dollar increase, assuming the drought rates are applied to FY 2024 rates. For future fiscal years, the percentages shown in line 6 would be applied to the rates in effect at the time the drought rates are implemented.



Table 9-4: FY 2024 Drought Rate Calculation

Line	Declared Water Supply Shortage Response	Up to 10%	Up to 20%	Up to 30%	Up to 40%	Up to 50%	Up to 60%							
1	Estimated Lost Revenue	\$3,567,286	\$7,826,669	\$11,396,424	\$16,302,431	\$19,421,463	\$24,700,978							
2	Estimated Drought Savings	\$2,085,991	\$4,595,151	\$6,686,737	\$9,564,167	\$11,433,906	\$14,515,736							
3	<b>Estimated Lost Revenue After Savings</b>	\$1,481,296	\$3,231,518	\$4,709,687	\$6,738,264	\$7,987,557	\$10,185,241							
4	Expected Revenue	\$38,471,326	\$34,211,943	\$30,642,188	\$25,736,181	\$22,617,149	\$17,337,634							
5	Drought Revenue Requirement	\$39,952,621	\$37,443,461	\$35,351,875	\$32,474,445	\$30,604,706	\$27,522,876							
6	% Increase	3.9%	9.4%	15.4%	26.2%	35.3%	58.7%							
7	Customer Class	Rate (No Drought)	Drought Rate	\$ Increase	Drought Rate	\$ Increase	Drought Rate	\$ Increase	Drought Rate	\$ Increase	Drought Rate	\$ Increase	Drought Rate	\$ Increase
8	<b>SFR</b>													
9	Tier 1	\$4.43	\$4.60	\$0.17	\$4.85	\$0.42	\$5.11	\$0.68	\$5.59	\$1.16	\$5.99	\$1.56	\$7.03	\$2.60
10	Tier 2	\$4.59	\$4.77	\$0.18	\$5.02	\$0.43	\$5.30	\$0.71	\$5.79	\$1.20	\$6.21	\$1.62	\$7.29	\$2.70
11	Tier 3	\$4.85	\$5.04	\$0.19	\$5.31	\$0.46	\$5.60	\$0.75	\$6.12	\$1.27	\$6.56	\$1.71	\$7.70	\$2.85
12														
13	<b>MFR</b>													
14	Tier 1	\$4.42	\$4.59	\$0.17	\$4.84	\$0.42	\$5.10	\$0.68	\$5.58	\$1.16	\$5.98	\$1.56	\$7.02	\$2.60
15	Tier 2	\$4.58	\$4.76	\$0.18	\$5.01	\$0.43	\$5.28	\$0.70	\$5.78	\$1.20	\$6.20	\$1.62	\$7.27	\$2.69
16														
17	<b>Commercial &lt;=2"</b>													
18	Tier 1	\$4.47	\$4.64	\$0.17	\$4.89	\$0.42	\$5.16	\$0.69	\$5.64	\$1.17	\$6.05	\$1.58	\$7.10	\$2.63
19	Tier 2	\$4.53	\$4.70	\$0.17	\$4.96	\$0.43	\$5.23	\$0.70	\$5.72	\$1.19	\$6.13	\$1.60	\$7.19	\$2.66
20	<b>Commercial &gt;=3"</b>	\$4.77	\$4.95	\$0.18	\$5.22	\$0.45	\$5.50	\$0.73	\$6.02	\$1.25	\$6.45	\$1.68	\$7.57	\$2.80
21														
22	<b>Industrial/City &lt;=2"</b>													
23	Tier 1	\$4.53	\$4.70	\$0.17	\$4.96	\$0.43	\$5.23	\$0.70	\$5.72	\$1.19	\$6.13	\$1.60	\$7.19	\$2.66
24	Tier 2	\$4.75	\$4.93	\$0.18	\$5.20	\$0.45	\$5.48	\$0.73	\$5.99	\$1.24	\$6.43	\$1.68	\$7.54	\$2.79
25	<b>Industrial &gt;=3"</b>	\$4.89	\$5.08	\$0.19	\$5.35	\$0.46	\$5.64	\$0.75	\$6.17	\$1.28	\$6.62	\$1.73	\$7.76	\$2.87
26	<b>City &gt;=3"</b>	\$4.70	\$4.88	\$0.18	\$5.14	\$0.44	\$5.42	\$0.72	\$5.93	\$1.23	\$6.36	\$1.66	\$7.46	\$2.76
27														
28	<b>Irrigation &lt;=2"</b>													
29	Tier 1	\$4.47	\$4.64	\$0.17	\$4.89	\$0.42	\$5.16	\$0.69	\$5.64	\$1.17	\$6.05	\$1.58	\$7.10	\$2.63
30	Tier 2	\$4.69	\$4.87	\$0.18	\$5.13	\$0.44	\$5.41	\$0.72	\$5.92	\$1.23	\$6.35	\$1.66	\$7.45	\$2.76
31	<b>Irrigation &gt;=3"</b>	\$4.76	\$4.94	\$0.18	\$5.21	\$0.45	\$5.49	\$0.73	\$6.01	\$1.25	\$6.44	\$1.68	\$7.56	\$2.80
32														
33	<b>Oceanview Commercial</b>													
34	Tier 1	\$4.87	\$5.06	\$0.19	\$5.33	\$0.46	\$5.62	\$0.75	\$6.15	\$1.28	\$6.59	\$1.72	\$7.73	\$2.86
35	Tier 2	\$5.04	\$5.23	\$0.19	\$5.52	\$0.48	\$5.81	\$0.77	\$6.36	\$1.32	\$6.82	\$1.78	\$8.00	\$2.96
36	Tier 3	\$4.84	\$5.03	\$0.19	\$5.30	\$0.46	\$5.58	\$0.74	\$6.11	\$1.27	\$6.55	\$1.71	\$7.68	\$2.84
37														
38	<b>Oceanview Agricultural (Set by Ordinance)</b>	\$1.55	\$1.61	\$0.06	\$1.69	\$0.15	\$1.79	\$0.24	\$1.95	\$0.41	\$2.09	\$0.55	\$2.46	\$0.91

### **9.2.1. Drought Rate Adoption**

The percentages shown in line 6 of Table 9-4 were shown in the public hearing notice sent to customers pursuant to Proposition 218. Therefore, should the City Council declare it is in particular drought stage, Council has the option to implement drought rates after the City gives customers 30 day notice. For the duration of the rate proposal period, the City can adopt drought rates by increasing the then-current volumetric rate without having to re-notice customers and hold a public hearing.

# **Appendix A: Percentages Used to Allocate O&M Expenses and Assets to Cost Components**

O&M Function	Allocation Basis	Supply	Base	Max Day	Max Hour	Customer Service	Meter Maintenance	Direct Fire Protection (Fire Hydrant Costs)	Backflow	Gen & Admin	Recycled Base	Recycled Max Day	P&G Supply	TOTAL
Volumetric Supply	Supply	100%												100%
Fixed/Other Supply	Base		100%											100%
Transmission	Max Day		67%	33%	0%									100%
Treatment	Max Day		67%	33%	0%									100%
Distribution	Max Hour		44%	22%	33%									100%
Distribution Storage	Max Day		67%	33%	0%									100%
Customer Service	Customer Service					100%								100%
Meter Maintenance	Meter Maintenance						100%							100%
Direct Fire Protection (Fire Hydrant Costs)	Direct Fire							100%						100%
Gen & Admin	Gen & Admin									100%				100%
Backflow	Backflow								100%					100%
P&G Supply													100%	100%
Recycled Treatment	Recycled Max Day										67%	33%		100%
Recycled Distribution	Recycled Max Hour										67%	33%		100%

Asset Function	Allocation Basis	Supply	Base	Max Day	Max Hour	Meter Maintenance	Direct Fire Protection (Fire Hydrant Costs)	General & Admin	TOTAL
Supply	Base	100%							100%
Treatment	Max Day		67%	33%	0%				100%
Distribution Storage	Max Day		67%	33%	0%				100%
Distribution	Max Hour		44%	22%	33%				100%
Meter	Meter					100.0%			100%
Fire	Fire						100%		100%
Gen & Admin	Gen & Admin							100%	100%