

MID-PENINSULA WATER DISTRICT Water Rate Study

September 23, 2024

Revises Final Report dated September 10, 2024

Final Report



MID-PENINSULA WATER DISTRICT

1075 Old County Road #A
Belmont, CA. 94022

WATER RATE STUDY

Final Report

September 23, 2024

Revises Final Report dated September 10, 2024

HF&H CONSULTANTS, LLC

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September 23, 2024

Kat Wuelfing
General Manager
Mid-Peninsula Water District
1075 Old County Road #A
Belmont, CA 94002

Subject: **Water Rate Study – Final Report – Revised**

Kat Wuelfing:

HF&H is pleased to submit this cost-of-service rate study to the Mid-Peninsula Water District. This study documents our methodology and recommendations. This report revises the final report dated September 10, 2024. This revised report corrects minor typos and adds definitions to the glossary. The revisions do not change the findings and recommended rates from our rate study. Our findings and recommendations are briefly summarized as follows.

- **Water revenue increases.** Annualized revenue from water rates should be increased by the following amounts:

January 1, 2025:	24.5%
July 1, 2025:	5%
July 1, 2026:	8%
July 1, 2027:	9%
July 1, 2028:	9%

- **Cost recovery.** The above revenue increases will allow the District to:
 - Fund average annual operating and maintenance costs of \$14.9 million per year.
 - Fund increasing water supply costs from the San Francisco Public Utilities Commission (SFPUC). The SFPUC has notified their wholesale water customers of a planned cumulative 17% increase in wholesale water rates over the next three fiscal years.

Kat Wuelfing
September 23, 2024
Page 2 of 2

- Fund \$48.9 million in needed capital improvements, including, but not limited to: 1) \$13.0 million to design and construct the new Operations Center (which is necessary due to the recent flooding of the District's office; 2) \$7.6 million to replace the Dekoven tanks; and, 3) \$3.9 million to recoat the Exborne West, Hallmark North, and West Belmont North water storage tanks.
- **\$48.9 million capital improvement funding.** The annual revenue requirement projections include funding capital improvements with a combination of debt issuances in FY 2024-25 (\$15.5 million) and FY 2025-26 (\$17.5 million), with the remainder cash-funded through rates. Debt funding assumption assumes a 30-year repayment period at a 5.5% annual interest rate.
- **Fixed service charge rate modifications.** The costs allocated to the capacity portion of the monthly fixed system charge rates have been reapportioned to each account based on each account's metered capacity ratio.
- **Residential consumption charge rate structure.** The number of tiers should be reduced from four to three tiers based on recent water demand patterns. The size of the first tier will be larger and the second and third tier will be slightly smaller, based on recent customer demand patterns.
- **Drought rate adjustment factors.** We recommend adopting drought rate adjustment factors that would be applied to consumption charge rates only during declared water shortages. These adjustments will offset revenue shortfalls due to water rationing with revenue neutral increases in consumption charge rates.

Sincerely,

HF&H CONSULTANTS, LLC



Rick Simonson
Senior Vice President

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APPENDIX

Water Rate Model

GLOSSARY

AWWA – American Water Works Association.

Breakpoint – The volume of water per billing period separating tiers in tiered rate structures.

CCF – Hundred cubic feet (see HCF below).

Capacity - Capacity is the maximum demand that a customer can place on the infrastructure. It is contrasted with demand (see below). Capacity is determined by the physical properties of the service connection.

Charge - A charge is how much a customer is billed and is the product of a rate multiplied times a unit of service (e.g., accounts, HCF).

CIP - Capital Improvement Program.

COP – Certificate of Participation.

COS - Cost-of-service.

Demand - Demand is the metered or estimated flow that a customer places on the infrastructure. Demand is determined based on metered or estimated water use, which can vary and is limited by the capacity (see above) of the service connection.

EMU – Equivalent Meter Unit.

FY - Fiscal Year.

GPD - Gallons per Day.

GPM – Gallons per Minute.

HCF - Hundred cubic feet of metered water; 748 gallons; a cube of water 4.6 feet on edge. One HCF per month is about 25 gallons per day.

MFR – Multi Family Residential

O&M - Operating and Maintenance, in reference to the costs of running facilities.

PAYGo - Pay-As-You-Go, in reference to funding capital improvements from cash rather than from borrowed sources such as bonds or loans.

Rate - A rate is the unit cost-of-service per account or volume of flow, which, when multiplied times the units of service (i.e., accounts, HCF) yields a charge that customers are billed.

SFR – Single Family Residential.

SFPUC - San Francisco Public Utilities Commission.

Uniform rates - A constant rate per unit of metered water use that does not change depending on the volume of flow.

WSCP - Water Shortage Contingency Plan

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HF&H acknowledges the valuable contributions of the following District Board members and staff.

Board of Directors

Matthew P. Zucca, President
Catherine M. Jordan, Vice President
Brian Schmidt
Kirk R. Wheeler
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LIMITATIONS

This document was prepared solely for the Mid-Peninsula Water District in accordance with the contract between the District and HF&H and is not intended for use by any other party for any other purpose. In preparing this study, we relied on information from the District, which we consider accurate and reliable. This study contains reasonable assumptions and forecasts regarding future conditions, which cannot be predicted with certainty. If actual conditions vary from these assumptions, there may be a significant difference with the forecasts in this report.

Rounding differences caused by stored values in electronic models may exist.

This document represents our understanding of relevant laws, regulations, and court decisions but should not be relied upon as legal advice. Questions concerning the interpretation of legal authorities referenced in this document should be referred to a qualified attorney.

WATER RATE STUDY

FINAL REPORT



I. EXECUTIVE SUMMARY

This study documents the process by which the District's water rates were updated for adoption for the next five years, FY 2024-25 through FY 2028-29. The following discussion summarizes our findings and recommendations.

PROJECTED REVENUE REQUIREMENTS AND REVENUE INCREASES

The water revenue requirements were updated by preparing a ten-year projection of operating and capital expenses. The projected increases needed in rate revenue were determined by comparing the revenue requirement projections with the revenue projected from rates. The required annual revenue increases are summarized in **Table I-1**, which includes other key financial indicators.

Table I-1 Projected Revenue and Revenue Requirement Increases

	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34
Revenue Increases	24.5%	5.0%	8.0%	9.0%	9.0%	4.0%	3.0%	3.0%	3.0%	3.0%
Revenue Requirement	\$19,262,770	\$20,978,714	\$21,565,191	\$22,362,846	\$22,943,405	\$24,981,506	\$25,684,777	\$26,475,049	\$27,195,140	\$28,003,090
EOY Reserve Fund Balance	\$10,021,310	\$8,452,915	\$7,818,656	\$8,266,856	\$10,219,776	\$12,558,864	\$14,204,836	\$15,917,762	\$17,804,409	\$19,814,409
Debt Coverage Ratio (1.30 min.)	1.32	1.51	1.82	2.17	2.65	2.80	2.88	2.94	3.03	3.10
Days of Cash	190	147	132	135	163	183	202	219	239	258

The projections show that annual increases in revenues are needed to fund anticipated expenses and to maintain adequate reserves. The expenses include meeting or exceeding the required 1.30 minimum debt coverage ratio and growing reserves in order to maintain the proposed target reserve fund balance adopted by the Board.

WATER RATE STRUCTURE MODIFICATIONS

The District's current water rate structure comprises two components: fixed system charge rates and consumption charge rates. The fixed system charges are charged monthly, are based on each customer's meter size, and are the same for the District's two customer classes (residential and commercial). In addition, residential customers are charged a monthly consumption charge based on a four-tier consumption charge structure, which proportionally allocates higher system service costs (not water commodity costs) associated with the greater system demands required by peak usage. Commercial customers are charged a monthly consumption charge based on a two-tier consumption charge structure, which also proportionally allocates higher system service costs (not water commodity costs) based on ranges of demand. These classes and rate structures have been in place for several years with periodic rate increases.

The following modifications are proposed to the rate structures, effective as of billings sent on or after January 1, 2025 followed by future annual increases effective July 1 of each year from 2025 through 2028.

Fixed System Charge Rates

The current fixed system charge rates reflect system costs that do not vary with the volume of water consumed by a customer, but instead the customer's fair share of the system costs based on maximum safe flow/capacity as determined by meter size, as a proportion of the system total. The District has some discretion in how to allocate certain system costs – as certain costs may have both a fixed and variable component. In deciding whether to favor a lower fixed system charge or a higher fixed system charge (the balance of which will be made up by the consumption charge), the Board of Directors makes a policy choice between the benefits of either approach. Low fixed system charge rates shift more revenue generation to the consumption charges, thereby making customer bills more reflective of customer consumption. Increases or decreases in consumption are more noticeable on bills with low fixed system charges, which encourages customers to conserve and discourages wastefulness. However, it is critical that the fixed system charges generate sufficient revenue so that they are consistent with the cost-of-service. Higher fixed system charges improve revenue stability, which will allow the District to carry slightly lower reserves. The fixed system charge rates reflect the rated capacities of each meter size. The proposed fixed system charge rates for the next five years are summarized in **Table I-2**.

Table I-2. Proposed Fixed System Charge Rates (\$/month)

Service Size	Current Charge	Proposed (All Customer Classes)				
		1/1/2025	7/1/2025	7/1/2026	7/1/2027	7/1/2028
		COS Rates	+ 5.0%	+ 8.0%	+ 9.0%	+ 9.0%
5/8"	\$28.00	\$35.15	\$36.91	\$39.86	\$43.45	\$47.36
1"	\$42.00	\$72.39	\$76.01	\$82.09	\$89.48	\$97.53
1-1/2"	\$70.00	\$134.44	\$141.16	\$152.45	\$166.18	\$181.13
2"	\$112.00	\$208.90	\$219.35	\$236.89	\$258.21	\$281.45
3"	\$168.00	\$407.47	\$427.84	\$462.07	\$503.66	\$548.99
4"	\$280.00	\$630.86	\$662.40	\$715.40	\$779.78	\$849.96
6"	\$700.00	\$1,251.39	\$1,313.96	\$1,419.08	\$1,546.79	\$1,686.00

Consumption Charge Rates

The District's single family rate payers have been charged increasing tiered rates for their metered water use for many years. Recent water rate litigation¹ provides guidance on designing tiered rates that limit the amount of discretion that was previously common in

¹ *Howard Jarvis Taxpayers Association v. City of San Juan Capistrano*.

designing rates. First, the size of each tier should be based on actual customer demands that corresponds with the cost of supplying those demands. This design guideline differs from prior common practices in which deemed amounts (e.g., essential use at the low end or excessive use at the high end) or budgets for indoor and outdoor needs were used as the basis for determining the size of tiers. The proposed consumption charge rates are based on recent customer demands taken from the District's billing data.

Second, the rate for each tier should reflect the cost of providing the service associated with each tier. This design guideline also differs from prior practices in which the rates for each tier were adjusted to discourage high water use. The proposed consumption charge rates are based on the cost of providing levels of service corresponding to each of the tiers based on the incremental additional cost of maintaining extra capacity in the system in order to meet peak system demands (usually during warmer months), which is required under Proposition 218.

With these modifications, the resulting consumption charge rates are summarized in **Table I-3**. Note that the proposed residential structure contains three tiers, rather than four tiers and that the sizes of the tiers differ slightly, both of which are the result of basing each tier on the level of actual customer demand, which has changed over time, and the cost of providing service for each level of demand. We regard these modifications as critical to avoiding similar litigation to what occurred in San Juan Capistrano. Going forward, we recommend that tiered rates apply only to the single-family residential customer category. Single-family residential demand is relatively homogenous compared to non-single family residential (i.e., commercial and multi-family) demand, which can vary widely based on land use. The types of customers (i.e., restaurants, office buildings, manufacturing, multi-family residential), the amounts of the water use, and the seasonality of their water use are so diverse among each type as to make it problematic to determine the location of breakpoints for the purpose of determining impact of peak demand on the cost of service. For that reason, tiered rates are not well suited for the commercial class. Accordingly, we recommend charging commercial customers a uniform consumption charge for all water use, which is in line with industry standards.

Table I-3. Proposed Consumption Charges Rates

Current Quantity Charge Rates			Recommended Quantity Charge Rates					
Tier Size (HCF)	\$/HCF		Tier Size (HCF)	1/1/2025 COS Rates	Proposed			
					7/1/2025 + 5.0%	7/1/2026 + 8.0%	7/1/2027 + 9.0%	7/1/2028 + 9.0%
				\$/HCF	\$/HCF	\$/HCF	\$/HCF	\$/HCF
Residential			Residential					
Tier 1	0 to 2	\$7.43	Tier 1	0 to 6	\$9.75	\$10.24	\$11.06	\$12.06
Tier 2	3 to 8	\$10.26	Tier 2	7 to 14	\$14.56	\$15.29	\$16.51	\$18.00
Tier 3	9 to 20	\$12.17	Tier 3	15+	\$19.10	\$20.06	\$21.66	\$23.61
Tier 4	21+	\$14.07						\$25.73
Commercial			Commercial					
Tier 1	0 to 5	\$9.37	All Usage		\$12.80	\$13.44	\$14.52	\$15.83
Tier 2	6+	\$10.73						\$17.25

We note that the proposed consumption charge rates in **Table I-3** may be adjusted over the next five years based on automatic Pass-Through Adjustments as described in **Section V** of this report. These automatic adjustments account for potential variances between the projected cost of the SFPUC's water used in this study and the rate that is ultimately adopted by the SFPUC.

We also note that the proposed rates in **Table I-3** are appropriate for years of normal water supply. During droughts, it is recommended that the District implement the Drought Rate Factor adjustments described in **Section V** of this report. These adjustments would be applied only when the SFPUC implements regional water supply reductions during droughts or for prolonged emergency outages. Applying those factors to the normal-year rates will minimize the revenue shortfall caused by significant, possibly prolonged conservation, which otherwise could jeopardize the District's reserves.

Both the Pass-Through and Drought Rate Adjustments provide an important measure of revenue stability that is highly regarded by credit rating agencies, which should favorably reduce the District's cost of borrowing.

CUSTOMER BILL IMPACTS

The impact on customer bills due to these modifications in FY 2024-25 will vary depending on the size of customers' meters and their monthly water use. Hence, the overall revenue increase of 24.5% proposed for January 1, 2025 will vary with each bill. **Table I-4** summarizes monthly costs for representative customers.

Table I-4. Impact on Monthly Water Bills (eff. January 1, 2025)

	Residential				Commercial
	Low Use	Average Use	High Use	Very High Use	Average Use
Assumptions					
Flow per Month (hcf)	3	7	14	21	45
Flow per Day (gpd)	75	175	349	524	1122
Meter Size	5/8"	5/8"	5/8"	5/8"	1"
Monthly Bill					
Bills with Current Rates					
Fixed System Charge	\$28.00	\$28.00	\$28.00	\$28.00	\$42.00
Consumption Charge	\$25.12	\$66.16	\$149.44	\$236.53	\$476.05
Total	\$53.12	\$94.16	\$177.44	\$264.53	\$518.05
Bills with Proposed Rates					
Fixed System Charge	\$35.15	\$35.15	\$35.15	\$35.15	\$72.39
Consumption Charge	\$29.25	\$73.06	\$174.98	\$308.68	\$576.00
Total	\$64.40	\$108.21	\$210.13	\$343.83	\$648.39
Proposed minus Current	\$11.28	\$14.05	\$32.69	\$79.30	\$130.34
Percent Change	21.2%	14.9%	18.4%	30.0%	25.2%

For residential customers, bills for low-use volumes increase over time primarily due to the increase in the fixed system charges, which is necessary to ensure that low-use customers are paying their share of the fixed costs. High-use customers are allocated the cost of providing for the highest level of peak service with the consumption charge rates in the highest tier. It is important to note that customers in the high-use category are only charged the high-use rate on the final increment of consumption – i.e. for volumes of water between 8 to 14 hcf. They will pay the same rate as all other customers for the first increment of water consumption (0-3 hcf), and the second increment of consumption (4-7 hcf).

For commercial customers, the increase in bills is higher because they typically have larger meters, the fixed system charges for which are proposed to increase. Furthermore, the consumption charge rates for institutional customers are going up because of the cost-of-service allocations.

II. INTRODUCTION

STUDY PURPOSE

The purpose of this study is to conduct a cost-of-service analysis that will determine rates that proportionally recover the cost of providing the District's water service. Toward that end, the cost-of-service analysis determined how much revenue should be generated by each component of the rate structures so that rate payers are charged for their proportionate shares of the cost of providing service. The cost-of-service analysis is tailored specifically to the District's customer classes and the rate structures.

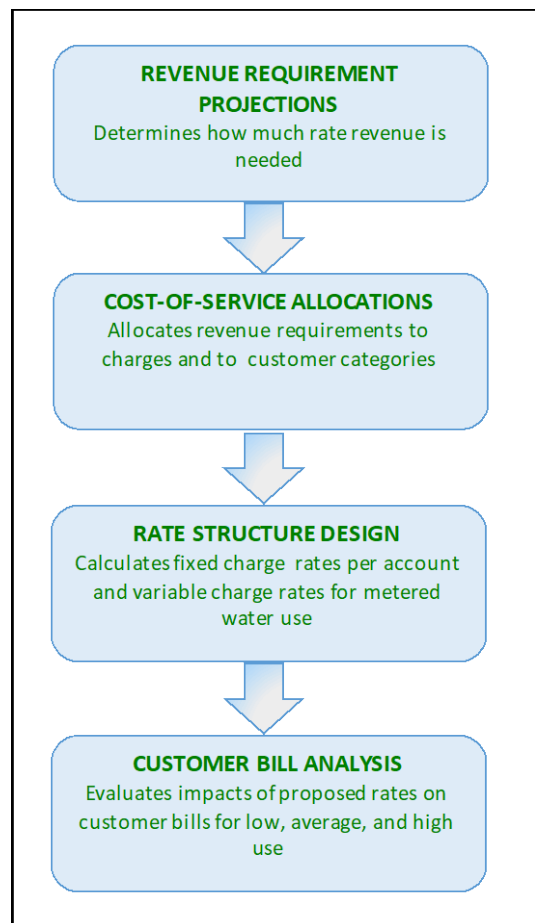
STUDY PROCESS

The rate study was conducted following industry standards and practices promulgated by the American Water Works Association.² A comprehensive rate study involves the four steps shown in the adjacent diagram.

Revenue requirements were projected for a ten-year planning period based on operations, maintenance, capital expenses, and contributions to reserves. The cost-of-service analysis allocates the projected expenses among the customer classes in proportion to their use of the systems. Rates are then designed so that rate payers are charged equitably. The impact on customers is then determined by comparing bills under the proposed rates with bills under the current rates.

During the course of the study, interim work products were presented to District staff, the Finance Committee, and the Board of Directors.

The input received from the Finance Committee and Board is reflected in the recommended rates documented in this report.



² *Principles of Water Rates, Fees, and Charges*. American Water Works Association Manual M1. 2017.

REPORT ORGANIZATION

This report documents the analysis for each of the four rate-making steps. A glossary of technical terms and acronyms is provided following the Table of Contents. An appendix contains a copy of portions of the rate model that are not included in the body of the report text as tables and figures.

III. REVENUE REQUIREMENTS

The revenue requirement analysis began with the FY 2024-25 budgeted O&M and capital expenditures. Revenue requirements for each fiscal year were then projected over a ten-year planning period. Revenue increases needed to cover the projected revenue requirements were then determined. Over a ten-year period it is possible to derive a relatively smooth series of annual revenue increases that minimize annual fluctuations.

ASSUMPTIONS AND PROJECTIONS

Expense projections combined with contributions to reserves constitute the revenue requirements. The assumptions shown in **Table III-1** were used to project expenses through FY 2033-34.

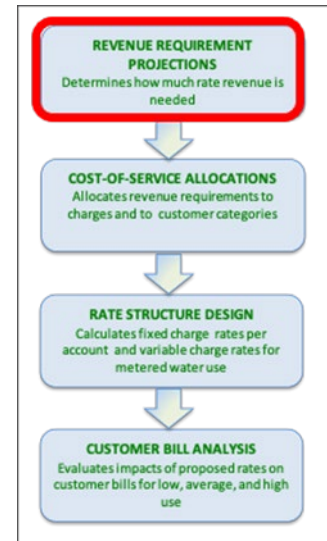


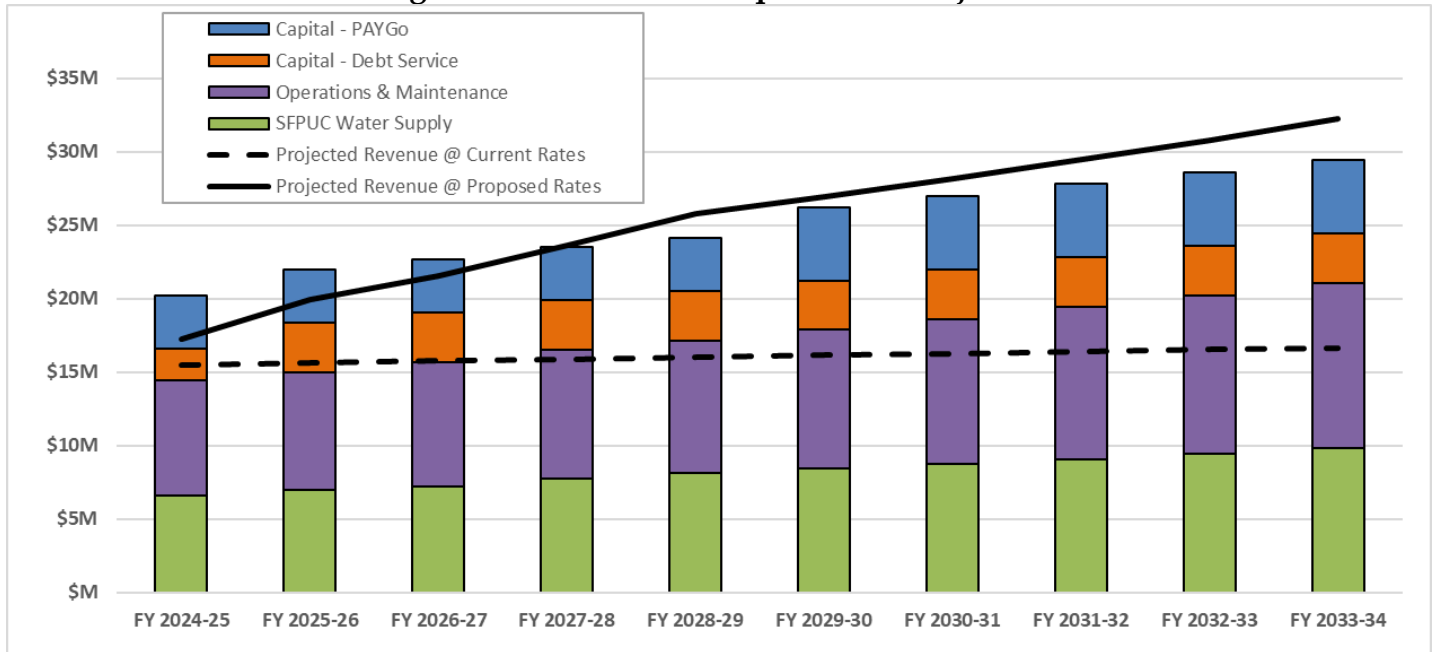
Table III-1. Projection Assumptions

Inflation Factor Assumptions used for projections:	Budget					Projected				
	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34
a Annual Account Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
b Annual Water Demand Increases	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
c General Inflation	4.00%	4.00%	4.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
d Salaries & Wages	8.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
e Benefits	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
f Utilities	4.52%	4.52%	4.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%
g Construction Cost Inflation	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%
h Interest on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
i Annual SFR conservation reduction	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
j Connection Fee Revenue	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
k Water Demand Offset Revenue	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
l SFPUC Quantity Charge per hcf	\$5.67	\$5.86	\$6.30	\$6.64	\$6.91	\$7.18	\$7.47	\$7.77	\$8.08	\$8.40
m Estimated Annual Increase in SFPUC Qty Charge	Rates above as provided by SFPUC - April 2024				4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
n BAWSCA Debt Service Surcharges	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236
o SFPUC Water Service Charge	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
p Water Sales (hcf)	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427

Source: Model Tab 1B. Assumptions

The resulting revenue requirement projections are shown in **Figure III-1** as stacked bars. In addition, the revenue from current rates, non-rate revenue, and capacity charges is shown as a dashed black line. As shown in **Figure III-1**, revenue from current rates and other sources is not sufficient to fund the District's projected operating and capital expenses. The revenue from the recommended revenue increases (discussed below) is shown as a solid black line. In years in which expenses are projected to exceed revenue, reserves are used to bridge the gap. In years in which revenue is projected to exceed expenses, the reserves are replenished.

Figure III-1. Revenue Requirement Projections



Source: Model Table 2. Revenue Requirement.

Expense Projections

The detail for the line items in each expense category is shown in the model in the Appendix. A brief narrative of the projected expense categories is provided below.

SFPUC Water Supply

The projected water supply expenses are the cost of purchased water from the SFPUC. This cost is increasing during the projection period as a result of increases in the SFPUC's wholesale rates; it is not expected that the District's purchased volumes from the SFPUC will increase significantly in the near future. It is assumed that the increase in water demand due to growth will be offset by conservation by all customers.

We note that the cost of SFPUC water that is used to set the proposed rates in this study is based on the SFPUC's projections. The SFPUC may adopt different rates as conditions evolve. We recommend making Pass-Through Adjustments to account for the variance between the cost of SFPUC water shown in **Table III-1** and the wholesale rates that are eventually adopted by the SFPUC (see **Section V**).

Operations & Maintenance (O&M) Expenses

The projected O&M expenses are projected to increase slightly based on the escalation factors in **Table III-1**.

Capital Projects

A significant portion of the District's revenue requirements comprises annual expenditures on capital improvements from rate revenue and capital reserves. These expenditures fund the on-going renewal and replacement of aging infrastructure. A list of the projects is shown in **Table III-2**. Capital spending for this five-year planning period is higher than in most similar periods as the recent flood of the District's offices requires the design and construction of a new facility and the need for tank replacements/recoating.

Because PAYGo projects fluctuate from year to year, they are funded from capital reserves, which buffers the annual fluctuations so that revenue requirements are relatively stable. To modulate these fluctuations, contributions from the revenue requirements are made to the capital reserve based on the inflation adjusted average of annual PAYGo capital expenses for each year. For the first five-year period of the planning period (i.e., FY 2024-25 through FY 2028-29), the revenue requirement reflects annual contributions to reserves to fund the PAYGo projects, shown in **Table III-2**, in the amount of \$3,628,237 per year (\$3.3 million per year in current 2024 dollars, adjusted for projected inflation³). For the second five-year period of the planning period (i.e., FY 2029-30 through FY 2033-34), the revenue requirement reflects annual contributions to reserves to fund anticipated PAYGo projects (not yet identified), in the amount of \$5,060,969 per year (\$4.0 million per year in current 2024 dollars, adjusted for projected inflation).

Table III-2. Capital Improvement Program

Project	Funding Source	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	Total
Capitalized Equipment	PAYGo	\$400,000	\$100,000	\$100,000	\$100,000	\$100,000	\$800,000
Old County Road Improvements	PAYGo	\$225,000	\$0	\$0	\$0	\$0	\$225,000
Dekoven Tank Util/Lincoln/Newlands/Oak	PAYGo	\$3,000,000	\$0	\$0	\$0	\$0	\$3,000,000
Dairy Lane Operations Center - Design	Debt	\$2,400,000	\$0	\$0	\$0	\$0	\$2,400,000
Dairy Lane Operations Center - Constructio	Debt	\$0	\$2,910,000	\$6,790,000	\$0	\$0	\$9,700,000
Folger Property Improvements	Debt	\$2,700,000	\$2,295,000	\$0	\$0	\$0	\$4,995,000
Dekoven Tanks Replacement	Debt	\$1,897,500	\$5,692,500	\$0	\$0	\$0	\$7,590,000
SR 101 Crossing - Phase 2	Debt	\$681,250	\$2,083,750	\$0	\$0	\$0	\$2,765,000
Exborne West Tank Recoating	PAYGo	\$675,000	\$0	\$0	\$0	\$0	\$675,000
Hallmark North Tank Recoating	PAYGo	\$610,000	\$2,440,000	\$0	\$0	\$0	\$3,050,000
West Belmont North Tank Recoating	PAYGo	\$130,000	\$0	\$0	\$0	\$0	\$130,000
Other Projects (Not Yet Identified)	PAYGo	\$0	\$1,000,000	\$2,500,000	\$2,500,000	\$2,500,000	\$8,500,000
Other Projects (Not Yet Identified)	Debt	\$0	\$0	\$1,700,000	\$1,700,000	\$1,700,000	\$5,100,000
Total		\$12,718,750	\$16,521,250	\$11,090,000	\$4,300,000	\$4,300,000	\$48,930,000
Recap by Funding Source							
PAYGo		\$5,040,000	\$3,540,000	\$2,600,000	\$2,600,000	\$2,600,000	\$16,380,000
Debt Financing		\$7,678,750	\$12,981,250	\$8,490,000	\$1,700,000	\$1,700,000	\$32,550,000
Total		\$12,718,750	\$16,521,250	\$11,090,000	\$4,300,000	\$4,300,000	\$48,930,000

³ Inflation factor of 3.3% per year based on the average annual increase (since 2014) in the Construction Cost Index (San Francisco) published by the Engineering-News Report

The District currently pays debt service on a previously issued Certificate of Participation (COP) and plans to issue two bonds in FY 2024-25 (\$15,500,000) and FY 2025-26 (\$17,500,000) to fund various capital improvement projects as listed in **Table III-2** above. The debt service on the COP (approximately \$1,060,000 annually) is scheduled to be paid off in 2046.

Annual debt service, which has been included in the revenue requirement, for the two planned bond issuances are as follows:

- \$1,082,481 annual debt service beginning FY 2024-25 based on funding \$15,500,000 in capital projects, projected issuance costs of 1.5%, a 30-year repayment term, and a 5.5% interest rate.
- \$1,222,156 annual debt service beginning FY 2025-26 based on funding \$17,500,000 in capital projects, projected issuance costs of 1.5%, a 30-year repayment term, and a 5.5% interest rate.

Revenue Increases

In addition to showing the major components of the revenue requirements, **Figure III-1** also shows the revenue from current rates and from rates after rate increases are added. The revenue and revenue requirement increases are summarized in **Table III-3** along with other key financial indicators. Note that the effective date for the FY 2024-25 increase is January 1, 2025. Subsequent revenue increases become effective on July 1, at the beginning of each fiscal year.

Table III-3. Projected Water Revenue and Revenue Requirement Increases

	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34
Revenue Increases	24.5%	5.0%	8.0%	9.0%	9.0%	4.0%	3.0%	3.0%	3.0%	3.0%
Revenue Requirement	\$19,262,770	\$20,978,714	\$21,565,191	\$22,362,846	\$22,943,405	\$24,981,506	\$25,684,777	\$26,475,049	\$27,195,140	\$28,003,090
EOY Reserve Fund Balance	\$10,021,310	\$8,452,915	\$7,818,656	\$8,266,856	\$10,219,776	\$12,558,864	\$14,204,836	\$15,917,762	\$17,804,409	\$19,814,409
Debt Coverage Ratio (1.30 min.)	1.32	1.51	1.82	2.17	2.65	2.80	2.88	2.94	3.03	3.10
Days of Cash	190	147	132	135	163	183	202	219	239	258

As further discussed below, the revenue increases fund the O&M and capital expenses and maintain adequate reserves. With the recommended revenue increases, debt coverage ratio will continue to meet the minimum requirement of 1.30, based on the current projected operating costs and capital improvement program. As further discussed below, the fund balance is drawn down to near the minimum target before climbing up. These revenue increases are therefore regarded as the minimum that are needed at this time.

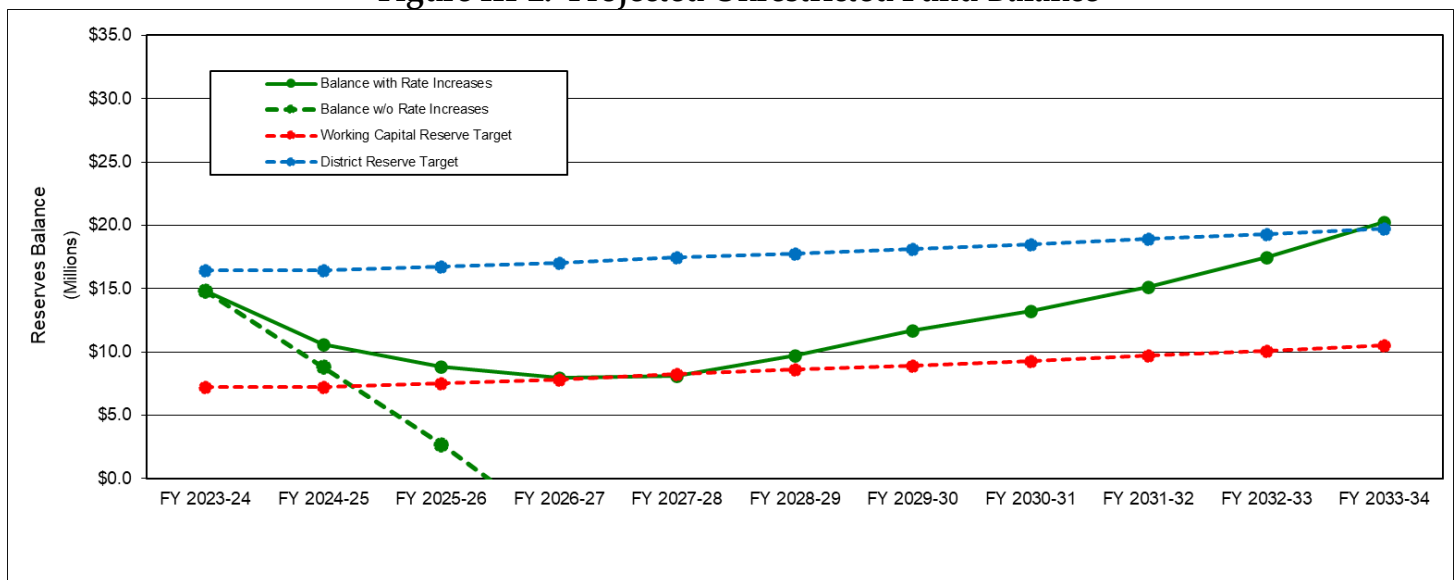
RESERVE FUND BALANCE

Rates are set to generate sufficient revenue to cover annual expenses and to maintain adequate reserves. The difference between annual revenue requirements and revenue from rates and other sources results in an annual surplus or deficit that either adds to or subtracts from the unrestricted fund balance.

Figure III-2 shows (solid green line) the annual fluctuations in the fund balance that are caused by the differences between the revenue requirement and revenue from rates with the recommended revenue increases (as shown in **Table III-3**); the dashed green line is the projected fund balance without the revenue increases. The revenue increase percentages in **Table III-3** were derived to maintain an adequate reserve balance and meet the debt coverage requirement. Meeting debt coverage requirements and maintaining adequate reserves helps to protect the District's credit rating, which lowers the cost of financing, thereby benefiting rate payers.

Figure III-2 contains two reserve target lines. The minimum fund balance (red dashed line) represents the working capital that is needed to meet month-to-month cash flow for O&M expenses and the required debt service reserve for the District's outstanding and planned debt (i.e., six months of operating expenses). **Figure III-2** also shows the recommended total reserve target. The target balance (blue dashed line) is derived by adding a \$1.2 million rate stabilization reserve and a \$8.0 million capital improvement reserve, to provide sufficient cash on hand to fund its cash-funded capital improvements without cash flow constraints, to the working capital reserve. This contingency is also available to help fund short-term deficits such as emergency expenditures and/or revenue shortfalls resulting from lower than projected water sales, if applicable.

Figure III-2. Projected Unrestricted Fund Balance

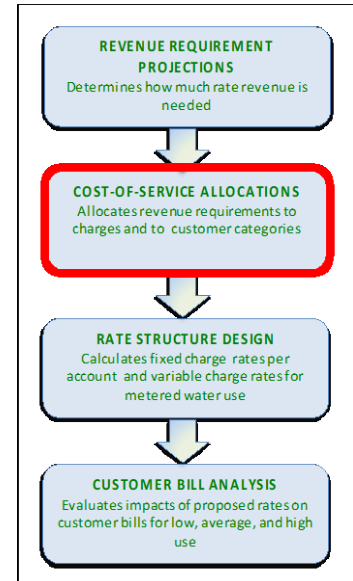


IV. COST-OF-SERVICE ANALYSIS

The revenue requirement analysis establishes how much revenue is required from rates to cover the cost-of-service. The next step in the analysis is determining the cost of the services provided by the District to its customers, which will be charged through its rates. Cost-of-service analysis is used to derive rates that proportionally allocate the cost-of-service between the fixed system charge and the consumption charge and further allocated the consumption charge costs between the customer classes and among customers in each class.

ANALYTICAL APPROACH

The District provides demand services and customer services to water customers. Demand services include the costs related to meeting various levels of demand. Customer services include the costs related to customer accounts and the capacity that customers require.



The cost-of-service analysis performed in this study follows a procedure that has been long established by the American Water Works Association (AWWA),⁴ which is referred to as the “base/extra capacity method.” The analytical procedure contains the following steps:

1. **Cost classification** - Costs in the FY 2024-25 revenue requirement are classified into the service categories related to providing for customer demands and for customer service. FY 2024-25 costs are used for the cost-of-service analysis because they are the most recent budget year.
2. **Cost allocation** - The classified costs are allocated to the functions associated with each service. For demand services, the functions are levels of service that range from base, non-seasonal demands to the peak hour demands that represent the highest level of service. For customer services, the functions are customer accounts and customer capacity.

The criteria for classifying major costs are summarized as follows; examples of costs in each category are also shown:

- Demand services** - the basis for the consumption charge rates.
- Base day - non-seasonal demand (SFPUC purchased water cost).

⁴ *Principles of Water Rates, Fees, and Charges*. Manual M1. American Water Works Association.

- Average day – average daily demand: facilities that do not provide for peak day or hour demands (additional water supplies).
- Maximum day – peak demand on the maximum day (transmission mains from the source of supply to distribution storage reservoirs; booster pumps).
- Maximum hour – peak hour demand on the maximum day (a portion of distribution storage reservoirs and distribution mains to customers; hydrants, conservation programs).

Customer services - the basis for the fixed system charge rates.

- Accounts: meter reading, billing, accounting, customer service, certain non-operating revenues.
- Capacity: a portion of distribution storage reservoirs and distribution mains to customers.

Composite services - these costs are recovered from both consumption and fixed system charge rates.

- Allocations for indirect costs that are not directly related to either the demand or customer service functions, such as personnel, overhead, certain non-operating revenue)
- Composite costs are allocated based on a composite of the direct allocations to the demand and customer service categories.

ALLOCATION FACTORS

Within the demand service function, allocations are made to varying levels of service. With these allocations, rates can be designed to proportionately charge customers based on their demands at each level of service.

Demand Services

Base Day Demand

Base day demand represents non-seasonal demand when irrigation is minimal and very little extra capacity is required for peaking. The base day demand was derived for each customer class from the District's customer billing data for the most recent three years. The base day demand period corresponded to the lowest month in each year.

Average Day Demand

Average day demand represents demand that includes only an average level of peaking. The average day demand was derived for each customer class from the District's customer billing data also for the most recent three years.

Maximum Day Demand

Maximum day demand includes average day demand plus peak day demand in the irrigation season. Based on the District's meter data, the residential maximum day

demand is 1.91 times their average day demand and commercial maximum day demand is 1.95 times their average day demand.

Maximum Hour Demand

Maximum hour demand represents the maximum hour demand on the maximum day. The District does not maintain data on its maximum hour demand, which is not unusual. An estimate was made by which the maximum hour demand was assumed to be 1.50 times the maximum day demand; this value is consistent with industry guidelines. It is noted that sizing maximum hour facilities often serves to simultaneously provide capacity for both peak hour demands by customers and for fire flows. In effect, maximum hour demands determine how much capacity should be built into facilities needed for maximum hour peaks, which also accommodates fire flow capacity.

Figure IV-1 is a graphical depiction of the capacities of pipelines that correspond to each demand service level. This depiction is intended to exemplify the impact that peak levels of demand have on the design of facilities. The concentric circles are pipeline diameters proportionate to the levels of demand beginning with base demand, which is average winter demand when peaking is minimal. Average peaking during average day demands increases the capacity of the pipeline by 1.3 times base day demand. Maximum day demand requires a pipeline that is 2.6 times the capacity of base, non-peaking demand. Finally, to meet the highest level of service required by maximum hour demand, the pipeline capacity must be 3.9 times greater than the base demand. The larger capacities that are required to meet the higher levels of service require expenditures that cost-of-service analysis allocates proportionately to those who require the service.

Figure IV-1. Pipeline Capacity Needed For Demand Service Levels

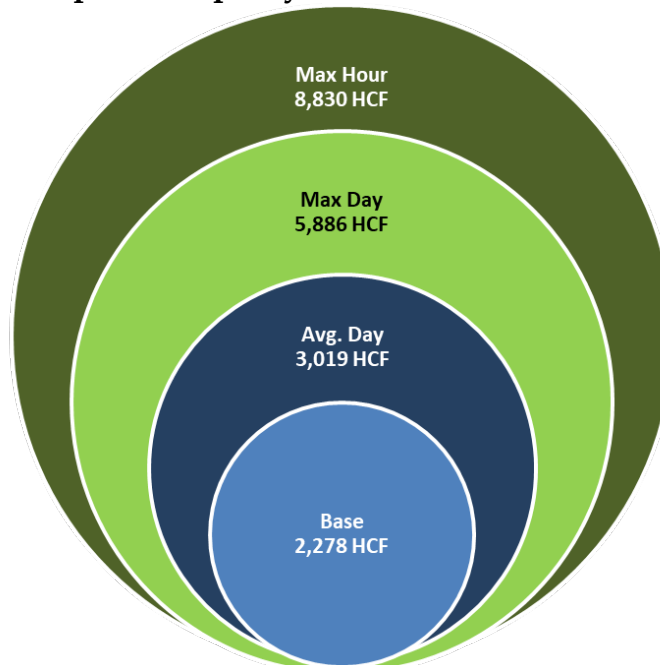
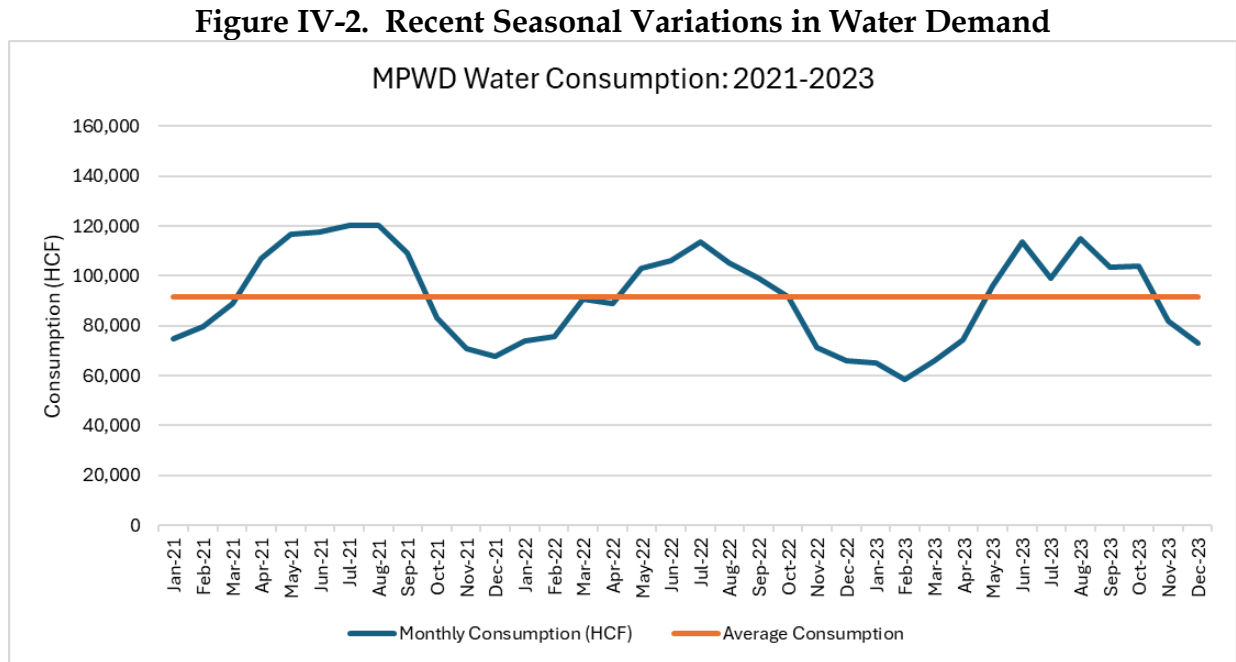


Figure IV-2 was prepared to further underscore the nature of peaking in the District from winter to summer.



The seasonality of the District’s demand is an important consideration in evaluating the balance of revenue between the fixed system charges and the consumption charges, which are subject to variations caused by climate (discussed below).

Allocation Factors

The flows associated with the demand service levels for each customer class and for the system as a whole are shown in **Table IV-1**. We note that the flows for the customer classes are coincident flows. Coincident flows represent the combined, total flow for which capacity is required at a given level of demand. It may be that one class’s peak may not be highest during the system-wide peak. That is inconsequential because facilities are not designed for noncoincident peaks. Hence, it would be illogical to use noncoincident flows to allocate costs that correspond to facilities that are sized for coincident peaks.

Table IV-1. Service Level Demands and Load Factors

	Levels of Demand			
	Base Day	Average Day	Maximum Day	Maximum Hour
Demand by Customer Category (hcf/Day)				
Residential	1,341	1,762	3,362	5,043
Commercial	936	1,257	2,524	3,786
Total	2,278	3,019	5,886	8,830
Ratio of Flows to Average Day				
Residential	0.76	1.00	1.91	2.86
Commercial	0.74	1.00	2.01	3.01
Total	0.75	1.00	1.95	2.93
Level of Service	2,278	3,019	5,886	8,830
Base Day Demand	3,019	3,019	3,019	3,019
Ratio of Level of Service to Base Day	0.75	1.00	1.95	2.93

Source: Data source as described in text.

Table IV-2 shows the system-wide allocation percentages corresponding to the flows and load factors in **Table IV-1**. Note that costs that are classified, for example, as average day are allocated to both base day and average day and not to average day only. This is done because the capacity provided by average day facilities also provides capacity to meet base day demands. Similarly, maximum day and maximum hour costs are allocated across the lower levels of demand.

Table IV-2. Service Level Allocation Factors

Allocation Basis	Load Factors	Demand Service Levels				Totals
		Base Day	Average Day	Maximum Day	Maximum Hour	
Base Day <i>Allocation %</i>	0.75	0.75 100%				0.75 100%
Average Day <i>Allocation %</i>	1.00	0.75 75%	0.25 25%			1.00 100%
Maximum Day <i>Allocation %</i>	1.95	0.75 39%	0.25 13%	0.95 49%		1.95 100%
Maximum Hour <i>Allocation %</i>	2.93	0.75 26%	0.25 8%	0.95 32%	0.98 33%	2.93 100%

The allocation factors for costs classified as Customer Service are not related to levels of demand and, instead, are allocated either as 100% customer accounts or 100% customer capacity.

Table IV-3 summarizes the allocation factors for the demand and customer service costs. In addition, it shows the composite allocations. The O&M, Capital, and Expense

composite allocations factors are based on subtotals of the O&M, Capital, and total costs that were directly allocated to either the demand or customer service categories. (These subtotals for the composite allocations are shown in **Tables IV-4, IV-5, and IV-6.**)

Table IV-3. Summary of Allocation Factors

System-Wide Cost Allocation Factors	Demand Services				Customer Serv	Customer Services		Total
	Base	Average Day	Maximum Day	Maximum Hour	Fire Service	Accounts	Fixed Service Charge	
<u>Demand Services</u>								
Base	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Average Day	75.5%	24.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Max Day	38.7%	12.6%	48.7%	0.0%	0.0%	0.0%	0.0%	100.0%
Max Hour	25.8%	8.4%	32.5%	33.3%	0.0%	0.0%	0.0%	100.0%
<u>Customer Services</u>								
Capacity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Accounts	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
<u>Composite Allocations</u>								
O&M Composite	63.3%	0.8%	3.1%	2.1%	0.8%	19.4%	10.5%	100.0%
CIP Composite	10.5%	10.5%	40.6%	4.5%	0.0%	0.0%	12.1%	78.2%
Exp Composite	46.4%	1.7%	6.5%	2.0%	0.6%	13.9%	29.0%	100.0%
Reserves Alloc	46.4%	1.7%	6.5%	2.0%	0.5%	13.9%	29.0%	100.0%

Source: Data source as described in the text

COST-OF-SERVICE ALLOCATIONS

O&M, Capital, and Composite Allocations

Tables IV-4, IV-5, and IV-6 show the FY 2024-25 revenue requirement allocated into the demand and customer services categories. The allocation factors that are summarized in **Table IV-3** allocate the costs, based on the allocation percentages shown in Table IV-3 above, across the services based on the cost classification.

Table IV-4. Functional Costs Allocations (FY 2024-25)

Consumption Charge							Fixed System Charge		
FY 2024-25 Revenue Requirement	Allocation Factor	Base Day	Average Day	Maximum Day	Maximum Hour	Accounts	Capacity		
Non Personnel O&M Expenses									
SFPUC EXPENSES									
SFPUC Treated Water	\$6,076,480	Base	\$6,076,480	\$0	\$0	\$0	\$0	\$0	
BAWSCA (Debt Service Surcharges)	\$427,239	Capacity	\$0	\$0	\$0	\$0	\$427,239	\$0	
SFPUC Water Service Charge	\$90,000	Capacity	\$0	\$0	\$0	\$0	\$90,000	\$0	
Subtotal	\$6,593,719		\$6,076,480	\$0	\$0	\$0	\$517,239	\$0	
OUTREACH/EDUCATION	\$80,000	Max Hour	\$20,636	\$6,714	\$25,983	\$26,667	\$0	(\$0)	\$0
OPS Systems									
Water Quality	\$60,000	Max Hour	\$15,477	\$5,036	\$19,487	\$20,000	\$0	\$0	\$0
Pumping	\$20,000	Max Hour	\$5,159	\$1,679	\$6,496	\$6,667	\$0	\$0	\$0
Storage Tanks	\$34,000	Max Hour	\$8,770	\$2,854	\$11,043	\$11,333	\$0	\$0	\$0
Mains/Distribution	\$180,000	Max Day	\$69,646	\$22,661	\$87,692	\$0	\$0	\$0	\$0
Meters & Service	\$176,000	Capacity	\$0	\$0	\$0	\$0	\$0	\$176,000	\$0
Fire Hydrants	\$80,000	Fire Service	\$0	\$0	\$0	\$0	\$0	\$80,000	\$0
Regulator Stations	\$15,000	Max Day	\$5,804	\$1,888	\$7,308	\$0	\$0	\$0	\$0
Employee Safety	\$15,000	Accounts	\$0	\$0	\$0	\$0	\$15,000	\$0	\$0
SCADA Maintenance	\$35,000	Accounts	\$0	\$0	\$0	\$0	\$35,000	\$0	\$0
Generator Maintenance	\$15,000	Max Day	\$5,804	\$1,888	\$7,308	\$0	\$0	\$0	\$0
Subtotal	\$630,000		\$110,660	\$36,006	\$139,333	\$38,000	\$50,000	\$256,000	\$0
FACILITIES & EQUIPMENT	\$352,000	Capacity	\$0	\$0	\$0	\$0	\$0	\$352,000	\$0
SYSTEM SURVEYS	\$75,000	Max Hour	\$19,346	\$6,295	\$24,359	\$25,000	\$0	\$0	\$0
ADMINISTRATION & EQUIP	\$621,000	Accounts	\$0	\$0	\$0	\$0	\$621,000	\$0	\$0
MEMBERSHIP & GOV FEES	\$447,000	Accounts	\$0	\$0	\$0	\$0	\$447,000	\$0	\$0
BAD DEBT & CLAIMS	\$15,000	Accounts	\$0	\$0	\$0	\$0	\$15,000	\$0	\$0
UTILITIES									
Utilities-Internet/Cable	\$53,000	Accounts	\$0	\$0	\$0	\$0	\$53,000	\$0	\$0
Utilities-Cellular Telephones	\$34,400	Accounts	\$0	\$0	\$0	\$0	\$34,400	\$0	\$0
Utilities-Electric-Pumping	\$360,500	Max Hour	\$92,991	\$30,257	\$117,085	\$120,167	\$0	\$0	\$0
Utilities-Electric-Bldgs&Grounds	\$51,500	Accounts	\$0	\$0	\$0	\$0	\$51,500	\$0	\$0
Utilities-Sewer - NPDES	\$7,000	Accounts	\$0	\$0	\$0	\$0	\$7,000	\$0	\$0
Subtotal	\$506,400		\$92,991	\$30,257	\$117,085	\$120,167	\$145,900	\$0	\$0
PROFESSIONAL SERVICES	\$574,000		\$0	\$0	\$0	\$0	\$574,000	\$0	\$0
TRAINING & TRAVEL	\$87,500	Accounts	\$0	\$0	\$0	\$0	\$87,500	\$0	\$0
Total Non-Personnel O&M Expenses	\$9,981,619		\$6,320,113	\$79,273	\$306,761	\$209,833	\$1,940,400	\$1,125,239	\$0
O&M Composite			63.3%	0.8%	3.1%	2.1%	19.4%	11.3%	0.0%

Table IV-4. Functional Costs Allocations (FY 2024-25) (cont.)

FY 2024-25 Revenue Requirement		Allocation Factor	Consumption Charge				Fixed System Charge		Fire Service
			Base Day	Average Day	Maximum Day	Maximum Hour	Accounts	Capacity	
O&M Expenses - Composite Allocation									
Prof Serv - District Engineer	\$140,000	O&M Composite	\$88,645	\$1,112	\$4,303	\$2,943	\$27,216	\$15,782	\$0
Prof Serv - Miscellaneous	\$387,500	O&M Composite	\$245,355	\$3,077	\$11,909	\$8,146	\$75,329	\$43,683	\$0
	\$527,500		\$334,000	\$4,189	\$16,211	\$11,089	\$102,545	\$59,466	\$0
PERSONNEL EXPENSES	\$3,949,733	O&M Composite	\$2,500,873	\$31,368	\$121,385	\$83,031	\$767,818	\$445,258	\$0
Debt Service									
2016 Certificate of Participation	\$1,064,900	CIP Composite	\$111,856	\$111,856	\$432,846	\$47,540	\$0	\$360,803	\$0
New Debt Service	\$1,082,481	CIP Composite	\$113,702	\$113,702	\$439,992	\$48,325	\$0	\$366,759	\$0
Total Debt Service	\$2,147,381		\$225,558	\$225,558	\$872,838	\$95,865	\$0	\$727,562	\$0
Capital Expenses (PayGo)									
Average 5-Year PAYGo CIP	\$3,628,237	Capacity	\$0	\$0	\$0	\$0	\$0	\$3,628,237	\$0
Total Capital Expenses	\$3,628,237		\$0	\$0	\$0	\$0	\$0	\$3,628,237	\$0
Subtotal - O&M and Capital	\$20,234,470		\$9,380,544	\$340,388	\$1,317,195	\$399,819	\$2,810,762	\$5,985,762	\$0
% of Consumption			82.0%	3.0%	11.5%	3.5%			
% of total			46.4%	1.7%	6.5%	2.0%	13.9%	29.6%	0.0%
Non-Operating Revenue Revenue									
Fire Service Charges	(\$18,000)	Fire Service	\$0	\$0	\$0	\$0	\$0	(\$18,000)	\$0
Credit/Debit Card Fees	(\$46,000)	Exp Composite	(\$21,325)	(\$774)	(\$2,994)	(\$909)	(\$6,390)	(\$13,608)	\$0
Late Fees	(\$33,000)	Exp Composite	(\$15,299)	(\$555)	(\$2,148)	(\$652)	(\$4,584)	(\$9,762)	\$0
48-Hour Notice Fees	(\$17,000)	Exp Composite	(\$7,881)	(\$286)	(\$1,107)	(\$336)	(\$2,361)	(\$5,029)	\$0
Shut Off Fees	(\$2,700)	Exp Composite	(\$1,252)	(\$45)	(\$176)	(\$53)	(\$375)	(\$799)	\$0
After Hour Fees	\$0	Exp Composite	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous Operating	(\$78,000)	Exp Composite	(\$36,160)	(\$1,312)	(\$5,078)	(\$1,541)	(\$10,835)	(\$23,074)	\$0
Service Line & Installation Charges	(\$60,000)	Exp Composite	(\$27,816)	(\$1,009)	(\$3,906)	(\$1,186)	(\$8,335)	(\$17,749)	\$0
Lease of Physical Property	(\$168,000)	Exp Composite	(\$77,884)	(\$2,826)	(\$10,936)	(\$3,320)	(\$23,337)	(\$49,698)	\$0
Property Tax Revenue	(\$545,000)	Exp Composite	(\$252,658)	(\$9,168)	(\$35,478)	(\$10,769)	(\$75,706)	(\$161,222)	\$0
Landscape Plan Permit Review	(\$4,000)	Exp Composite	(\$1,854)	(\$67)	(\$260)	(\$79)	(\$556)	(\$1,183)	\$0
Subtotal - Non-Operating Revenue	(\$971,700)		(\$442,128)	(\$16,043)	(\$62,083)	(\$18,844)	(\$132,478)	(\$300,124)	\$0
Subtotal O&M, Capital, Non-Operating	\$19,262,770	\$0	\$8,938,416	\$324,345	\$1,255,113	\$380,974	\$2,678,284	\$5,685,638	\$0
			46.4%	1.7%	6.5%	2.0%	13.9%	29.5%	0.0%
Transfers to/(from) Reserves									
Operating Reserves	(\$1,294,758)	Reserves Alloc	(\$600,801)	(\$21,801)	(\$84,363)	(\$25,607)	(\$180,022)	(\$382,163)	\$0
	(\$1,294,758)		(\$600,801)	(\$21,801)	(\$84,363)	(\$25,607)	(\$180,022)	(\$382,163)	\$0
Fire Service Redistribution		Capacity	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Charge Reallocation			\$2,552,298	\$92,614	\$358,388	\$108,784	(\$1,474,146)	(\$1,637,940)	\$0
Total Revenue Requirement	\$17,968,012		\$10,889,913	\$395,158	\$1,529,138	\$464,151	\$1,024,116	\$3,665,535	\$0
						\$13,278,361	\$1,024,116	\$3,665,535	\$0
% of total revenue requirement						73.9%	26.1%	0.0%	
Consumption Charge COS						Fixed System Charge COS			

We note that the resulting allocations divide the revenue requirement between the demand services and customer services. Revenue from customer services is billed through the fixed system charges, which are fixed based on the size of the service connection; they do not vary with demand. The analysis indicates that 26.1% of the

revenue requirement is attributed to the fixed system charges, while 73.9% of revenue will be generated through the consumption charges.

Summary of Allocations By Customer Class

The allocations by customer class are summarized in **Table IV-5**. Overall, residential charges will generate \$1,990,053 more revenue on an annual basis than they would pay if the current rates stayed in place; commercial charges will generate an additional \$1,547,926.

Table IV-5. Comparison of Customer Class Allocations (Current vs. FY 2024-25 COS)

Components of Rate Structure	Annual Revenue at Current Rates		Annual Revenue at Proposed FY 2024-25 Rates		Difference	
					COS Minus Current	
Residential						
Consumption Charge Revenue	\$6,607,774	72%	\$7,784,720	70%	\$1,176,946	17.8%
Fixed System Charge Revenue	\$2,560,320	28%	\$3,373,426	30%	\$813,106	31.8%
Subtotal - Residential	\$9,168,094	100%	\$11,158,146	100%	\$1,990,053	21.7%
Commercial						
Consumption Charge Revenue	\$4,557,604	87%	\$5,495,745	81%	\$938,141	20.6%
Fixed System Charge Revenue	\$706,440	13%	\$1,316,225	19%	\$609,785	86.3%
Subtotal - Commercial	\$5,264,044	100%	\$6,811,970	100%	\$1,547,926	29.4%
Total						
Consumption Charge Revenue	\$11,165,378	77%	\$13,280,465	74%	\$2,115,087	18.9%
Fixed System Charge Revenue	\$3,266,760	23%	\$4,689,651	26%	\$1,422,891	43.6%
Total	\$14,432,138	100%	\$17,970,116	100%	\$3,537,978	24.5%

Source: Model Tab 8. Allocations.

CONSUMPTION CHARGE COST ALLOCATIONS

As previously mentioned, the customer service function is independent of the customer classes. The demand service function requires further allocations to customer classes in deriving rates. **Table IV-6** derives the cost-of-service for each of the District's customer classes. The allocation reflects each class's proportionate shares of the four demand service levels (i.e., base day, average day, maximum day, and maximum hour) because they share common facilities. Moreover, the allocation of costs to the residential customers needs to be tracked by demand service level for purposes of calculating the residential tiered rates in **Section V** below.

Table IV-6. Consumption Charge Cost Allocations By Customer Class

Consumption Charge Cost of Service		Base Day	Average Day	Maximum Day	Maximum Hour	Total
O&M (net of Non-Op Revenue)		\$8,712,858	\$98,787	\$382,275	\$285,109	\$9,479,029
Capital (includes D/S)		\$225,558	\$225,558	\$872,838	\$95,865	\$1,419,819
Transfers to Reserves		(\$600,801)	(\$21,801)	(\$84,363)	(\$25,607)	(\$732,572)
Service Charge Reallocation		\$2,552,298	\$92,614	\$358,388	\$108,784	\$3,112,085
Total Consumption Charge COS	a	\$10,889,913	\$395,158	\$1,529,138	\$464,151	\$13,278,361
Units of Service (hcf)						
Residential	b	1,341	1,762	3,362	5,043	
Commercial	c	936	1,257	2,524	3,786	
	d	2,278	3,019	5,886	8,830	
Proportional Allocation Factors						
Residential	e=b÷d	58.90%	58.36%	57.12%	57.12%	
Commercial	f=c÷d	41.10%	41.64%	42.88%	42.88%	
		100.00%	100.00%	100.00%	100.00%	
Total COS - Residential	g=a*e	\$6,413,778	\$230,605	\$873,414	\$265,114	\$7,782,911
Total COS - Commercial	g=a*f	\$4,476,136	\$164,553	\$655,724	\$199,037	\$5,495,450
Grand Total Consumption Charge COS		\$10,889,913	\$395,158	\$1,529,138	\$464,151	\$13,278,361

V. RATE DESIGN

This section explains the derivation of the updated rates associated with the two charges paid by customers in the District's two customer classes. These rates are based on the results of the cost-of-service analysis in the preceding section.

RATE DESIGN OBJECTIVES

The rate design analysis links the revenue requirements identified in Section III with the water rates necessary to achieve full cost recovery. The focus of this process is to set rates and substantiate that each rate reflects its fair and proportionate share of system costs.

Setting rates in California is subject to key laws and court decisions of which Article XIII D of the California Constitution is most important. Article XIII D has three substantive provisions that must be met: (1) the revenue from rates must not exceed the cost of providing service, (2) the revenue from rates must be used for providing service, and (3) the fees and charges must be proportional to the cost of providing the service. In meeting these provisions, the water supplier is responsible for meeting the burden of proof. The first two provisions are more closely related to developing revenue requirements and revenue projections. The last provision is the primary objective in rate structure design.

The San Juan Capistrano decision is a 2015 appellate court decision that found that tiered rates must be proportionate to the cost of service across the range of consumption. While acknowledging that such an analysis may be complex, no formulas, rules, or specific procedures are prescribed in the decision for how to set tiered rates, only that each tier must be cost-based.

The District has historically charged water customers the combination of a fixed system charge and a variable consumption charge based on metered water use. As previously discussed, this is a very common set of charges that is prevalent throughout the water industry. This section explains the derivation of the fixed system charge and consumption charge rates that reflect the projected cost of service.

SUMMARY OF RATE DESIGN MODIFICATIONS

Based on discussion with District staff, and careful review of the cost of service analysis, the following rate design elements were discussed, and in some cases modified from current, as noted. The calculation of rates and the rationale for any recommended modifications follow this section.

- Maintain two separate customer classes for quantity charge rates: residential and commercial.

- Reduce the number of residential consumption charge tiers from four to three and adjust the breakpoints based on current water demand patterns.
- Reduce the number of commercial consumption charge tiers from two to a uniform charged per unit of water use.
- Develop rate stabilization factors to be applied to quantity charge rates during declared water shortages to maintain revenue stability.
- Derive 26% of rate revenue from the fixed system charge rates, which is a slight increase from the current 23%, to improve revenue stability.

CURRENT RATE STRUCTURE

Tables V-1 and V-2 summarize the District's current rates for its two charges. This rate structure, including the customer classes, has been in place for many years. Customers are billed the sum of the fixed system charge and water consumption charges monthly.

Table V-1. Current Fixed System Charge Rates (\$/month)

Service Size	Current Charge
5/8"	\$28.00
1"	\$42.00
1-1/2"	\$70.00
2"	\$112.00
3"	\$168.00
4"	\$280.00
6"	\$700.00

Table V-2. Current Consumption Charge Rates

Current Consumption Charge Rates		
	Tier Size (HCF)	\$/HCF
	Monthly Use	\$/HCF
Residential		
Tier 1	0 to 2	\$7.43
Tier 2	3 to 8	\$10.26
Tier 3	9 to 20	\$12.17
Tier 4	21+	\$14.07
Commercial		
Tier 1	0 to 5	\$9.37
Tier 2	6+	\$10.73

FIXED SYSTEM CHARGE RATE DESIGN

Fixed system charge rates are fixed rates charged per account that recover the cost of the customer service function. Fixed system charge rates are graduated in proportion to the capacity of the service (i.e., size of the water meter) serving a property. Fixed system charge rates are also independent of customer classes because the capacity of a service is the same no matter what customer is connected to the meter. In other words, a one-inch meter provides the same capacity to any customer that is connected to it.

The fixed system charge is set to generate the revenue required to cover the costs allocated to the customer service function, which was determined in the cost-of-service analysis (**Section IV**). The customer service function has two components – customer accounts and customer capacity – each of which is itemized in the cost-of-service analysis. Costs attributable to customer accounts are allocated to customers in proportion to the number of accounts. Costs attributable to customer capacity are allocated to customers in proportion to the capacity of their services. The sum of the two components equals the fixed system charge rate per connection.

Capacity costs associated with the distribution system are apportioned among the connections in proportion to the capacity associated with each connection. Accounts are converted to Equivalent Meter Units (EMUs) to apportion the customer capacity cost component. An EMU represents the number of 5/8-inch meters to which a larger meter is equivalent. The capacity multipliers are based on AWWA nominal rated capacities.

The inventory of these meters is shown in **Table V-3**, which also shows the rated capacity in gallons per minute (GPM) for each meter size. Using the rated capacities, it is possible to calculate the EMUs for each size meter. For example, a 1-inch meter provides 2.5 times as much capacity as a 5/8-inch meter. The 615 1-inch meters equal 1,538 EMUs (i.e., 5/8" meters). The number of EMUs was calculated for each meter type and summed up to determine the total EMUs.

Table V-3 derives the unit costs for the customer accounts and customer capacity cost components. Each account is allocated \$10.33 for the customer account cost component. That amount represents the costs the District incurs to maintain an account regardless of the capacity of the service. Each account is also allocated \$24.82 per EMU. That amount represents a portion of the cost of providing distribution system capacity for each account, and increases in proportion to the capacity of the meter.

Table V-3. Proposed Fixed System Charge Unit Costs

Service Size	# of Accounts	Meter Ratings (gpm)	Capacity Multiplier*	EMUs
	a	b	c = b ÷ 20	a * c
5/8" meters	7,254	20	1.00	7,254
1" meters	615	50	2.50	1,538
1 1/2" meters	159	100	5.00	795
2" meters	170	160	8.00	1,360
3" meters	35	320	16.00	560
4" meters	20	500	25.00	500
6" meters	6	1000	50.00	300
Total Accounts	8,259		Total EMUs	12,307
Units Costs	\$1,024,116			\$3,665,535
Monthly Cost per Account	\$10.33		Monthly Cost per EMU	\$24.82

Table V-4 combines the customer service and capacity components into a fixed system charge for each size service. These amounts are monthly values for FY 2024-25. They are compared with the current monthly equivalents. All of the current fixed system charges increase in order to generate the additional cost that is allocated to the customer service function in the cost-of-service analysis in **Section IV**.

Table V-4. Proposed Monthly Fixed System Charge Rates - Effective 1/1/2025

Service Size	% of Meters	Account Component	Capacity Component			Proposed Service Charges (\$/mo.)	Total	
		(\$/mo.)	\$/EMU	Capacity Multiplier	Capacity Total		Current Charge	\$ Difference
		a	b	c	d = b * c	e = a + d		
5/8" meters	87.8%	\$10.33	\$24.82	1.00	\$24.82	\$35.15	\$28.00	\$7.15
1" meters	7.4%	\$10.33	\$24.82	2.50	\$62.05	\$72.39	\$42.00	\$30.39
1 1/2" meters	1.9%	\$10.33	\$24.82	5.00	\$124.11	\$134.44	\$70.00	\$64.44
2" meters	2.1%	\$10.33	\$24.82	8.00	\$198.57	\$208.90	\$112.00	\$96.90
3" meters	0.4%	\$10.33	\$24.82	16.00	\$397.14	\$407.47	\$168.00	\$239.47
4" meters	0.2%	\$10.33	\$24.82	25.00	\$620.53	\$630.86	\$280.00	\$350.86
6" meters	0.1%	\$10.33	\$24.82	50.00	\$1,241.06	\$1,251.39	\$700.00	\$551.39

CONSUMPTION CHARGE RATE DESIGN

The District's customers pay consumption charge rates that are tiered, increasing block rates. Residential customers currently have a four-tier structure and commercial customers currently have a two-tier structure.

Going forward, we recommend that tiered rates apply only to the residential customer category. Residential demand is more homogenous compared to non-single family residential (i.e., commercial and multi-family residential) demand. The commercial customer class is not homogeneous the way residential customers are. Multi-family customers are categorized with commercial as the District's multi-family complexes range from three units to several hundred units, which results in varying water use demand patterns, similar to commercial. These types of customers (i.e., restaurants, office buildings, manufacturing, multi-family), the amounts of the water use, and the seasonality of their water use are so diverse among each type as to make it problematic to determine the location of breakpoints. For that reason, tiered rates are not well suited for the non-single family residential class. Accordingly, we recommend charging non-single family residential customers a uniform charge for all water use, which is in line with industry standards.

Residential Tiered Consumption Charge Rates

The District's residential customers are currently charged a four-tier increasing block rate structure.⁵ The structure is a series of "blocks" of water whose unit costs increase with each block. The structure is "progressive" in the sense that water is billed sequentially by block up to the highest block. It is not the case that all of the water is billed at only the rate for the highest block. All metered water use is at least billed the Tier 1 rate. Water use beyond Tier 1 is only billed the Tier 2 rate for the volume of water within Tier 2, and water use beyond the volume of water within Tier 2 is billed at the Tier 3 rate.

Increasing block rates have become more common as the need has grown to set rates that more precisely recover the cost-of-service. Increasing block rates continue to be well suited for the District's residential customer class.

When increasing block rates are implemented, the number of tiers must be determined. There is no absolute industry standard or law that prescribes how many tiers must be used. Judgment that is supported by facts is allowed. However, the rates for each tier cannot exceed the proportional cost-of-service for each tier. In the District's case, based on water use patterns of its residential customers over the past three calendar year, we recommend reducing the number of tiers from a four-tier structure to a three-tier structure.

⁵ For simplicity, we use the term "tiered rates" synonymously with "increasing block rates." "Inclining block rates" is sometimes used for "increasing block rates." However, because an incline can slope either up or down, it is ambiguous in this context and therefore is not used in this study.

To develop the appropriate number of tiers and the breakpoints for each tier, we analyzed the actual water use patterns from the District’s residential customers over the past three calendar years (2021-2023). The analysis relies on the AWWA base/extra capacity cost-of-service methodology that looks at leads to four distinct levels of demand that are defined by the functions performed by facilities that are designed to provide each service level. The base/extra capacity method in the AWWA M1 Manual contains three categories: base, maximum day, and maximum hour. Base capacity is determined by the average daily flow during the year. The average daily flow determines how much base capacity is needed to provide that flow. Maximum day capacity is determined by the flow on the maximum day of the year. In other words, the maximum day capacity is greater than the base capacity, including the base capacity plus the additional capacity needed to provide for the maximum day flow of the year. Maximum hour capacity is determined by the flow during the maximum hour on the maximum day. In other words, the maximum hour capacity is greater than the maximum day capacity by the amount of peak hour that occurs during the maximum day flow.

We have refined AWWA’s version of the base/extra capacity method. What AWWA considers “base” capacity is not purely base capacity because AWWA defines “base” as average day capacity. Average day capacity includes average peaking, which is greater than how “base” is defined in this report. In this report, “base” demand does not include peaking. We have introduced a fourth category that corresponds to base demand with no peaking, which we call Base Day. This Base Day demand is derived from average winter demand, when there is the least amount of peaking. Hence, in addition to Average Day, Maximum Day, and Maximum Hour categories, we have added Base Day. We have calculated the proportional cost of providing service for each of these four categories in this report.

Each service level has an average flow that can be used as the divider (i.e., “breakpoint”) between each service level. Based on residential billing data, the breakpoints for a four-tier structure were calculated as shown in **Table V-5**.

Table V-5. Residential Breakpoint Analysis

Flow per Customer (hcf per month)	Base Day	Average Day	Maximum Day	Maximum Hour
Residential				
hcf per day	1,341	1,762	3,362	5,043
hcf per month	40,242	52,848	100,865	
# of Accounts	7,266	7,266	7,266	
Average flow per Acct (hcf/mo)	6.0	7.0	14.0	15+

The separation between base and average day demand is so close that the recommended number of tiers warrant reducing the current four tiers to three tiers to avoid a tier that is only one HCF in size.

Rates Per Tier

It is recommended that the Tier 1 breakpoint for the proposed rate structure be set at 6 HCF, which is the base day demand as shown in **Table V-5**. With this design, the proposed Tier 1 rate remains affordable for base day demand, which includes minimal peaking. The proposed Tier 2 and Tier 3 rates covers the costs associated with higher rates of peaking.

Table V-6 shows the calculation of the per-unit cost for each tier. The total revenue requirement for the residential class was distributed across the tiers as shown in **Table IV-6**.

Table V-6. Proposed Residential Consumption Charge Rates – Effective 1/1/2025

Residential COS per Unit	Base Day	Average Day/ Max Day	Maximum Hour
Residential COS - Consumption¹	\$6,413,778	\$1,104,019	\$265,114
Demand Per Tier			
Tier 1 (0-6 hcf)	428,610		
Tier 2 (7-14 hcf)	171,134	171,134	
Tier 3 (15+ hcf)	58,328	58,328	58,328
Total hcf per Tier	658,072	229,462	58,328
Cost-of-Service per Unit (hcf)	\$9.75	\$4.81	\$4.55

Unit Cost Calculation	Base Day	Average Day/ Max Day	Maximum Hour
Tier 1 (0-6 hcf)	\$9.75	\$9.75	\$9.75
Tier 2 (7-14 hcf)		\$4.81	\$4.81
Tier 3 (15+ hcf)			\$4.55
Unit Cost per hcf (by Tier)	\$9.75	\$14.56	\$19.10

Note: Numbers may not sum exactly due to rounding

¹ Net revenue requirement from Table IV-6.

Base day costs apply to all tiers. Usage up to the 6 HCF Tier 1 breakpoint is charged the base day rate only. Demand that does not exceed Tier 1 is not responsible for the additional costs of peaking that were allocated to the higher service levels. These additional peaking costs are both the initial capital cost, the subsequent rehabilitation and renewal costs, and the operations and maintenance costs for larger pipelines, additional

pumps, and larger reservoirs. Bills that exceed Tier 1 pay additional rate increments corresponding to the higher levels of service.

Average day and maximum day costs apply to all water use greater than Tier 1, namely, to Tier 2 and Tier 3. Usage between 7 and 14 HCF is charged the Tier 2 rate, which is the sum of the base day, average day, and maximum day incremental costs. Clearly, as demand progresses through the tiers, the additional costs of higher levels of service associated with peaking are allocated to the higher tiers to recover the costs from those who require the higher levels of service. Tier 3 pays the final cost increment for maximum hour service, which is the highest burden placed on the system.

Commercial Uniform Consumption Charge Rate

The consumption charge rate for commercial customers is a uniform, un-tiered rate. The uniform rate is derived by dividing the costs allocated to the commercial class by the corresponding demand as shown in **Table V-7**.

Table V-7. Proposed Institutional Consumption Charge Rate (January 1, 2025)

Consumption Charge Cost of Service	Base Day	Average Day	Maximum Day	Maximum Hour	Total
Total COS - Commercial	\$4,476,136	\$164,553	\$655,724	\$199,037	\$5,495,450
			Annual water use (hcf)		429,355
				\$ per hcf	\$12.80

Source: Revenue requirement from **Table IV-6**;

RATE SUMMARY

The proposed rates for the fixed system charges and consumption charges are summarized for FY 2024-25 through FY 2028-29 in **Table V-8** and **Table V-9**, respectively. The recommended rates to be effective January 1, 2025 reflect the cost-of-service and rate design calculations described above and all subsequent rates reflect the uniform percentage increase to all rates (effective July 1 of each year) as indicated in the tables.

Table V-8. Recommended Fixed System Charge Rates

Service Size	Current Charge	Proposed (All Customer Classes)				
		1/1/2025	7/1/2025	7/1/2026	7/1/2027	7/1/2028
		COS Rates	+ 5.0%	+ 8.0%	+ 9.0%	+ 9.0%
5/8"	\$28.00	\$35.15	\$36.91	\$39.86	\$43.45	\$47.36
1"	\$42.00	\$72.39	\$76.01	\$82.09	\$89.48	\$97.53
1-1/2"	\$70.00	\$134.44	\$141.16	\$152.45	\$166.18	\$181.13
2"	\$112.00	\$208.90	\$219.35	\$236.89	\$258.21	\$281.45
3"	\$168.00	\$407.47	\$427.84	\$462.07	\$503.66	\$548.99
4"	\$280.00	\$630.86	\$662.40	\$715.40	\$779.78	\$849.96
6"	\$700.00	\$1,251.39	\$1,313.96	\$1,419.08	\$1,546.79	\$1,686.00

Table V-9. Recommended Consumption Charge Rates

Current Quantity Charge Rates			Recommended Quantity Charge Rates						
Tier Size (HCF)	\$/HCF		Tier Size (HCF)	1/1/2025 COS Rates	Proposed				
					7/1/2025 + 5.0%	7/1/2026 + 8.0%	7/1/2027 + 9.0%	7/1/2028 + 9.0%	
				\$/HCF	\$/HCF	\$/HCF	\$/HCF	\$/HCF	
Residential			Residential						
Tier 1	0 to 2	\$7.43	Tier 1	0 to 6	\$9.75	\$10.24	\$11.06	\$12.06	\$13.15
Tier 2	3 to 8	\$10.26	Tier 2	7 to 14	\$14.56	\$15.29	\$16.51	\$18.00	\$19.62
Tier 3	9 to 20	\$12.17	Tier 3	15+	\$19.10	\$20.06	\$21.66	\$23.61	\$25.73
Tier 4	21+	\$14.07							
Commercial			Commercial						
Tier 1	0 to 5	\$9.37	All Usage		\$12.80	\$13.44	\$14.52	\$15.83	\$17.25
Tier 2	6+	\$10.73							

DROUGHT RATE FACTORS

We note that the proposed rates should be considered adequate in years of normal water supply. During shortages that require customers to curtail water use, revenue shortfalls will occur. These shortfalls may be fiscally tolerable for a brief shortage, as the District recently adopted a rate stabilization reserve as part of the new Financial Management Plan. However, during a severe or prolonged drought or other emergency shortage (e.g., a natural disaster that damages the SFPUC's regional water supply facilities), the District's reserves may be unable to offset the revenue shortfall because costs will not decrease by the same amount.

As a means of stabilizing revenue during declared emergency shortages, water agencies are integrating adjustment factors that are implemented *only* during water shortages. During a water shortage, the District will implement a range of actions to reduce water use and help ensure that demand for water does not exceed supply. Such actions may include public outreach campaigns, water efficiency customer assistance and rebate programs, operational changes, and prohibitions and restrictions on some water uses. In the more severe stages of shortage and when the SFPUC implements its regional water supply reductions during droughts, the District's Board of Directors would declare a water shortage emergency and have discretion to require mandatory water reductions and implement the Water Shortage Rate Adjustments to increase the existing rates to recoup lost revenue from reduced consumption. These adjustments would be temporary and would return to the regular schedule when the District's Board determines that the water shortage emergency is over. Rate payers must be notified in advance on their monthly bills; the need for the full ratepayer protest process under Proposition 218, which is costly and time consuming is avoided by simply providing advance notification on bills at least 30 days prior to when the adjustment is made.

The adjustment factors increase the consumption charges to cover fixed costs without generating a surplus. This revenue-neutral adjustment is correlated with the level of mandated reduction and is reduced and eliminated as the shortage is alleviated and ends.

Methodology

Since the passage of Proposition 218, water shortages have occurred that have led an increasing number of water suppliers to adopt drought rate adjustments that do not trigger the Proposition 218 protest process each time an adjustment is made. This is accomplished by including the Drought Rate Factor procedures in the Proposition 218 notice at the time rates are adopted in compliance with Proposition 218. The notice describes the process, which rate payers have the right to protest. Barring a majority protest, the adjustment process is adopted as part of the rate increase and can be implemented as needed during the term of the adopted rate increases.

The adjustment process includes factors by which quantity charge rates are adjusted in conjunction with the reduction stages in the District's Water Shortage Contingency Plan. The factors are only applied to the variable quantity charge rates and not to the fixed service charge rates to give effect only to customer's changes in water demand. The District's current *Water Shortage Contingency Plan* is based on the same reduction in water use for all classes in each of the five stages. As part of the recommended Drought Rate Factors, it is proposed that the shortage reductions will vary by customer class. Each classes' reduction will be determined by reducing "outdoor" water use (seasonal water use) six times more than "indoor" (average winter water use) water use.⁶ It is assumed that seasonal "outdoor" water demand is primarily for irrigation, which is a lower beneficial use than non-seasonal "indoor" demand, which is primarily related to health and safety needs.

Analysis

Based on customer water use data gathered through customer water meters, the resulting reductions are summarized in **Table V-10**. The reductions shown represent the customer class reductions required to achieve the reduction associated with each shortage stage. The customer class reductions are greater or less than the overall average for each stage depending on how much of each classes' water demand is seasonal. Due to the historical seasonality of water use by multi-family customers, which we do not see in commercial customers, the multi-family shortage reductions have been broken out to acknowledge the differences between multi-family and other commercial water users.

⁶ This 6-to-1 reduction formula was implemented by the San Francisco Public Utilities Commission during the 1987-1992 drought.

Table V-10. Shortage Reductions by Class

Class	Stage 1 Up to 10% Reduction	Stage 2 Up to 20% Reduction	Stage 3 Up to 30% Reduction	Stage 4 Up to 40% Reduction	Stage 5 Up to 50% Reduction	Stage 6 Greater than 50% Reduction
Single Family Residential (SFR)	9.9%	19.8%	29.8%	39.7%	49.6%	59.5%
Multi Family Residential (MFR)	8.5%	17.0%	25.5%	34.0%	42.5%	51.6%
Commercial	11.3%	22.7%	34.0%	45.4%	56.7%	67.6%

Table V-11 shows the calculation of each customer classes' respective shortage reduction required during each shortage stage. The annual demand for each class is separated into estimated indoor and outdoor water use, where indoor water use is estimated and as the water use from January through March multiplied times four to get the annualized indoor water use over 12 months. Subtracting indoor water use from the total annual water use determines the seasonal outdoor water use.

The percentage reductions for each customer class required to achieve the overall reduction for a particular stage are derived so that outdoor consumption is reduced six times indoor consumption. In a Stage 1 shortage, a 7.8% reduction in indoor water use and an 17.1% reduction in outdoor water use are required to achieve an overall 10% reduction. Applying the same reduction factors to each class results in different overall reductions for the class based on the relative proportions of their indoor and outdoor water use.

Table V-11. Calculation of Shortage Reductions by Stage and Customer Class/Type

10% Stage 1 Reduction (up to 10% reduction)									
Class	Baseline Annual Demand (HCF)			Reductions					
	Total	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Total	Total
SFR	642,990	495,932	147,058	7.8%	17.1%	38,592	25,176	63,768	9.9%
MFR	198,876	183,436	15,440	7.8%	17.1%	14,275	2,643	16,918	8.5%
Commercial	259,942	160,705	99,237	7.8%	17.1%	12,506	16,989	29,495	11.3%
Total	1,101,808	840,073	261,735	7.8%	17.1%	65,372	44,808	110,181	10.0%
20% Stage 2 Reduction (up to 20% reduction)									
Class	Baseline Annual Demand (HCF)			Reductions					
	Total	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Total	Total
SFR	642,990	495,932	147,058	15.6%	34.2%	77,184	50,352	127,536	19.8%
MFR	198,876	183,436	15,440	15.6%	34.2%	28,549	5,286	33,836	17.0%
Commercial	259,942	160,705	99,237	15.6%	34.2%	25,011	33,978	58,990	22.7%
Total	1,101,808	840,073	261,735	15.6%	34.2%	130,745	89,617	220,362	20.0%
30% Stage 3 Reduction (up to 30% reduction)									
Class	Baseline Annual Demand (HCF)			Reductions					
	Total	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Total	Total
SFR	642,990	495,932	147,058	23.3%	51.4%	115,776	75,528	191,305	29.8%
MFR	198,876	183,436	15,440	23.3%	51.4%	42,824	7,930	50,753	25.5%
Commercial	259,942	160,705	99,237	23.3%	51.4%	37,517	50,968	88,485	34.0%
Total	1,101,808	840,073	261,735	23.3%	51.4%	196,117	134,425	330,542	30.0%
40% Stage 4 Reduction (up to 40% reduction)									
Class	Baseline Annual Demand (HCF)			Reductions					
	Total	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Total	Total
SFR	642,990	495,932	147,058	31.1%	68.5%	154,369	100,704	255,073	39.7%
MFR	198,876	183,436	15,440	31.1%	68.5%	57,098	10,573	67,671	34.0%
Commercial	259,942	160,705	99,237	31.1%	68.5%	50,023	67,957	117,979	45.4%
Total	1,101,808	840,073	261,735	31.1%	68.5%	261,489	179,234	440,723	40.0%
50% Stage 5 Reduction (up to 50% reduction)									
Class	Baseline Annual Demand (HCF)			Reductions					
	Total	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Total	Total
SFR	642,990	495,932	147,058	38.9%	85.6%	192,961	125,880	318,841	49.6%
MFR	198,876	183,436	15,440	38.9%	85.6%	71,373	13,216	84,589	42.5%
Commercial	259,942	160,705	99,237	38.9%	85.6%	62,528	84,946	147,474	56.7%
Total	1,101,808	840,073	261,735	38.9%	85.6%	326,862	224,042	550,904	50.0%
60% Stage 6 Reduction (greater than 50% reduction)									
Class	Baseline Annual Demand (HCF)			Reductions					
	Total	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Total	Total
SFR	642,990	495,932	147,058	47.5%	100.0%	235,754	147,058	382,812	59.5%
MFR	198,876	183,436	15,440	47.5%	100.0%	87,201	15,440	102,641	51.6%
Commercial	259,942	160,705	99,237	47.5%	100.0%	76,395	99,237	175,632	67.6%
Total	1,101,808	840,073	261,735	47.5%	100.0%	399,350	261,735	661,085	60.0%

The fixed system charge rates are fixed and generate about 26% of the total rate revenue regardless of shortages. The remaining 74% of revenue is generated by the variable consumption charge rates. In deriving the drought rate factors, the factors will only apply to the consumption charge rates because fluctuations in water use correlate with

fluctuations in variable costs. Each customer class has its own set of drought rate factors corresponding to its required reduction in each stage of shortage.

The formula for the drought rate factors comprises conservation and variable cost components. The conservation component adjusts to account for the required reduction in water demand. The variable cost component adjusts to account for the portion of variable costs that is covered by the quantity charges. The drought rate factors are the product of the conservation component multiplied by the variable cost component. Each component is defined as follows:

Drought Rate Factor = Conservation Component multiplied times Variable Cost Component, where

Conservation Component = $1/(1 - a)$, where

a = required percentage reduction, which varies by customer class.

Variable Cost Component = $(b - (c * a))/b$, where

a = required percentage reduction, which varies by customer class;

b = percentage of revenue from total fixed system charges and consumption charges for all customer classes that is attributable to consumption charges, an amount that is currently 73.93%; and

c = percentage of total revenue requirement that varies based on fluctuations in demand, an amount that is currently 39.96%.⁷

The following example illustrates how the formula determined the 1.051 drought rate factor in **Table V-12** for the single-family customer class in a Stage 1 shortage in which an overall conservation goal of 10% if required.

Conservation Component: $1/(1 - a) = 1/(1 - 0.0992) = 1.1101$, where

a = required percentage reduction is 9.92% for the single-family customer class (see **Table V-11**, where a rounded 9.9% is shown).

Variable Cost Component: $(b - (c * a))/b = (0.7393 - (0.3996 * 0.0992))/0.7393 = 0.463$, where

a = 9.92% reduction for single-family customers in a Stage 1 shortage.

⁷ The cost of SFPUC water is the largest example of a variable cost, which varies with water demand.

$b = 73.93\%$ of total rate revenue is generated by fixed system charges; and

$c = 39.96\%$ of the revenue requirement is related to variable costs.

$$\text{Drought Rate Factor} = 1.1101 * 0.9464 = 1.051$$

The single-family residential quantity charge rates in effect under non-shortage conditions would be multiplied by 1.051 to derive the quantity charge rates to be in effect during a Stage 1 water shortage. **Table V-12** shows the adjustment factors that would be applied to the rates that would normally be in effect absent declared shortages.

Table V-12. Water Shortage Drought Rate Factors by Class/Type

Class	Stage 1 Up to 10% Reduction	Stage 2 Up to 20% Reduction	Stage 3 Up to 30% Reduction	Stage 4 Up to 40% Reduction	Stage 5 Up to 50% Reduction	Stage 6 Greater than 50% Reduction
Single Family Residential (SFR)	1.051	1.114	1.195	1.302	1.452	1.676
Multi Family Residential (MFR)	1.043	1.094	1.157	1.237	1.340	1.490
Commercial	1.059	1.135	1.237	1.382	1.603	1.957

To be applied to the non-shortage Consumption rates in effect at the time of the shortage declaration

Implementation

The recommended water shortage drought rate factors in **Table V-12** are intended to be implemented during periods of declared shortages. The District's Board of Directors may choose to enact them, at their discretion, in coordination with enactment of the corresponding WSCP shortage stage. The adjustments can go in either direction from stage to stage depending on whether the level of reduction is increasing or decreasing during the shortage. At least 30 days prior to making the adjustment, notice must be provided to rate payers, which can be included in the customer's bills. No protest process is required if the water shortage drought rate factors are implemented during the five-year planning period.

PASS-THROUGH ADJUSTMENTS

The Water Shortage Rate Adjustments described above are intended for use during *declared* water shortages and only if the Board of Director's choose to enact them. The water shortage rate adjustments are intended to protect the District's revenues when customers are asked to conserve, as a majority of the District's costs are fixed. Another threat to the District covering annual operating costs are unplanned increases in the cost of SFPUC purchased water, which can occur at any time. These costs are referred to as "pass-through costs" because these costs are outside the control of the District and are

passed through directly to District rate payers. The District does not determine the SFPUC's wholesale water rates and has no choice but to pass through the cost to avoid depleting the District's reserves to cover any SFPUC rate increases which are greater than what was assumed in this rate study (**Table V-13** summarizes the SFPUC rates assumed in this rate study). This rate study relies on historical trends to determine the projected SFPUC rates, which are likely to differ from actual rates over the next five-year period, as the SFPUC studies their rates annually and actual SFPUC rates are not currently known beyond FY 2024-25.

The District currently has a provision that allows it to make these pass-through adjustments after providing at least 30-days-notice to rate payers. We recommend that the District continue this practice by informing rate payers of this continued practice in the Proposition 218 notice which shall be mailed to all customers.

Table V-13 shows the wholesale rates projected by the SFPUC in April 2024, which served as the basis for deriving the proposed rates for the District, in this report. These projected SFPUC wholesale rates serve as the baseline for determining if a pass-through adjustment should be considered. The pass-through adjustment would equal the difference between the projections in **Table V-13** and the wholesale rate that is eventually adopted by the SFPUC. That difference would be added or subtracted from the rates adopted by the District.

Table V-13. Projected SFPUC Wholesale Rates (\$/HCF)

	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29
SFPUC Wholesale Rate	\$5.67	\$5.86	\$6.30	\$6.64	\$6.91

VI. CUSTOMER BILL IMPACTS

A further understanding of the differences between the current and proposed rate structures is gained by comparing bills based on both rate structures. The monthly cost comparison is based on “typical” customers or customers that are most representative of a group of customers. The typical customer is based on the most common meter sizes for the class and the average water use for customers of that type.

In addition to comparisons of bills with the current and proposed rates, comparisons are also made of the District’s proposed bills with neighboring agencies.

CUSTOMER BILL COMPARISON

The monthly bills for the current and proposed rates for FY 2024-25 starting January 1, 2025 are compared in **Table VI-1**, which also shows the assumed water use and meter size. Clearly, the impact on customers is sensitive to the meter size and monthly water use for each bill.

Four sample bill calculations are shown for residential bills ranging from low use, which is representative of a small household with little or no irrigation, to very high use by customers who will reach the proposed tier 3 rates. The average use represents average use over a calendar year based on 2023 data, the low use represents half of average use (rounded down to a whole unit (HCF)), the high use represents two times average use, and very high use is three times average use.

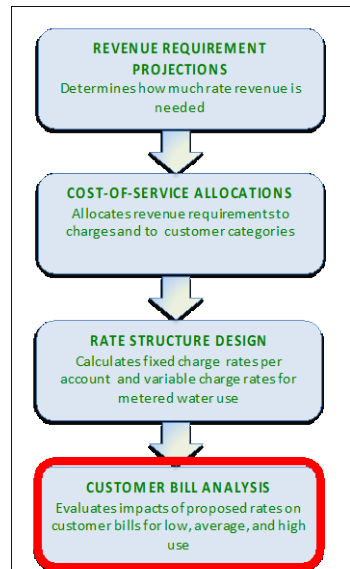


Table VI-1. Sample Water Bill Impacts (as of January 1, 2025)

	<u>Residential</u>				<u>Commercial</u>
	Low Use	Average Use	High Use	Very High Use	Average Use
Assumptions					
Flow per Month (hcf)	3	7	14	21	45
Flow per Day (gpd)	75	175	349	524	1122
Meter Size	5/8"	5/8"	5/8"	5/8"	1"
Monthly Bill					
Bills with Current Rates					
Fixed System Charge	\$28.00	\$28.00	\$28.00	\$28.00	\$42.00
Consumption Charge	\$25.12	\$66.16	\$149.44	\$236.53	\$476.05
Total	\$53.12	\$94.16	\$177.44	\$264.53	\$518.05
Bills with Proposed Rates					
Fixed System Charge	\$35.15	\$35.15	\$35.15	\$35.15	\$72.39
Consumption Charge	\$29.25	\$73.06	\$174.98	\$308.68	\$576.00
Total	\$64.40	\$108.21	\$210.13	\$343.83	\$648.39
Proposed minus Current	\$11.28	\$14.05	\$32.69	\$79.30	\$130.34
Percent Change	21.2%	14.9%	18.4%	30.0%	25.2%

Figure VI-1 plots monthly bills for residential customers with a 5/8-inch meter for a range of consumption from 0 to 30 HCF, which includes 99% of the bills for 5/8-inch meters. **Table VI-2** is the tabular basis for **Figure VI-1**.

Figure VI-1. Current and Proposed Residential Bill Comparison (5/8" Meter)

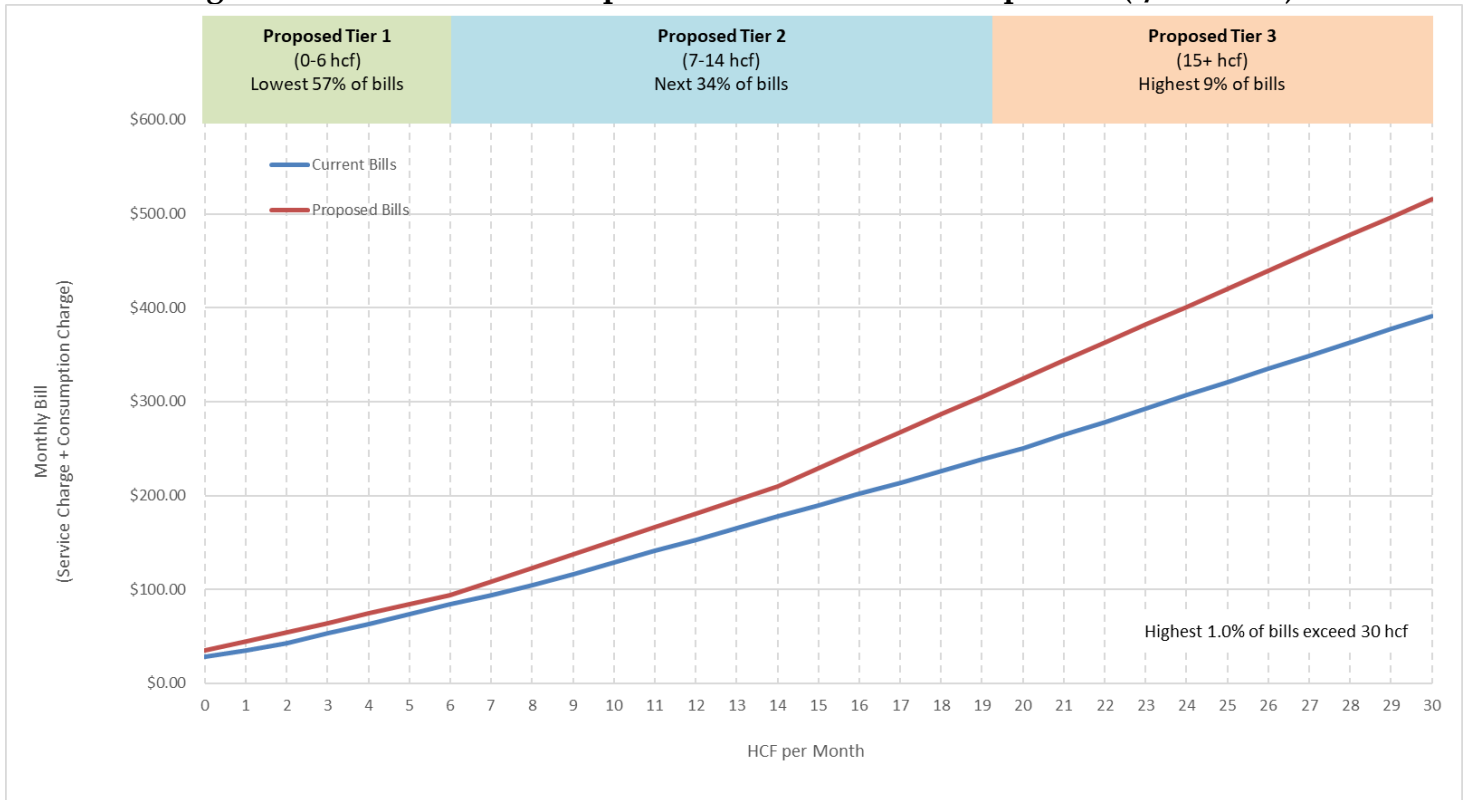


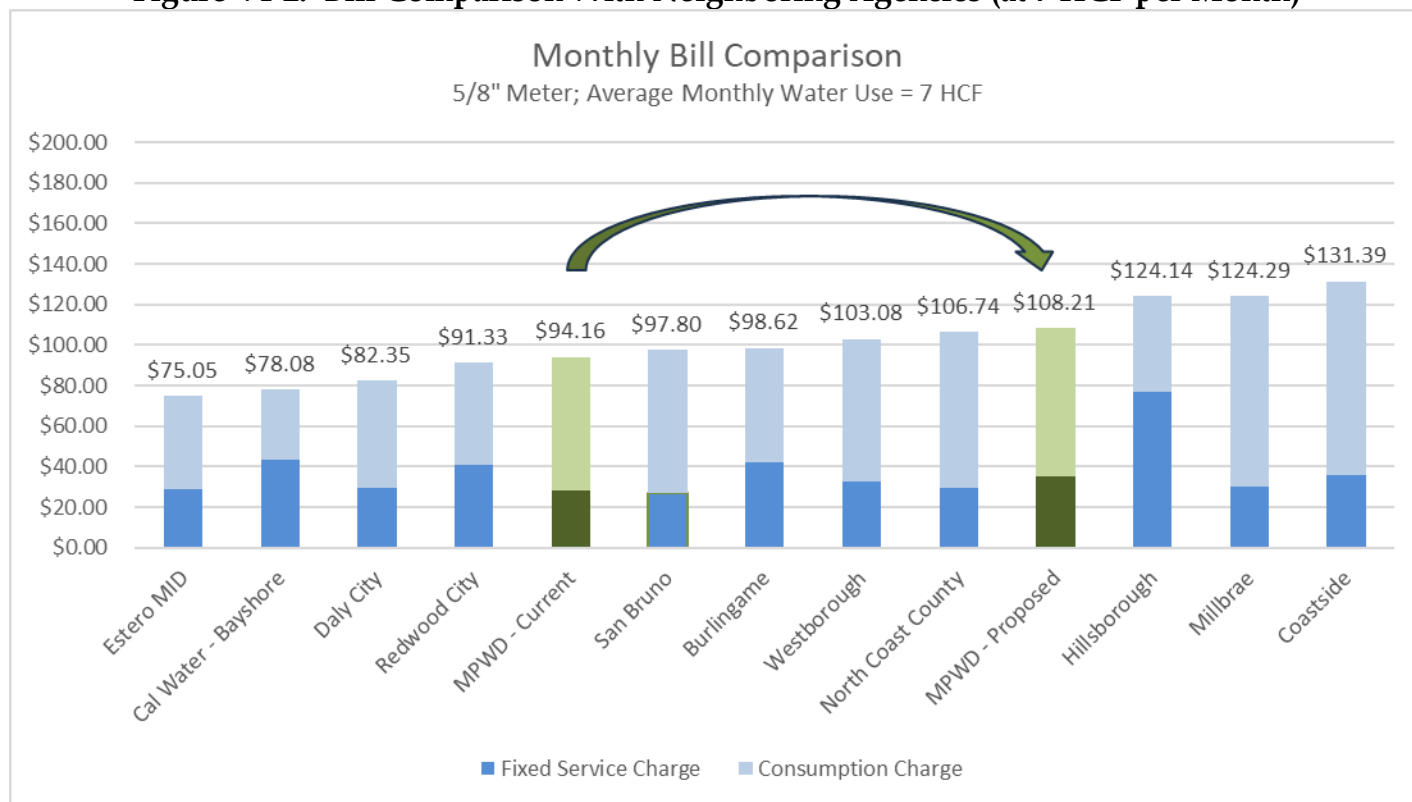
Table VI-2. Residential Bill Impacts - FY 2024-25 (5/8" Meter)

Water Use		Total Bill (with 5/8" meter)				
HCF /Mo.	Gal /Day	Current Rates	FY 2024-25 Proposed	\$ Difference	% of Bills	Cumulative
0	0	\$28.00	\$35.15	\$7.15	3.01%	3.01%
1	25	\$35.43	\$44.90	\$9.47	4.43%	7.44%
2	50	\$42.86	\$54.65	\$11.79	7.66%	15.11%
3	75	\$53.12	\$64.40	\$11.28	10.44%	25.55%
4	100	\$63.38	\$74.15	\$10.77	11.32%	36.86%
5	125	\$73.64	\$83.90	\$10.26	10.95%	47.81%
6	150	\$83.90	\$93.65	\$9.75	9.66%	57.47%
7	175	\$94.16	\$108.21	\$14.05	8.01%	65.48%
8	200	\$104.42	\$122.77	\$18.35	6.50%	71.98%
9	225	\$116.59	\$137.33	\$20.74	5.16%	77.14%
10	250	\$128.76	\$151.89	\$23.13	4.11%	81.25%
11	275	\$140.93	\$166.45	\$25.52	3.33%	84.58%
12	300	\$153.10	\$181.01	\$27.91	2.69%	87.27%
13	325	\$165.27	\$195.57	\$30.30	2.18%	89.45%
14	350	\$177.44	\$210.13	\$32.69	1.82%	91.27%
15	375	\$189.61	\$229.23	\$39.62	1.42%	92.69%
16	400	\$201.78	\$248.33	\$46.55	1.19%	93.88%
17	425	\$213.95	\$267.43	\$53.48	0.96%	94.84%
18	450	\$226.12	\$286.53	\$60.41	0.81%	95.65%
19	475	\$238.29	\$305.63	\$67.34	0.67%	96.32%
20	500	\$250.46	\$324.73	\$74.27	0.53%	96.85%
21	525	\$264.53	\$343.83	\$79.30	0.46%	97.30%
22	550	\$278.60	\$362.93	\$84.33	0.35%	97.66%
23	575	\$292.67	\$382.03	\$89.36	0.31%	97.97%
24	600	\$306.74	\$401.13	\$94.39	0.29%	98.26%
25	625	\$320.81	\$420.23	\$99.42	0.24%	98.50%

COMPARISON WITH OTHER AGENCIES

Figure VI-2 compares the District's residential monthly bills with a variety of water agencies in San Mateo County. The comparison is for a customer with a 5/8 inch connection (most common meter size of residential customers) and using 7 HCF (average monthly water use by the District's residential customers) in each agency. Average water use differs from agency to agency, this graph is intended to show an apples-to-apples comparison of what the District's average residential customer (using 7 HCF per month) at other agencies. Monthly bills for neighboring agencies reflect the rates in effective on July 1, 2024, with the exception that the City of Millbrae's rates were effective on August 1, 2024.

Figure VI-2. Bill Comparison With Neighboring Agencies (at 7 HCF per Month)



WATER RATE STUDY

APPENDIX

WATER RATE MODEL

	A	B	C	D	E	F	G	H	I	J	K	L
1	Mid-Peninsula Water District											
2	Water Rate Model											
3	1A - Summary											
4												
5	Fiscal year											
6		FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	
7	Eff. Date	1/1/2025	7/1/2025	7/1/2026	7/1/2027	7/1/2028	7/1/2029	7/1/2030	7/1/2031	7/1/2032	7/1/2033	
8	Rate Revenue Increases	24.5%	5.0%	8.0%	9.0%	9.0%	4.0%	3.0%	3.0%	3.0%	3.0%	
9	Cumulative Increase	24.5%	30.7%	41.2%	53.9%	67.7%	74.4%	79.7%	85.1%	90.6%	96.3%	
10	Change in Reserves	(\$4,233,680)	(\$1,568,395)	(\$634,259)	\$448,201	\$1,952,920	\$2,339,088	\$1,645,971	\$1,712,927	\$1,886,647	\$2,010,000	
11	Debt Coverage Ratio (1.30 minimum)	1.32	1.51	1.82	2.17	2.65	2.80	2.88	2.94	3.03	3.10	
12	<div> <div>Reserves Balance (Millions)</div> </div>											
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1		Mid-Peninsula Water District												
2		Water Rate Model												
3		1B - Assumptions												
4														
5		Inflation Factor Assumptions	Budget	Projected										
6		used for projections:	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	Notes
7	a	Annual Account Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	Estimate; To Tables 3, 4, 7
8	b	Annual Water Demand Increases	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	
9	c	General Inflation	Budget	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	
10	d	Salaries & Wages	Budget	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	
11	e	Benefits	Budget	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	
12	f	Utilities	Budget	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	
13	g	Construction Cost Inflation	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	SF ENR CCI Index Dec to Dec; 2013 to 2021
14	h	Interest on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	To Table 4
15	i	Annual SFR conservation reduction	0.0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	To Table 3
16	j	Connection Fee Revenue	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	To Table 4
17	k	Water Demand Offset Revenue	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	
18	l	SFPUC Quantity Charge per hcf	\$5.21	\$5.67	\$5.86	\$6.30	\$6.64	\$6.91	\$7.18	\$7.47	\$7.77	\$8.08	\$8.40	
19	m	Estimated Annual Increase in SFPUC Qty Charge		8.8%	3.4%	7.5%	5.4%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
20	n	BAWSCA Debt Service Surcharges	\$427,239	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	
21	o	SFPUC Water Service Charge	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	
22	p	Water Sales (hcf)	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	
23														
24				8.8%	3.4%	7.5%	5.4%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
25				\$0.46										
26		Target Fund Balances												
27		Operating Reserve Fund												
28		Purpose	For O&M cash flow during the year											
29		Minimum balance	Cannot go negative											
30		Target balance - Current Policy	\$1.5 million (fixed)											
31		Target balance - HF&H Recommended Policy	6 weeks annual operating expense projections (1.5x billing monthly billing frequency)											
32														
33		Capital Reserve Fund												
34		Purpose	To be used for repair and replacement of water system infrastructure											
35		Minimum balance	Cannot go negative											
36		Target balance - Current Policy	\$1.5 million (fixed)											
37		Target balance - HF&H Recommended Policy	Rolling 5-year average annual PAYGo capital expense projections											

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Mid-Peninsula Water District												
2	Water Rate Model												
3	2A - Rev Reqmts												
4		Inflation	Budgeted										
5		Factor	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	Notes
6	PERSONNEL EXPENSES												
7	Salaries & Wages	d	\$2,604,868	\$2,735,111	\$2,871,867	\$3,015,460	\$3,166,233	\$3,324,545	\$3,490,772	\$3,665,311	\$3,848,576	\$4,041,005	
8	Overtime Labor	d	\$120,000	\$126,000	\$132,300	\$138,915	\$145,861	\$153,154	\$160,811	\$168,852	\$177,295	\$186,159	
9	Standby Labor	d	\$48,000	\$50,400	\$52,920	\$55,566	\$58,344	\$61,262	\$64,325	\$67,541	\$70,918	\$74,464	
10	FICA/Medicare PR Tax	e	\$190,937	\$204,303	\$218,604	\$233,906	\$250,279	\$267,799	\$286,545	\$306,603	\$328,065	\$351,030	
11	Health Care Insurance	e	\$469,226	\$502,072	\$537,217	\$574,822	\$615,060	\$658,114	\$704,182	\$753,474	\$806,218	\$862,653	
12	Workers' Comp Insurance	e	\$50,000	\$53,500	\$57,245	\$61,252	\$65,540	\$70,128	\$75,037	\$80,289	\$85,909	\$91,923	
13	CALPERS Retirement - ER 2%@55	e	\$255,112	\$272,970	\$292,078	\$312,523	\$334,400	\$357,808	\$382,854	\$409,654	\$438,330	\$469,013	
14	CALPERS UAL	e	\$30,590	\$32,731	\$35,022	\$37,474	\$40,097	\$42,904	\$45,907	\$49,121	\$52,559	\$56,238	
15	Directors' Health Care Insurance	e	\$61,000	\$65,270	\$69,839	\$74,728	\$79,959	\$85,556	\$91,545	\$97,953	\$104,809	\$112,146	
16	Medical Reimbursement	e	\$50,000	\$53,500	\$57,245	\$61,252	\$65,540	\$70,128	\$75,037	\$80,289	\$85,909	\$91,923	
17	Health Savings Account & EAP	e		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
18	Employee Service Recognition	e	\$10,000	\$10,700	\$11,449	\$12,250	\$13,108	\$14,026	\$15,007	\$16,058	\$17,182	\$18,385	
19	EE Safety Incentive/Wellness Program	e	\$40,000	\$42,800	\$45,796	\$49,002	\$52,432	\$56,102	\$60,029	\$64,231	\$68,727	\$73,538	
20	Uniforms	e	\$20,000	\$21,400	\$22,898	\$24,501	\$26,216	\$28,051	\$30,015	\$32,116	\$34,364	\$36,769	
21	Subtotal		\$3,949,733	\$4,170,757	\$4,404,480	\$4,651,652	\$4,913,068	\$5,189,574	\$5,482,065	\$5,791,492	\$6,118,862	\$6,465,247	
22													
23	SFPUC EXPENSES												
24	SFPUC Treated Water	c	\$6,076,480	\$6,490,221	\$6,707,706	\$7,211,356	\$7,600,541	\$7,904,562	\$8,220,745	\$8,549,575	\$8,891,558	\$9,247,220	from Table 2B
25	BAWSCA (Debt Service Surcharges)	c	\$427,239	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	from Table 2B
26	SFPUC Water Service Charge	c	\$90,000	\$87,063	\$89,981	\$96,737	\$101,958	\$106,036	\$110,278	\$114,689	\$119,276	\$124,047	from Table 2B
27	Subtotal		\$6,593,719	\$7,004,520	\$7,224,923	\$7,735,330	\$8,129,735	\$8,437,835	\$8,758,258	\$9,091,499	\$9,438,070	\$9,798,503	
28													
29	OUTREACH/EDUCATION												
30	Water Conservation Program	c	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593	\$11,941	\$12,299	\$12,668	\$13,048	
31	School Conservation Program	c	\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389	\$17,911	\$18,448	\$19,002	\$19,572	
32	Public Outreach & Education	c	\$25,000	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982	\$29,851	\$30,747	\$31,669	\$32,619	
33	Smart Irrigation Rebates	c	\$2,000	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319	\$2,388	\$2,460	\$2,534	\$2,610	
34	Irrigation Hardware Rebates	c	\$1,000	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159	\$1,194	\$1,230	\$1,267	\$1,305	
35	Lawn-Be-Gone Rebates	c	\$25,000	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982	\$29,851	\$30,747	\$31,669	\$32,619	
36	Rain Barrel Rebates	c	\$2,000	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319	\$2,388	\$2,460	\$2,534	\$2,610	
37	Subtotal		\$80,000	\$82,400	\$84,872	\$87,418	\$90,041	\$92,742	\$95,524	\$98,390	\$101,342	\$104,382	
38													
39	OPS Systems												
40	Water Quality	c	\$60,000	\$61,800	\$63,654	\$65,564	\$67,531	\$69,556	\$71,643	\$73,792	\$76,006	\$78,286	
41	Pumping	c	\$20,000	\$20,600	\$21,218	\$21,855	\$22,510	\$23,185	\$23,881	\$24,597	\$25,335	\$26,095	
42	Storage Tanks	c	\$34,000	\$35,020	\$36,071	\$37,153	\$38,267	\$39,415	\$40,598	\$41,816	\$43,070	\$44,362	
43	Mains/Distribution	c	\$180,000	\$185,400	\$190,962	\$196,691	\$202,592	\$208,669	\$214,929	\$221,377	\$228,019	\$234,859	
44	Meters & Service	c	\$176,000	\$181,280	\$186,718	\$192,320	\$198,090	\$204,032	\$210,153	\$216,458	\$222,952	\$229,640	
45	Fire Hydrants	c	\$80,000	\$82,400	\$84,872	\$87,418	\$90,041	\$92,742	\$95,524	\$98,390	\$101,342	\$104,382	
46	Regulator Stations	c	\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389	\$17,911	\$18,448	\$19,002	\$19,572	
47	Employee Safety	c	\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389	\$17,911	\$18,448	\$19,002	\$19,572	
48	SCADA Maintenance	c	\$35,000	\$36,050	\$37,132	\$38,245	\$39,393	\$40,575	\$41,792	\$43,046	\$44,337	\$45,667	
49	Generator Maintenance	c	\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389	\$17,911	\$18,448	\$19,002	\$19,572	
50	Subtotal		\$630,000	\$648,900	\$668,367	\$688,418	\$709,071	\$730,343	\$752,253	\$774,821	\$798,065	\$822,007	
51													
52	Facilities & Equipment												
53	M&R-Buildings&Grounds	c	\$260,000	\$87,800	\$90,434	\$93,147	\$95,941	\$98,820	\$101,784	\$104,838	\$107,983	\$111,222	
54	M&R-Equipment&Tools	c	\$20,000	\$20,600	\$21,218	\$21,855	\$22,510	\$23,185	\$23,881	\$24,597	\$25,335	\$26,095	
55	M&R-Vehicles & Large Equipment	c	\$30,000	\$30,900	\$31,827	\$32,782	\$33,765	\$34,778	\$35,822	\$36,896	\$38,003	\$39,143	
56	M&R-Fuel	c	\$42,000	\$43,260	\$44,558	\$45,895	\$47,271	\$48,690	\$50,150	\$51,655	\$53,204	\$54,800	
57	Subtotal		\$352,000	\$182,560	\$188,037	\$193,678	\$199,488	\$205,473	\$211,637	\$217,986	\$224,526	\$231,262	
58													
59	SYSTEM SURVEYS												
60	Cathodic Protection Survey	c	\$35,000	\$36,050	\$37,132	\$38,245	\$39,393	\$40,575	\$41,792	\$43,046	\$44,337	\$45,667	
61	Leak Detection Survey	c	\$40,000	\$41,200	\$42,436	\$43,709	\$45,020	\$46,371	\$47,762	\$49,195	\$50,671	\$52,191	
62	Subtotal		\$75,000	\$77,250	\$79,568	\$81,955	\$84,413	\$86,946	\$89,554	\$92,241	\$95,008	\$97,858	
63													
64	ADMINISTRATION & EQUIP												
65	Office Supplies	c	\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389	\$17,911	\$18,448	\$19,002	\$19,572	
66	Insurance- Liability/Vehicles	c	\$209,000	\$215,270	\$221,728	\$228,380	\$235,231	\$242,288	\$249,557	\$257,044	\$264,755	\$272,698	
67	Postage	c	\$2,000	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319	\$2,388	\$2,460	\$2,534	\$2,610	
68	Printing/Printing Supplies	c	\$2,000	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319	\$2,388	\$2,460	\$2,534	\$2,610	
69	Equipment Services/Maintenance	c	\$17,000	\$17,510	\$18,035	\$18,576	\$19,134	\$19,708	\$20,299	\$20,908	\$21,535	\$22,181	

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Mid-Peninsula Water District												
2	Water Rate Model												
3	2A - Rev Reqmts												
4		Inflation	Budgeted										
5		Factor	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	Notes
70	Computer Supplies & Upgrades	c	\$23,000	\$23,690	\$24,401	\$25,133	\$25,887	\$26,663	\$27,463	\$28,287	\$29,136	\$30,010	
71	Website Hosting	c	\$7,000	\$7,210	\$7,426	\$7,649	\$7,879	\$8,115	\$8,358	\$8,609	\$8,867	\$9,133	
72	Security & Safety	c	\$28,000	\$28,840	\$29,705	\$30,596	\$31,514	\$32,460	\$33,433	\$34,436	\$35,470	\$36,534	
73	Credit/Debit Card Processing Fees	c	\$165,000	\$169,950	\$175,049	\$180,300	\$185,709	\$191,280	\$197,019	\$202,929	\$209,017	\$215,288	
74	Bank Service Charges	c	\$6,000	\$6,180	\$6,365	\$6,556	\$6,753	\$6,956	\$7,164	\$7,379	\$7,601	\$7,829	
75	Property Lease	c	\$147,000	\$151,410	\$155,952	\$160,631	\$0	\$0	\$0	\$0	\$0	\$0	
76	Subtotal		\$621,000	\$639,630	\$658,819	\$678,583	\$533,491	\$549,496	\$565,981	\$582,960	\$600,449	\$618,462	
77													
78	MEMBERSHIP & GOV FEES												
79	Dues & Publications	c	\$50,000	\$51,500	\$53,045	\$54,636	\$56,275	\$57,964	\$59,703	\$61,494	\$63,339	\$65,239	
80	Gov't Fees & Licenses	c	\$70,000	\$72,100	\$74,263	\$76,491	\$78,786	\$81,149	\$83,584	\$86,091	\$88,674	\$91,334	
81	BAWSCA Membership Assessments	c	\$100,000	\$103,000	\$106,090	\$109,273	\$112,551	\$115,927	\$119,405	\$122,987	\$126,677	\$130,477	
82	BAWSCA Water Management Charge	c	\$47,000	\$48,410	\$49,862	\$51,358	\$52,899	\$54,486	\$56,120	\$57,804	\$59,538	\$61,324	
83	Env Health - Cross Connection Inspection	c	\$45,000	\$46,350	\$47,741	\$49,173	\$50,648	\$52,167	\$53,732	\$55,344	\$57,005	\$58,715	
84	Software License	c	\$135,000	\$139,050	\$143,222	\$147,518	\$151,944	\$156,502	\$161,197	\$166,033	\$171,014	\$176,144	
85	Subtotal		\$447,000	\$460,410	\$474,222	\$488,449	\$503,102	\$518,196	\$533,741	\$549,754	\$566,246	\$583,234	
86													
87	BAD DEBT & CLAIMS												
88	Bad Debt	c	\$5,000	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796	\$5,970	\$6,149	\$6,334	\$6,524	
89	Claims	c	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593	\$11,941	\$12,299	\$12,668	\$13,048	
90	Subtotal		\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389	\$17,911	\$18,448	\$19,002	\$19,572	
91													
92	UTILITIES												
93	Utilities-Internet/Cable	c	\$53,000	\$54,590	\$56,228	\$57,915	\$59,652	\$61,442	\$63,285	\$65,183	\$67,139	\$69,153	
94	Utilities-Cellular Telephones	c	\$34,400	\$35,432	\$36,495	\$37,590	\$38,718	\$39,879	\$41,075	\$42,308	\$43,577	\$44,884	
95	Utilities-Electric-Pumping	f	\$360,500	\$373,172	\$386,289	\$399,867	\$413,922	\$428,471	\$443,532	\$459,122	\$475,260	\$491,966	
96	Utilities-Electric-Bldgs&Grounds	f	\$51,500	\$53,310	\$55,184	\$57,124	\$59,132	\$61,210	\$63,362	\$65,589	\$67,894	\$70,281	
97	Utilities-Sewer - NPDES	c	\$7,000	\$7,210	\$7,426	\$7,649	\$7,879	\$8,115	\$8,358	\$8,609	\$8,867	\$9,133	
98	Subtotal		\$506,400	\$523,714	\$541,622	\$560,144	\$579,302	\$599,117	\$619,612	\$640,811	\$662,738	\$685,417	
99													
100	PROFESSIONAL SERVICES												
101	Prof Serv - District Counsel	c	\$125,000	\$128,750	\$132,613	\$136,591	\$140,689	\$144,909	\$149,257	\$153,734	\$158,346	\$163,097	
102	Prof Serv - District Engineer	c	\$140,000	\$144,200	\$148,526	\$152,982	\$157,571	\$162,298	\$167,167	\$172,182	\$177,348	\$182,668	
103	Prof Serv - IT	c	\$85,000	\$87,550	\$90,177	\$92,882	\$95,668	\$98,538	\$101,494	\$104,539	\$107,675	\$110,906	
104	Prof Serv- Annual Finance Audit	c	\$24,000	\$24,720	\$25,462	\$26,225	\$27,012	\$27,823	\$28,657	\$29,517	\$30,402	\$31,315	
105	Prof Serv - Mngmt Consult	c	\$60,000	\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389	\$17,911	\$18,448	\$19,002	
106	Prof Serv- Accounting & Payroll	c	\$30,000	\$30,900	\$31,827	\$32,782	\$33,765	\$34,778	\$35,822	\$36,896	\$38,003	\$39,143	
107	Prof Serv- Customer Billing	c	\$65,000	\$66,950	\$68,959	\$71,027	\$73,158	\$75,353	\$77,613	\$79,942	\$82,340	\$84,810	
108	Recruiting	c	\$30,000	\$30,900	\$31,827	\$32,782	\$33,765	\$34,778	\$35,822	\$36,896	\$38,003	\$39,143	
109	Prof Serv - Answering Svs	c	\$5,000	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796	\$5,970	\$6,149	\$6,334	\$6,524	
110	Prof Serv - Miscellaneous	c	\$387,500	\$399,125	\$461,099	\$424,932	\$437,680	\$450,810	\$464,334	\$528,264	\$494,112	\$508,936	Rate studies, Master plans, UWMP etc.
111	Prof Serv - District Treasurer	c	\$150,000	\$154,500	\$159,135	\$163,909	\$168,826	\$173,891	\$179,108	\$184,481	\$190,016	\$195,716	
112	Subtotal		\$1,101,500	\$1,087,745	\$1,170,377	\$1,155,489	\$1,190,153	\$1,225,858	\$1,262,634	\$1,350,513	\$1,341,028	\$1,381,259	
113													
114	TRAINING & TRAVEL												
115	Director Travel	c	\$5,000	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796	\$5,970	\$6,149	\$6,334	\$6,524	
116	Director Expense	c	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
117	Elections	c	\$38,500	\$39,655	\$40,845	\$42,070	\$43,332	\$44,632	\$45,971	\$47,350	\$48,771	\$50,234	
118	Employee Travel/Training	c	\$36,000	\$37,080	\$38,192	\$39,338	\$40,518	\$41,734	\$42,986	\$44,275	\$45,604	\$46,972	
119	Meetings Expense	c	\$8,000	\$8,240	\$8,487	\$8,742	\$9,004	\$9,274	\$9,552	\$9,839	\$10,134	\$10,438	
120	Subtotal		\$87,500	\$90,125	\$92,829	\$95,614	\$98,482	\$101,436	\$104,480	\$107,614	\$110,842	\$114,168	
121													
122	Total Operating Costs		\$14,458,852	\$14,983,461	\$15,604,028	\$16,433,119	\$17,047,229	\$17,754,404	\$18,493,650	\$19,316,528	\$20,076,177	\$20,921,370	
123				3.6%	4.1%	5.3%	3.7%	4.1%	4.2%	4.4%	3.9%	4.2%	
124	Non-Operating (Revenue)/Expense												
125	Fire Service Charges	c	(\$18,000)	(\$22,410)	(\$23,531)	(\$25,413)	(\$27,700)	(\$30,193)	(\$31,401)	(\$32,343)	(\$33,313)	(\$34,313)	
126	Credit/Debit Card Fees	c	(\$46,000)	(\$47,380)	(\$48,801)	(\$50,265)	(\$51,773)	(\$53,327)	(\$54,926)	(\$56,574)	(\$58,271)	(\$60,020)	
127	Late Fees	c	(\$33,000)	(\$33,990)	(\$35,010)	(\$36,060)	(\$37,142)	(\$38,256)	(\$39,404)	(\$40,586)	(\$41,803)	(\$43,058)	
128	48-Hour Notice Fees	c	(\$17,000)	(\$17,510)	(\$18,035)	(\$18,576)	(\$19,134)	(\$19,708)	(\$20,299)	(\$20,908)	(\$21,535)	(\$22,181)	
129	Shut Off Fees	c	(\$2,700)	(\$2,781)	(\$2,864)	(\$2,950)	(\$3,039)	(\$3,130)	(\$3,224)	(\$3,321)	(\$3,420)	(\$3,523)	
130	After Hour Fees	c	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
131	Miscellaneous Operating	c	(\$78,000)	(\$80,340)	(\$82,750)	(\$85,233)	(\$87,790)	(\$90,423)	(\$93,136)	(\$95,930)	(\$98,808)	(\$101,772)	
132	Service Line & Installation Charges	c	(\$60,000)	(\$61,800)	(\$63,654)	(\$65,564)	(\$67,531)	(\$69,556)	(\$71,643)	(\$73,792)	(\$76,006)	(\$78,286)	
133	Lease of Physical Property	c	(\$168,000)	(\$173,040)	(\$178,231)	(\$183,578)	(\$189,085)	(\$194,758)	(\$200,601)	(\$206,619)	(\$212,817)	(\$219,202)	

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Mid-Peninsula Water District												
2	Water Rate Model												
3	2A - Rev Reqmts												
4		Inflation	Budgeted										
5		Factor	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	Notes
134	Property Tax Revenue	c	(\$545,000)	(\$561,350)	(\$578,191)	(\$595,536)	(\$613,402)	(\$631,804)	(\$650,759)	(\$670,281)	(\$690,390)	(\$711,101)	
135	Landscape Plan Permit Review	c	(\$4,000)	(\$4,120)	(\$4,244)	(\$4,371)	(\$4,502)	(\$4,637)	(\$4,776)	(\$4,919)	(\$5,067)	(\$5,219)	
136	Total Non-Rate Revenue		(\$971,700)	(\$1,004,721)	(\$1,035,311)	(\$1,067,547)	(\$1,101,098)	(\$1,135,793)	(\$1,170,169)	(\$1,205,274)	(\$1,241,432)	(\$1,278,675)	
137													
138	Subtotal		\$13,487,152	\$13,978,740	\$14,568,718	\$15,365,572	\$15,946,131	\$16,618,611	\$17,323,482	\$18,111,254	\$18,834,745	\$19,642,695	
139	Debt Service												
140	2016 Certificate of Participation		\$1,064,900	\$1,067,100	\$1,063,600	\$1,064,400	\$1,064,400	\$1,063,600	\$1,062,000	\$1,064,500	\$1,061,100	\$1,061,100	From Table 6
141	New Debt Service #1		\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	From Table 6
142	New Debt Service #2		\$0	\$1,222,156	\$1,222,156	\$1,222,156	\$1,222,156	\$1,222,156	\$1,222,156	\$1,222,156	\$1,222,156	\$1,222,156	From Table 6
143	Total Debt Service		\$2,147,381	\$3,371,737	\$3,368,237	\$3,369,037	\$3,369,037	\$3,368,237	\$3,366,637	\$3,369,137	\$3,365,737	\$3,365,737	
144	Transfers to/(from):												
145	Operating Reserves		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	From Table 4
146	Capital Reserves		\$3,628,237	\$3,628,237	\$3,628,237	\$3,628,237	\$3,628,237	\$4,994,658	\$4,994,658	\$4,994,658	\$4,994,658	\$4,994,658	From Table 4
147	Total Transfers		\$3,628,237	\$3,628,237	\$3,628,237	\$3,628,237	\$3,628,237	\$4,994,658	\$4,994,658	\$4,994,658	\$4,994,658	\$4,994,658	
148													
149	Total Revenue Requirement		\$19,262,770	\$20,978,714	\$21,565,191	\$22,362,846	\$22,943,405	\$24,981,506	\$25,684,777	\$26,475,049	\$27,195,140	\$28,003,090	To Table 3
150	Annual Change			8.9%	2.8%	3.7%	2.6%	8.9%	2.8%	3.1%	2.7%	3.0%	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Mid-Peninsula Water District													
2	Water Rate Model													
3	2B - Purchased Water													
4														
5		FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34		
6														
7	Water Demand	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427		
8	Water Losses	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%		
9	Purchased Water (hcf)	1,144,660	1,144,660	1,144,660	1,144,660	1,144,660	1,144,660	1,144,660	1,144,660	1,144,660	1,144,660	1,144,660		
10														
11	SFPUC Quantity Charge per hcf	\$5.21	\$5.67	\$5.86	\$6.30	\$6.64	\$6.91	\$7.18	\$7.47	\$7.77	\$8.08	\$8.40		
12		\$5,963,677	\$6,490,221	\$6,707,706	\$7,211,356	\$7,600,541	\$7,904,562	\$8,220,745	\$8,549,575	\$8,891,558	\$9,247,220	\$9,617,109	To Table 2A	
13														
14	BAWSCA (Debt Service Surcharges)	\$427,239	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	\$427,236	To Table 2A	
15														
16	SFPUC Water Service Charge	\$80,000	\$87,063	\$89,981	\$96,737	\$101,958	\$106,036	\$110,278	\$114,689	\$119,276	\$124,047	\$129,009	To Table 2A	
17														
18	Total Purchased Water Costs	\$6,470,916	\$7,004,520	\$7,224,923	\$7,735,330	\$8,129,735	\$8,437,835	\$8,758,258	\$9,091,499	\$9,438,070	\$9,798,503	\$10,173,354		

Mid-Peninsula Water District
Water Rate Model
2C - Projected Demand

	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35
CY 2021-2023 average consumption											
Residential											
Tier 1	164,328	164,328	164,328	164,328	164,328	164,328	164,328	164,328	164,328	164,328	164,328
Tier 2	304,913	304,913	304,913	304,913	304,913	304,913	304,913	304,913	304,913	304,913	304,913
Tier 3	124,539	124,539	124,539	124,539	124,539	124,539	124,539	124,539	124,539	124,539	124,539
Tier 4	24,128	24,128	24,128	24,128	24,128	24,128	24,128	24,128	24,128	24,128	24,128
Subtotal	617,908	617,908	617,908	617,908	617,908	617,908	617,908	617,908	617,908	617,908	617,908
Commercial											
Tier 1	34,090	34,090	34,090	34,090	34,090	34,090	34,090	34,090	34,090	34,090	34,090
Tier 2	369,060	369,060	369,060	369,060	369,060	369,060	369,060	369,060	369,060	369,060	369,060
Subtotal	403,150	403,150	403,150	403,150	403,150	403,150	403,150	403,150	403,150	403,150	403,150
Total Demand	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058

Water Demand as a percent of CY 2021-2023 Average

Residential											
Tier 1	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
Tier 2	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
Tier 3	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
Tier 4	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
Commercial											
Tier 1	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
Tier 2	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%

Projected Demand

Residential											
Tier 1	175,009	175,009	175,009	175,009	175,009	175,009	175,009	175,009	175,009	175,009	175,009
Tier 2	324,732	324,732	324,732	324,732	324,732	324,732	324,732	324,732	324,732	324,732	324,732
Tier 3	132,634	132,634	132,634	132,634	132,634	132,634	132,634	132,634	132,634	132,634	132,634
Tier 4	25,696	25,696	25,696	25,696	25,696	25,696	25,696	25,696	25,696	25,696	25,696
Subtotal	658,072	658,072	658,072	658,072	658,072	658,072	658,072	658,072	658,072	658,072	658,072
	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
Commercial											
Tier 1	36,306	36,306	36,306	36,306	36,306	36,306	36,306	36,306	36,306	36,306	36,306
Tier 2	393,049	393,049	393,049	393,049	393,049	393,049	393,049	393,049	393,049	393,049	393,049
Subtotal	429,355	429,355	429,355	429,355	429,355	429,355	429,355	429,355	429,355	429,355	429,355
	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
Total Demand	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427
	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Mid-Peninsula Water District												
2	Water Rate Model												
3	2D - COS Demand												
4			FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35
5	CY 2021-2023 average consumption												
6	Residential												
7		Tier 1	402,450	402,450	402,450	402,450	402,450	402,450	402,450	402,450	402,450	402,450	402,450
8		Tier 2	36,867	36,867	36,867	36,867	36,867	36,867	36,867	36,867	36,867	36,867	36,867
9		Tier 3	123,823	123,823	123,823	123,823	123,823	123,823	123,823	123,823	123,823	123,823	123,823
10		Tier 4	54,768	54,768	54,768	54,768	54,768	54,768	54,768	54,768	54,768	54,768	54,768
11		Subtotal	617,908	617,908	617,908	617,908	617,908	617,908	617,908	617,908	617,908	617,908	617,908
12													
13	Commercial												
14		Tier 1	176,907	176,907	176,907	176,907	176,907	176,907	176,907	176,907	176,907	176,907	176,907
15		Tier 2	226,243	226,243	226,243	226,243	226,243	226,243	226,243	226,243	226,243	226,243	226,243
16		Subtotal	403,150	403,150	403,150	403,150	403,150	403,150	403,150	403,150	403,150	403,150	403,150
17													
18	Total Demand		1,021,058	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058	1,021,058
19													
20	Water Demand as a percent of 2021-2023 Average												
21	Residential												
22		Tier 1	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
23		Tier 2	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
24		Tier 3	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
25		Tier 4	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
26													
27	Commercial												
28		Tier 1	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
29		Tier 2	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
30													
31	Projected Demand												
32	Residential												
33		Tier 1	428,610	428,610	428,610	428,610	428,610	428,610	428,610	428,610	428,610	428,610	428,610
34		Tier 2	39,263	39,263	39,263	39,263	39,263	39,263	39,263	39,263	39,263	39,263	39,263
35		Tier 3	131,871	131,871	131,871	131,871	131,871	131,871	131,871	131,871	131,871	131,871	131,871
36		Tier 4	58,328	58,328	58,328	58,328	58,328	58,328	58,328	58,328	58,328	58,328	58,328
37		Subtotal	658,072	658,072	658,072	658,072	658,072	658,072	658,072	658,072	658,072	658,072	658,072
38			106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
39													
40	Commercial												
41		Tier 1	188,406	188,406	188,406	188,406	188,406	188,406	188,406	188,406	188,406	188,406	188,406
42		Tier 2	240,949	240,949	240,949	240,949	240,949	240,949	240,949	240,949	240,949	240,949	240,949
43		Subtotal	429,355	429,355	429,355	429,355	429,355	429,355	429,355	429,355	429,355	429,355	429,355
44			106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%
45													
46	Total Demand		1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427	1,087,427
47			106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%	106.5%

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Mid-Peninsula Water District												
2	Water Rate Model												
3	3A - Rev Increases												
4													
5		Months											
6		Increase											
7		In Effect	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	Notes
8	Rate Revenue at Current Rates and Projected Usage												
9	WATER COMMODITY CHARGES		\$11,165,378	\$11,221,205	\$11,277,311	\$11,333,698	\$11,390,366	\$11,447,318	\$11,504,555	\$11,562,077	\$11,619,888	\$11,677,987	
10	(includes SFPUC pass-through 7/1/24)												
11	Total Revenue (before rate increases)		\$11,165,378	\$11,221,205	\$11,277,311	\$11,333,698	\$11,390,366	\$11,447,318	\$11,504,555	\$11,562,077	\$11,619,888	\$11,677,987	
12	Increase in Rate Revenue		24.5%	5.0%	8.0%	9.0%	9.0%	4.0%	3.0%	3.0%	3.0%	3.0%	From Table 18
13	Revenue from Current Rates		\$11,165,378	\$11,221,205	\$11,277,311	\$11,333,698	\$11,390,366	\$11,447,318	\$11,504,555	\$11,562,077	\$11,619,888	\$11,677,987	
14													
15	Revenue from Rate Increases												
16	FY 2024-25 (eff. Jan 1, 2025)	6	\$1,367,759	\$2,749,195	\$2,762,941	\$2,776,756	\$2,790,640	\$2,804,593	\$2,818,616	\$2,832,709	\$2,846,873	\$2,861,107	
17	FY 2025-26 (eff. Jul 1, 2025)	12		\$698,520	\$702,013	\$705,523	\$709,050	\$712,596	\$716,159	\$719,739	\$723,338	\$726,955	
18	FY 2026-27 (eff. Jul 1, 2026)	12			\$1,179,381	\$1,185,278	\$1,191,204	\$1,197,161	\$1,203,146	\$1,209,162	\$1,215,208	\$1,221,284	
19	FY 2027-28 (eff. Jul 1, 2027)	12				\$1,440,113	\$1,447,313	\$1,454,550	\$1,461,823	\$1,469,132	\$1,476,478	\$1,483,860	
20	FY 2028-29 (eff. Jul 1, 2028)	12					\$1,577,572	\$1,585,460	\$1,593,387	\$1,601,354	\$1,609,361	\$1,617,407	
21	FY 2029-30 (eff. Jul 1, 2029)	12						\$768,067	\$771,907	\$775,767	\$779,646	\$783,544	
22	FY 2030-31 (eff. Jul 1, 2030)	12							\$602,088	\$605,098	\$608,124	\$611,164	
23	FY 2031-32 (eff. Jul 1, 2031)	12								\$623,251	\$626,367	\$629,499	
24	FY 2032-33 (eff. Jul 1, 2032)	12									\$645,158	\$648,384	
25	FY 2033-34 (eff. Jul 1, 2033)	12										\$667,836	
26	Total Revenue from Rate Increases		\$1,367,759	\$3,447,715	\$4,644,335	\$6,107,670	\$7,715,780	\$8,522,426	\$9,167,125	\$9,836,212	\$10,530,552	\$11,251,040	
27	Total Current Revenue		\$11,165,378	\$11,221,205	\$11,277,311	\$11,333,698	\$11,390,366	\$11,447,318	\$11,504,555	\$11,562,077	\$11,619,888	\$11,677,987	From above
28	Total Revenue with Rate Increases		\$12,533,137	\$14,668,920	\$15,921,646	\$17,441,367	\$19,106,146	\$19,969,744	\$20,671,680	\$21,398,290	\$22,150,440	\$22,929,027	To Table 6
29													
30	Rate Revenue at Current Rates and Projected Usage												
31	FIXED SYSTEM CHARGES		\$3,266,760	\$3,297,504	\$3,328,248	\$3,359,328	\$3,390,744	\$3,422,160	\$3,454,416	\$3,487,008	\$3,519,936	\$3,552,864	includes growth
32	Total Revenue (before rate increases)		\$3,266,760	\$3,297,504	\$3,328,248	\$3,359,328	\$3,390,744	\$3,422,160	\$3,454,416	\$3,487,008	\$3,519,936	\$3,552,864	
33	Increase in Rate Revenue		24.5%	5.0%	8.0%	9.0%	9.0%	4.0%	3.0%	3.0%	3.0%	3.0%	From Table 18
34	Revenue from Current Rates		\$3,266,760	\$3,297,504	\$3,328,248	\$3,359,328	\$3,390,744	\$3,422,160	\$3,454,416	\$3,487,008	\$3,519,936	\$3,552,864	
35													
36	Revenue from Rate Increases												
37	FY 2024-25 (eff. Jan 1, 2025)	6	\$400,178	\$807,888	\$815,421	\$823,035	\$830,732	\$838,429	\$846,332	\$854,317	\$862,384	\$870,452	
38	FY 2025-26 (eff. Jul 1, 2025)	12		\$205,270	\$207,183	\$209,118	\$211,074	\$213,029	\$215,037	\$217,066	\$219,116	\$221,166	
39	FY 2026-27 (eff. Jul 1, 2026)	12			\$348,068	\$351,319	\$354,604	\$357,889	\$361,263	\$364,671	\$368,115	\$371,559	
40	FY 2027-28 (eff. Jul 1, 2027)	12				\$426,852	\$430,844	\$434,836	\$438,934	\$443,076	\$447,260	\$451,444	
41	FY 2028-29 (eff. Jul 1, 2028)	12					\$469,620	\$473,971	\$478,438	\$482,952	\$487,513	\$492,074	
42	FY 2029-30 (eff. Jul 1, 2029)	12						\$229,613	\$231,777	\$233,964	\$236,173	\$238,382	
43	FY 2030-31 (eff. Jul 1, 2030)	12							\$180,786	\$182,492	\$184,215	\$185,938	
44	FY 2031-32 (eff. Jul 1, 2031)	12								\$187,966	\$189,741	\$191,516	
45	FY 2032-33 (eff. Jul 1, 2032)	12									\$195,434	\$197,262	
46	FY 2033-34 (eff. Jul 1, 2033)	12										\$203,180	
47	Total Revenue from Rate Increases		\$400,178	\$1,013,158	\$1,370,672	\$1,810,324	\$2,296,874	\$2,547,767	\$2,752,568	\$2,966,504	\$3,189,951	\$3,422,971	
48	Total Current Revenue		\$3,266,760	\$3,297,504	\$3,328,248	\$3,359,328	\$3,390,744	\$3,422,160	\$3,454,416	\$3,487,008	\$3,519,936	\$3,552,864	From above
49	Total Revenue with Rate Increases		\$3,666,938	\$4,310,662	\$4,698,920	\$5,169,652	\$5,687,618	\$5,969,927	\$6,206,984	\$6,453,512	\$6,709,887	\$6,975,835	To Table 6
50													
51	Total Rate Revenue with Rate Increases		\$16,200,075	\$18,979,582	\$20,620,567	\$22,611,019	\$24,793,764	\$25,939,671	\$26,878,664	\$27,851,802	\$28,860,326	\$29,904,863	
52													
53	Total Revenue Requirement		\$19,262,770	\$20,978,714	\$21,565,191	\$22,362,846	\$22,943,405	\$24,981,506	\$25,684,777	\$26,475,049	\$27,195,140	\$28,003,090	
54	Transfer to/(from) Reserves		(\$3,062,695)	(\$1,999,131)	(\$944,625)	\$248,173	\$1,850,359	\$958,165	\$1,193,887	\$1,376,752	\$1,665,186	\$1,901,773	To Table 4

[illegible]

	A	B	C	D	E	F	G	H	I	J	K	L	M
1		Mid-Peninsula Water District											
2		Water Rate Model											
3		3B - Current Rev											
4													
58			FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35
59		Water Usage Charge Revenue at Current Rates											
60		Residential											
61		Tier 1 Usage	175,009	175,884	176,763	177,647	178,535	179,428	180,325	181,227	182,133	183,044	183,959
62		Tier 2 Usage	324,732	326,356	327,988	329,628	331,276	332,932	334,597	336,270	337,951	339,641	341,339
63		Tier 3 Usage	132,634	133,297	133,964	134,634	135,307	135,983	136,663	137,346	138,033	138,723	139,417
64		Tier 4 Usage	25,696	25,825	25,954	26,084	26,214	26,345	26,477	26,609	26,742	26,876	27,010
65													
66		Tier 1 Rate	\$7.43	\$7.43	\$7.43	\$7.43	\$7.43	\$7.43	\$7.43	\$7.43	\$7.43	\$7.43	\$7.43
67		Tier 2 Rate	\$10.26	\$10.26	\$10.26	\$10.26	\$10.26	\$10.26	\$10.26	\$10.26	\$10.26	\$10.26	\$10.26
68		Tier 3 Rate	\$12.17	\$12.17	\$12.17	\$12.17	\$12.17	\$12.17	\$12.17	\$12.17	\$12.17	\$12.17	\$12.17
69		Tier 4 Rate	\$14.07	\$14.07	\$14.07	\$14.07	\$14.07	\$14.07	\$14.07	\$14.07	\$14.07	\$14.07	\$14.07
70													
71		Tier 1 Revenue	\$1,300,317	\$1,306,818	\$1,313,352	\$1,319,919	\$1,326,519	\$1,333,151	\$1,339,817	\$1,346,516	\$1,353,249	\$1,360,015	\$1,366,815
72		Tier 2 Revenue	\$3,331,754	\$3,348,413	\$3,365,155	\$3,381,980	\$3,398,890	\$3,415,885	\$3,432,964	\$3,450,129	\$3,467,380	\$3,484,717	\$3,502,140
73		Tier 3 Revenue	\$1,614,156	\$1,622,227	\$1,630,338	\$1,638,490	\$1,646,682	\$1,654,916	\$1,663,190	\$1,671,506	\$1,679,864	\$1,688,263	\$1,696,704
74		Tier 4 Revenue	\$361,547	\$363,355	\$365,172	\$366,998	\$368,833	\$370,677	\$372,530	\$374,393	\$376,265	\$378,146	\$380,037
75		Residential Quantity Charge Revenue	\$6,607,774	\$6,640,813	\$6,674,017	\$6,707,387	\$6,740,924	\$6,774,628	\$6,808,502	\$6,842,544	\$6,876,757	\$6,911,141	\$6,945,696
76													
77		Commercial											
78		Tier 1 Usage	36,306	36,487	36,670	36,853	37,037	37,223	37,409	37,596	37,784	37,973	38,163
79		Tier 2 Usage	393,049	395,015	396,990	398,975	400,969	402,974	404,989	407,014	409,049	411,094	413,150
80													
81		Tier 1 Rate	\$9.37	\$9.37	\$9.37	\$9.37	\$9.37	\$9.37	\$9.37	\$9.37	\$9.37	\$9.37	\$9.37
82		Tier 2 Rate	\$10.73	\$10.73	\$10.73	\$10.73	\$10.73	\$10.73	\$10.73	\$10.73	\$10.73	\$10.73	\$10.73
83													
84		Tier 1 Revenue	\$340,186	\$341,887	\$343,596	\$345,314	\$347,041	\$348,776	\$350,520	\$352,272	\$354,034	\$355,804	\$357,583
85		Tier 2 Revenue	\$4,217,419	\$4,238,506	\$4,259,698	\$4,280,997	\$4,302,402	\$4,323,914	\$4,345,533	\$4,367,261	\$4,389,097	\$4,411,043	\$4,433,098
86		Commercial Quantity Charge Revenue	\$4,557,604	\$4,580,392	\$4,603,294	\$4,626,311	\$4,649,442	\$4,672,690	\$4,696,053	\$4,719,533	\$4,743,131	\$4,766,847	\$4,790,681
87													
88		Revenue Recap	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35
89		Total Service Charge Revenue - Residential	\$2,560,320	\$2,585,520	\$2,610,720	\$2,636,256	\$2,662,128	\$2,688,000	\$2,714,712	\$2,741,760	\$2,769,144	\$2,796,528	\$2,824,248
90		Total Service Charge Revenue - Commercial	\$706,440	\$711,984	\$717,528	\$723,072	\$728,616	\$734,160	\$739,704	\$745,248	\$750,792	\$756,336	\$761,880
91		Total Water Use Revenue - Residential	\$6,607,774	\$6,640,813	\$6,674,017	\$6,707,387	\$6,740,924	\$6,774,628	\$6,808,502	\$6,842,544	\$6,876,757	\$6,911,141	\$6,945,696
92		Total Water Use Revenue - Commercial	\$4,557,604	\$4,580,392	\$4,603,294	\$4,626,311	\$4,649,442	\$4,672,690	\$4,696,053	\$4,719,533	\$4,743,131	\$4,766,847	\$4,790,681
93			\$14,432,138	\$14,518,709	\$14,605,559	\$14,693,026	\$14,781,110	\$14,869,478	\$14,958,971	\$15,049,085	\$15,139,824	\$15,230,851	\$15,322,505

	A	B	C	D	E	F	G	H	I	J	K	L	M
1		Mid-Peninsula Water District											
2		Water Rate Model											
3		3C - Proposed Rev											
4													
5			FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34
6		Water Service Charge Revenue at Current Rates											
7		Meter Count by Size - Residential											
8		5/8" meters	6,870	6,939	7,008	7,078	7,149	7,220	7,292	7,365	7,439	7,513	7,588
9		1" meters	433	437	441	445	449	453	458	463	468	473	478
10		1 1/2" meters	29	29	29	29	29	29	29	29	29	29	29
11		2" meters	4	4	4	4	4	4	4	4	4	4	4
12		3" meters	2	2	2	2	2	2	2	2	2	2	2
13		4" meters	0	0	0	0	0	0	0	0	0	0	0
14		6" meters	0	0	0	0	0	0	0	0	0	0	0
15			7,338	7,411	7,484	7,558	7,633	7,708	7,785	7,863	7,942	8,021	8,101
16													
17		Meter Count by Size - Commercial											
18		5/8" meters	312	315	318	321	324	327	330	333	336	339	342
19		1" meters	176	178	180	182	184	186	188	190	192	194	196
20		1 1/2" meters	129	130	131	132	133	134	135	136	137	138	139
21		2" meters	164	166	168	170	172	174	176	178	180	182	184
22		3" meters	33	33	33	33	33	33	33	33	33	33	33
23		4" meters	20	20	20	20	20	20	20	20	20	20	20
24		6" meters	6	6	6	6	6	6	6	6	6	6	6
25			840	848	856	864	872	880	888	896	904	912	920
26													
27		Monthly Rate		COS									
28		5/8" meters	\$28.00	\$35.15	\$43.77	\$45.96	\$49.63	\$54.10	\$58.97	\$61.33	\$63.17	\$65.06	\$67.01
29		1" meters	\$42.00	\$72.39	\$90.12	\$94.63	\$102.20	\$111.39	\$121.42	\$126.28	\$130.07	\$133.97	\$137.99
30		1 1/2" meters	\$70.00	\$134.44	\$167.38	\$175.75	\$189.81	\$206.89	\$225.51	\$234.53	\$241.56	\$248.81	\$256.27
31		2" meters	\$112.00	\$208.90	\$260.08	\$273.09	\$294.93	\$321.48	\$350.41	\$364.43	\$375.36	\$386.62	\$398.22
32		3" meters	\$168.00	\$407.47	\$507.30	\$532.67	\$575.28	\$627.06	\$683.49	\$710.83	\$732.16	\$754.12	\$776.74
33		4" meters	\$280.00	\$630.86	\$785.42	\$824.69	\$890.67	\$970.83	\$1,058.20	\$1,100.53	\$1,133.55	\$1,167.55	\$1,202.58
34		6" meters	\$700.00	\$1,251.39	\$1,557.98	\$1,635.88	\$1,766.75	\$1,925.76	\$2,099.08	\$2,183.04	\$2,248.53	\$2,315.99	\$2,385.47
35													
36		Annual Revenue - Residential											
37		5/8" meters	\$1,154,160	\$2,927,242	\$3,680,656	\$3,903,291	\$4,257,841	\$4,687,139	\$5,159,930	\$5,420,049	\$5,638,743	\$5,865,679	\$6,101,962
38		1" meters	\$109,116	\$379,593	\$476,919	\$505,307	\$550,637	\$605,541	\$667,325	\$701,595	\$730,447	\$760,398	\$791,489
39		1 1/2" meters	\$12,180	\$46,785	\$58,247	\$61,159	\$66,052	\$71,997	\$78,477	\$81,616	\$84,064	\$86,586	\$89,184
40		2" meters	\$2,688	\$10,027	\$12,484	\$13,108	\$14,157	\$15,431	\$16,820	\$17,493	\$18,017	\$18,558	\$19,115
41		3" meters	\$2,016	\$9,779	\$12,175	\$12,784	\$13,807	\$15,049	\$16,404	\$17,060	\$17,572	\$18,099	\$18,642
42		4" meters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
43		6" meters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
44		Total Service Charge Revenue - Residential	\$1,280,160	\$3,373,426	\$4,240,481	\$4,495,650	\$4,902,494	\$5,395,158	\$5,938,956	\$6,237,813	\$6,488,843	\$6,749,320	\$7,020,391
45													
46		Annual Revenue - Commercial											
47		5/8" meters	\$52,416	\$132,884	\$167,016	\$177,021	\$192,970	\$212,285	\$233,513	\$245,061	\$254,687	\$264,670	\$275,023
48		1" meters	\$44,352	\$154,617	\$194,661	\$206,665	\$225,651	\$248,633	\$273,924	\$287,912	\$299,671	\$311,876	\$324,544
49		1 1/2" meters	\$54,180	\$209,725	\$263,116	\$278,381	\$302,929	\$332,675	\$365,322	\$382,749	\$397,130	\$412,030	\$427,466
50		2" meters	\$110,208	\$416,134	\$524,328	\$557,099	\$608,745	\$671,248	\$740,070	\$778,419	\$810,780	\$844,383	\$879,271
51		3" meters	\$33,264	\$161,359	\$200,892	\$210,936	\$227,811	\$248,314	\$270,662	\$281,489	\$289,933	\$298,631	\$307,590
52		4" meters	\$33,600	\$151,407	\$188,501	\$197,927	\$213,761	\$232,999	\$253,969	\$264,128	\$272,052	\$280,213	\$288,620
53		6" meters	\$25,200	\$90,100	\$112,175	\$117,783	\$127,206	\$138,655	\$151,133	\$157,179	\$161,894	\$166,751	\$171,753
54		Total Service Charge Revenue - Commercial	\$353,220	\$1,316,225	\$1,650,689	\$1,745,812	\$1,899,072	\$2,084,808	\$2,288,593	\$2,396,936	\$2,486,147	\$2,578,554	\$2,674,267
55													
56		Total Water Service Charge Revenue	\$1,633,380	\$4,689,651	\$5,891,170	\$6,241,462	\$6,801,566	\$7,479,966	\$8,227,549	\$8,634,749	\$8,974,990	\$9,327,874	\$9,694,658
57													

	A	B	C	D	E	F	G	H	I	J	K	L	M
1		Mid-Peninsula Water District											
2		Water Rate Model											
3		3C - Proposed Rev											
4													
58			FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34
59		Water Usage Charge Revenue at Current Rates											
60		Residential											
61		Tier 1 Usage	164,328	428,610	428,610	428,610	428,610	428,610	428,610	428,610	428,610	428,610	428,610
62		Tier 2 Usage	304,913	39,263	39,263	39,263	39,263	39,263	39,263	39,263	39,263	39,263	39,263
63		Tier 3 Usage	124,539	131,871	131,871	131,871	131,871	131,871	131,871	131,871	131,871	131,871	131,871
64		Tier 4 Usage	24,128	58,328	58,328	58,328	58,328	58,328	58,328	58,328	58,328	58,328	58,328
65				COS									
66		Tier 1 Rate	\$7.43	\$9.75	\$10.24	\$11.06	\$12.05	\$13.14	\$13.66	\$14.07	\$14.49	\$14.93	\$15.38
67		Tier 2 Rate	\$10.26	\$14.56	\$15.29	\$16.51	\$18.00	\$19.62	\$20.40	\$21.01	\$21.64	\$22.29	\$22.96
68		Tier 3 Rate	\$12.17	\$14.56	\$15.29	\$16.51	\$18.00	\$19.62	\$20.40	\$21.01	\$21.64	\$22.29	\$22.96
69		Tier 4 Rate	\$14.07	\$19.10	\$20.06	\$21.66	\$23.61	\$25.73	\$26.76	\$27.57	\$28.39	\$29.24	\$30.12
70													
71		Tier 1 Revenue	\$1,220,955	\$4,178,944	\$4,387,891	\$4,738,922	\$5,165,425	\$5,630,313	\$5,855,526	\$6,031,192	\$6,212,127	\$6,398,491	\$6,590,446
72		Tier 2 Revenue	\$3,128,407	\$571,669	\$600,253	\$648,273	\$706,618	\$770,213	\$801,022	\$825,052	\$849,804	\$875,298	\$901,557
73		Tier 3 Revenue	\$1,515,640	\$1,920,044	\$2,016,046	\$2,177,330	\$2,373,289	\$2,586,885	\$2,690,361	\$2,771,072	\$2,854,204	\$2,939,830	\$3,028,025
74		Tier 4 Revenue	\$339,481	\$1,114,063	\$1,169,766	\$1,263,348	\$1,377,049	\$1,500,983	\$1,561,023	\$1,607,853	\$1,656,089	\$1,705,772	\$1,756,945
75		Residential Quantity Charge Revenue	\$6,204,483	\$7,784,720	\$8,173,956	\$8,827,872	\$9,622,381	\$10,488,395	\$10,907,931	\$11,235,169	\$11,572,224	\$11,919,391	\$12,276,973
76													
77		Commercial											
78		Tier 1 Usage	34,090	188,406	188,406	188,406	188,406	188,406	188,406	188,406	188,406	188,406	188,406
79		Tier 2 Usage	369,060	240,949	240,949	240,949	240,949	240,949	240,949	240,949	240,949	240,949	240,949
80				COS									
81		Tier 1 Rate	\$9.37	\$12.80	\$13.44	\$14.52	\$15.82	\$17.25	\$17.94	\$18.47	\$19.03	\$19.60	\$20.19
82		Tier 2 Rate	\$10.73	\$12.80	\$13.44	\$14.52	\$15.82	\$17.25	\$17.94	\$18.47	\$19.03	\$19.60	\$20.19
83													
84		Tier 1 Revenue	\$319,423	\$2,411,596	\$2,532,176	\$2,734,750	\$2,980,878	\$3,249,157	\$3,379,123	\$3,480,497	\$3,584,911	\$3,692,459	\$3,803,233
85		Tier 2 Revenue	\$3,960,017	\$3,084,149	\$3,238,357	\$3,497,425	\$3,812,193	\$4,155,291	\$4,321,502	\$4,451,147	\$4,584,682	\$4,722,222	\$4,863,889
86		Commercial Quantity Charge Revenue	\$4,279,441	\$5,495,745	\$5,770,533	\$6,232,175	\$6,793,071	\$7,404,447	\$7,700,625	\$7,931,644	\$8,169,593	\$8,414,681	\$8,667,122
87													
88		Revenue Recap		FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34
89		Total Service Charge Revenue - Residential	\$1,280,160	\$3,373,426	\$4,240,481	\$4,495,650	\$4,902,494	\$5,395,158	\$5,938,956	\$6,237,813	\$6,488,843	\$6,749,320	\$7,020,391
90		Total Service Charge Revenue - Commercial	\$353,220	\$1,316,225	\$1,650,689	\$1,745,812	\$1,899,072	\$2,084,808	\$2,288,593	\$2,396,936	\$2,486,147	\$2,578,554	\$2,674,267
91		Total Water Use Revenue - Residential	\$6,204,483	\$7,784,720	\$8,173,956	\$8,827,872	\$9,622,381	\$10,488,395	\$10,907,931	\$11,235,169	\$11,572,224	\$11,919,391	\$12,276,973
92		Total Water Use Revenue - Commercial	\$4,279,441	\$5,495,745	\$5,770,533	\$6,232,175	\$6,793,071	\$7,404,447	\$7,700,625	\$7,931,644	\$8,169,593	\$8,414,681	\$8,667,122
93			\$12,117,303										
94				\$17,970,116	\$19,835,658	\$21,301,509	\$23,217,018	\$25,372,808	\$26,836,105	\$27,801,562	\$28,716,807	\$29,661,946	\$30,638,753

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Mid-Peninsula Water District												
2	Water Rate Model												
3	4 - Reserves												
4													
5													
6													
7	Fiscal Year	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	Notes
8	Working Capital Reserve												
9	With Rate Increases												
10	Beginning Balance		\$12,754,990	\$7,292,032	\$5,355,825	\$4,460,035	\$4,754,050	\$6,661,201	\$7,690,769	\$8,967,533	\$9,687,094	\$10,201,227	
11	Transfer to/(from) Operations		(\$3,062,695)	(\$1,999,131)	(\$944,625)	\$248,173	\$1,850,359	\$958,165	\$1,193,887	\$1,376,752	\$1,665,186	\$1,901,773	From Table 3
12													
13	Transfers (to)/from:												
14	Revenue Requirements												To Table 2
15	Capital Reserve		(\$2,500,000)							(\$750,000)	(\$1,250,000)	(\$1,750,000)	To below
16	Fund Subtotal		\$7,192,295	\$5,292,900	\$4,411,200	\$4,708,208	\$6,604,408	\$7,619,366	\$8,884,656	\$9,594,285	\$10,102,280	\$10,353,000	
17	Estimated Interest Earnings		\$99,736	\$62,925	\$48,835	\$45,841	\$56,792	\$71,403	\$82,877	\$92,809	\$98,947	\$102,771	Avg. Bal. * Table 1A assumption f.
18	Ending Balance with Rate Increase	\$ 12,754,990	\$7,292,032	\$5,355,825	\$4,460,035	\$4,754,050	\$6,661,201	\$7,690,769	\$8,967,533	\$9,687,094	\$10,201,227	\$10,455,771	FY 2023-24 EY source: Reserves Report as of June 30, 2024
19	Target Balance	\$1,500,000	\$7,229,426	\$7,491,730	\$7,802,014	\$8,216,560	\$8,523,614	\$8,877,202	\$9,246,825	\$9,658,264	\$10,038,089	\$10,460,685	
20	Fund Balance Compared to Minimum		101%	71%	57%	58%	78%	87%	97%	100%	102%	100%	
21													
22	Capital Reserve												
23	Beginning Balance		\$1,500,000	\$2,729,278	\$3,097,090	\$3,358,621	\$3,512,807	\$3,558,575	\$4,868,095	\$5,237,303	\$6,230,668	\$7,603,182	
24													
25	Water System Capacity Charges		\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	
26	Water Demand Offset Charges		\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	
27	Cash Funded CIP Expenditures		(\$5,040,000)	(\$3,409,412)	(\$3,518,825)	(\$3,628,237)	(\$3,737,650)	(\$3,847,062)	(\$4,795,727)	(\$4,928,348)	(\$5,060,969)	(\$5,193,590)	From Table 5
28	Transfers (to)/from:												
29	Revenue Requirements		\$3,628,237	\$3,628,237	\$3,628,237	\$3,628,237	\$3,628,237	\$4,994,658	\$4,994,658	\$4,994,658	\$4,994,658	\$4,994,658	To Table 2
30	Operating Fund		\$2,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$750,000	\$1,250,000	\$1,750,000	
31	Fund Subtotal		\$2,708,237	\$3,068,103	\$3,326,503	\$3,478,621	\$3,523,394	\$4,826,172	\$5,187,027	\$6,173,613	\$7,534,357	\$9,274,251	
32	Estimated interest earnings		\$21,041	\$28,987	\$32,118	\$34,186	\$35,181	\$41,924	\$50,276	\$57,055	\$68,825	\$84,387	Avg. Bal. * Table 1A assumption f.
33	Ending Balance	\$ 1,500,000	\$2,729,278	\$3,097,090	\$3,358,621	\$3,512,807	\$3,558,575	\$4,868,095	\$5,237,303	\$6,230,668	\$7,603,182	\$9,358,638	
34	Target Balance	\$8,000,000	\$8,000,000	\$8,000,000	\$8,000,000	\$8,000,000	\$8,000,000	\$8,000,000	\$8,000,000	\$8,000,000	\$8,000,000	\$8,000,000	
35	Fund Balance Compared to Target		34%	39%	42%	44%	44%	61%	65%	78%	95%	117%	

	A	B	C	D	E	F	G	H
1	Mid-Peninsula Water District							
2	Water Rate Model							
3	5 - CIP							
4								
5								
6								
7	Capital Improvement Plan (FY 2024-25 through FY 2028/29)							
8								
9	Project	Funding Source	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	Total
10	Capitalized Equipment	PAYGo	\$400,000	\$100,000	\$100,000	\$100,000	\$100,000	\$800,000
11	Old County Road Improvements	PAYGo	\$225,000	\$0	\$0	\$0	\$0	\$225,000
12	Dekoven Tank Util/Lincoln/Newlands/Oak Knoll	PAYGo	\$3,000,000	\$0	\$0	\$0	\$0	\$3,000,000
13	Dairy Lane Operations Center - Design	Debt	\$2,400,000	\$0	\$0	\$0	\$0	\$2,400,000
14	Dairy Lane Operations Center - Construction	Debt	\$0	\$2,910,000	\$6,790,000	\$0	\$0	\$9,700,000
15	Folger Property Improvements	Debt	\$2,700,000	\$2,295,000	\$0	\$0	\$0	\$4,995,000
16	Dekoven Tanks Replacement	Debt	\$1,897,500	\$5,692,500	\$0	\$0	\$0	\$7,590,000
17	SR 101 Crossing - Phase 2	Debt	\$681,250	\$2,083,750	\$0	\$0	\$0	\$2,765,000
18	Exborne West Tank Recoating	PAYGo	\$675,000	\$0	\$0	\$0	\$0	\$675,000
19	Hallmark North Tank Recoating	PAYGo	\$610,000	\$2,440,000	\$0	\$0	\$0	\$3,050,000
20	West Belmont North Tank Recoating	PAYGo	\$130,000	\$0	\$0	\$0	\$0	\$130,000
21	Other Projects (Not Yet Identified)	PAYGo	\$0	\$1,000,000	\$2,500,000	\$2,500,000	\$2,500,000	\$8,500,000
22	Other Projects (Not Yet Identified)	Debt	\$0	\$0	\$1,700,000	\$1,700,000	\$1,700,000	\$5,100,000
23	Total		\$12,718,750	\$16,521,250	\$11,090,000	\$4,300,000	\$4,300,000	\$48,930,000
24								
25	Recap by Funding Source							
26	PAYGo		\$5,040,000	\$3,540,000	\$2,600,000	\$2,600,000	\$2,600,000	\$16,380,000
27	Debt Financing		\$7,678,750	\$12,981,250	\$8,490,000	\$1,700,000	\$1,700,000	\$32,550,000
28	Total		\$12,718,750	\$16,521,250	\$11,090,000	\$4,300,000	\$4,300,000	\$48,930,000
29								

	A	B	C	D	E	F	G	H	I	J	K	L
1	Mid-Peninsula Water District											
2	Water Rate Model											
3	6 - Debt											
4												
5												
6												
7												
8												
9	2016 Certificate of Participation											
10	Principal	\$435,000	\$455,000	\$470,000	\$490,000	\$510,000	\$530,000	\$550,000	\$575,000	\$595,000	\$595,000	
11	Interest	\$629,900	\$612,100	\$593,600	\$574,400	\$554,400	\$533,600	\$512,000	\$489,500	\$466,100	\$466,100	
12	Total	\$1,064,900	\$1,067,100	\$1,063,600	\$1,064,400	\$1,064,400	\$1,063,600	\$1,062,000	\$1,064,500	\$1,061,100	\$1,061,100	
13												
14												
15	New Debt Service #1	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	\$1,082,481	
16												
17	New Debt Service #2		\$1,222,156	\$1,222,156	\$1,222,156	\$1,222,156	\$1,222,156	\$1,222,156	\$1,222,156	\$1,222,156	\$1,222,156	
18												
19	Total Debt Service	\$2,147,381	\$3,371,737	\$3,368,237	\$3,369,037	\$3,369,037	\$3,368,237	\$3,366,637	\$3,369,137	\$3,365,737	\$3,365,737	
20												
21	Debt Coverage Calculation											
22	Funds Available for Debt Service											
23	Rate Revenue	\$16,200,075	\$18,979,582	\$20,620,567	\$22,611,019	\$24,793,764	\$25,939,671	\$26,878,664	\$27,851,802	\$28,860,326	\$29,904,863	From Table 3
24	Non-Operating Income	\$971,700	\$1,004,721	\$1,035,311	\$1,067,547	\$1,101,098	\$1,135,793	\$1,170,169	\$1,205,274	\$1,241,432	\$1,278,675	From Table 2
25	Interest income	\$120,778	\$91,912	\$80,953	\$80,027	\$91,973	\$113,327	\$133,153	\$149,864	\$167,772	\$187,158	From Table 4
26	Total Funds Available	\$17,292,553	\$20,076,215	\$21,736,830	\$23,758,593	\$25,986,835	\$27,188,790	\$28,181,985	\$29,206,939	\$30,269,530	\$31,370,696	To below
27												
28	Expenses											
29	O&M	\$14,458,852	\$14,983,461	\$15,604,028	\$16,433,119	\$17,047,229	\$17,754,404	\$18,493,650	\$19,316,528	\$20,076,177	\$20,921,370	From Table 2
30	Total Expenses	\$14,458,852	\$14,983,461	\$15,604,028	\$16,433,119	\$17,047,229	\$17,754,404	\$18,493,650	\$19,316,528	\$20,076,177	\$20,921,370	
31												
32	Net Revenue	\$2,833,701	\$5,092,754	\$6,132,802	\$7,325,474	\$8,939,606	\$9,434,387	\$9,688,335	\$9,890,411	\$10,193,353	\$10,449,326	Funds Available less Expenses
33												
34	Debt Service	\$2,147,381	\$3,371,737	\$3,368,237	\$3,369,037	\$3,369,037	\$3,368,237	\$3,366,637	\$3,369,137	\$3,365,737	\$3,365,737	From above
35	Debt Coverage Ratio (1.30 Min)	1.32	1.51	1.82	2.17	2.65	2.80	2.88	2.94	3.03	3.10	To Table 1B

	A	B	C	D	E	F	G	H	I	J
1	Mid-Peninsula Water District									
2	Water Rate Model									
3	7 - Load Factors									
4										
5	Multi Family included with Commercial									
6										
7										
8										
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	A	B	C	D	E	F	G	H	I	J	K
1		Mid-Peninsula Water District									
2		Water Rate Model									
3		8 - Allocations									
4											
5											
6											
7											
8											
9											
10											
11											
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62											

	A	B	C	D	E	F	G	H	I	J	K
1		Mid-Peninsula Water District									
2		Water Rate Model									
3		8 - Allocations									
4											
5											
6											
7											
63											
64		MEMBERSHIP & GOV FEES									
65		Dues & Publications	\$50,000	Accounts	\$0	\$0	\$0	\$0	\$50,000	\$0	\$0
66		Gov't Fees & Licenses	\$70,000	Accounts	\$0	\$0	\$0	\$0	\$70,000	\$0	\$0
67		BAWSCA Membership Assessments	\$100,000	Accounts	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0
68		BAWSCA Water Management Charge	\$47,000	Accounts	\$0	\$0	\$0	\$0	\$47,000	\$0	\$0
69		Env Health - Cross Connection Inspection	\$45,000	Accounts	\$0	\$0	\$0	\$0	\$45,000	\$0	\$0
70		Software License	\$135,000	Accounts	\$0	\$0	\$0	\$0	\$135,000	\$0	\$0
71		Subtotal	\$447,000		\$0	\$0	\$0	\$0	\$447,000	\$0	\$0
72											
73		BAD DEBT & CLAIMS									
74		Bad Debt	\$5,000	Accounts	\$0	\$0	\$0	\$0	\$5,000	\$0	\$0
75		Claims	\$10,000	Accounts	\$0	\$0	\$0	\$0	\$10,000	\$0	\$0
76		Subtotal	\$15,000		\$0	\$0	\$0	\$0	\$15,000	\$0	\$0
77											
78		UTILITIES									
79		Utilities-Internet/Cable	\$53,000	Accounts	\$0	\$0	\$0	\$0	\$53,000	\$0	\$0
80		Utilities-Cellular Telephones	\$34,400	Accounts	\$0	\$0	\$0	\$0	\$34,400	\$0	\$0
81		Utilities-Electric-Pumping	\$360,500	Max Hour	\$92,991	\$30,257	\$117,085	\$120,167	\$0	\$0	\$0
82		Utilities-Electric-Bldgs&Grounds	\$51,500	Accounts	\$0	\$0	\$0	\$0	\$51,500	\$0	\$0
83		Utilities-Sewer - NPDES	\$7,000	Accounts	\$0	\$0	\$0	\$0	\$7,000	\$0	\$0
84		Subtotal	\$506,400		\$92,991	\$30,257	\$117,085	\$120,167	\$145,900	\$0	\$0
85											
86		PROFESSIONAL SERVICES									
87		Prof Serv - District Counsel	\$125,000	Accounts	\$0	\$0	\$0	\$0	\$125,000	\$0	\$0
88		Prof Serv - IT	\$85,000	Accounts	\$0	\$0	\$0	\$0	\$85,000	\$0	\$0
89		Prof Serv- Annual Finance Audit	\$24,000	Accounts	\$0	\$0	\$0	\$0	\$24,000	\$0	\$0
90		Prof Serv - Mngmt Consult	\$60,000	Accounts	\$0	\$0	\$0	\$0	\$60,000	\$0	\$0
91		Prof Serv- Accounting & Payroll	\$30,000	Accounts	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0
92		Prof Serv- Customer Billing	\$65,000	Accounts	\$0	\$0	\$0	\$0	\$65,000	\$0	\$0
93		Recruiting	\$30,000	Accounts	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0
94		Prof Serv - Answering Svs	\$5,000	Accounts	\$0	\$0	\$0	\$0	\$5,000	\$0	\$0
95		Prof Serv - District Treasurer	\$150,000	Accounts	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0
96		Subtotal	\$574,000		\$0	\$0	\$0	\$0	\$574,000	\$0	\$0
97											
98		TRAINING & TRAVEL									
99		Director Travel	\$5,000	Accounts	\$0	\$0	\$0	\$0	\$5,000	\$0	\$0
100		Director Expense	\$0	Accounts	\$0	\$0	\$0	\$0	\$0	\$0	\$0
101		Elections	\$38,500	Accounts	\$0	\$0	\$0	\$0	\$38,500	\$0	\$0
102		Employee Travel/Training	\$36,000	Accounts	\$0	\$0	\$0	\$0	\$36,000	\$0	\$0
103		Meetings Expense	\$8,000	Accounts	\$0	\$0	\$0	\$0	\$8,000	\$0	\$0
104		Subtotal	\$87,500		\$0	\$0	\$0	\$0	\$87,500	\$0	\$0
105		Total Non-Personnel O&M Expenses	\$9,981,619		\$6,320,113	\$79,273	\$306,761	\$209,833	\$1,940,400	\$1,045,239	\$80,000
106		O&M Composite			63.3%	0.8%	3.1%	2.1%	19.4%	10.5%	0.8%
107											
108		O&M Expenses - Composite Allocation									
109		Prof Serv - District Engineer	\$140,000	O&M Composite	\$88,645	\$1,112	\$4,303	\$2,943	\$27,216	\$14,660	\$1,122
110		Prof Serv - Miscellaneous	\$387,500	O&M Composite	\$245,355	\$3,077	\$11,909	\$8,146	\$75,329	\$40,578	\$3,106
111			\$527,500		\$334,000	\$4,189	\$16,211	\$11,089	\$102,545	\$55,238	\$4,228
112											
113		PERSONNEL EXPENSES									
114		Salaries & Wages	\$2,604,868	O&M Composite	\$1,649,338	\$20,688	\$80,054	\$54,759	\$506,379	\$272,772	\$20,877
115		Overtime Labor	\$120,000	O&M Composite	\$75,981	\$953	\$3,688	\$2,523	\$23,328	\$12,566	\$962
116		Standby Labor	\$48,000	O&M Composite	\$30,392	\$381	\$1,475	\$1,009	\$9,331	\$5,026	\$385
117		FICA/Medicare PR Tax	\$190,937	O&M Composite	\$120,897	\$1,516	\$5,868	\$4,014	\$37,118	\$19,994	\$1,530

	A	B	C	D	E	F	G	H	I	J	K
1		Mid-Peninsula Water District									
2		Water Rate Model									
3		8 - Allocations									
4											
5											
6											
7											
164		Fire Service Redistribution		Capacity	\$0	\$0	\$0	\$0	\$0	\$86,210	(\$86,210)
165		Service Charge Reallocation			\$2,552,298	\$92,614	\$358,388	\$108,784	(\$1,474,146)	(\$1,637,940)	\$0
166											
167		Total Revenue Requirement	\$17,968,012		\$10,889,913	\$395,158	\$1,529,138	\$464,151	\$1,024,116	\$3,665,535	\$0
168								\$13,278,361	\$1,024,116	\$3,665,535	\$0
169								73.9%		26.1%	0.0%
170								Consumption Charge COS	Fixed System Charge COS		
171											
172											
173											
174											
175											
176		System-Wide Cost Allocation Factors									
177		Demand Services									
178		Base	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
179		Average Day	75.5%	24.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
180		Max Day	38.7%	12.6%	48.7%	0.0%	0.0%	0.0%	0.0%	100.0%	
181		Max Hour	25.8%	8.4%	32.5%	33.3%	0.0%	0.0%	0.0%	100.0%	
182											
183		Customer Services									
184		Capacity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	
185		Accounts	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
186		Composite Allocations									
187		O&M Composite	63.3%	0.8%	3.1%	2.1%	0.8%	19.4%	10.5%	100.0%	
188		CIP Composite	10.5%	10.5%	40.6%	4.5%	0.0%	0.0%	12.1%	78.2%	
189		Exp Composite	46.4%	1.7%	6.5%	2.0%	0.6%	13.9%	29.0%	100.0%	
190		Reserves Alloc	46.4%	1.7%	6.5%	2.0%	0.5%	13.9%	29.0%	100.0%	
191											
192											
193											
194		Components of Rate Structure									
195		Residential									
196	1	Consumption Charge Revenue	\$6,607,774	72%	\$7,784,720	70%	\$1,176,946	17.8%			
197	2	Fixed System Charge Revenue	\$2,560,320	28%	\$3,373,426	30%	\$813,106	31.8%			
198	3	Subtotal - Residential	\$9,168,094	100%	\$11,158,146	100%	\$1,990,053	21.7%			
199	4	Commercial									
200	5	Consumption Charge Revenue	\$4,557,604	87%	\$5,495,745	81%	\$938,141	20.6%			
201	6	Fixed System Charge Revenue	\$706,440	13%	\$1,316,225	19%	\$609,785	86.3%			
202	7	Subtotal - Commercial	\$5,264,044	100%	\$6,811,970	100%	\$1,547,926	29.4%			
203	8	Total									
204	9	Consumption Charge Revenue	\$11,165,378	77%	\$13,280,465	74%	\$2,115,087	18.9%			
205	10	Fixed System Charge Revenue	\$3,266,760	23%	\$4,689,651	26%	\$1,422,891	43.6%			
206	11	Total	\$14,432,138	100%	\$17,970,116	100%	\$3,537,978	24.5%			
207											

	A	B	C	D	E	F	G	H
1	Mid-Peninsula Water District							
2	Water Rate Model							
3	9 - Consumption Rates							
4								
5								
6		Consumption Charge		Base	Average	Maximum	Maximum	
7		Cost of Service		Day	Day	Day	Hour	Total
8								
9		O&M (net of Non-Op Revenue)		\$8,712,858	\$98,787	\$382,275	\$285,109	\$9,479,029
10		Capital (includes D/S)		\$225,558	\$225,558	\$872,838	\$95,865	\$1,419,819
11		Transfers to Reserves		(\$600,801)	(\$21,801)	(\$84,363)	(\$25,607)	(\$732,572)
12		Service Charge Reallocation		\$2,552,298	\$92,614	\$358,388	\$108,784	\$3,112,085
13		Total Consumption Charge COS	a	\$10,889,913	\$395,158	\$1,529,138	\$464,151	\$13,278,361
14								
15		Units of Service (hcf)						
16		Residential	b	1,341	1,762	3,362	5,043	
17		Commercial	c	936	1,257	2,524	3,786	
18			d	2,278	3,019	5,886	8,830	
19		Proportional Allocation Factors						
20		Residential	e=b÷d	58.90%	58.36%	57.12%	57.12%	
21		Commercial	f=c÷d	41.10%	41.64%	42.88%	42.88%	
22				100.00%	100.00%	100.00%	100.00%	
23								
24		Cost of Service - Residential						
25		O&M (net of Non-Op Rev.)		\$5,131,568	\$57,650	\$218,348	\$162,849	\$5,570,415
26		Capital (includes D/S)		\$132,846	\$131,631	\$498,548	\$54,756	\$817,781
27		Transfers to Reserves		(\$353,851)	(\$12,723)	(\$48,187)	(\$14,626)	(\$429,386)
28		Service Charge Reallocation		\$1,503,214	\$54,048	\$204,704	\$62,136	\$1,824,102
29		Total COS - Residential	g=a*e	\$6,413,778	\$230,605	\$873,414	\$265,114	\$7,782,911
30							Annual water use (hcf)	658,072
31							\$ per hcf	\$11.83
32		Cost of Service - Commercial						
33		O&M (net of Non-Op Revenue)		\$3,581,290	\$41,137	\$163,927	\$122,260	\$3,908,614
34		Capital (includes D/S)		\$92,712	\$93,927	\$374,290	\$41,109	\$602,038
35		Transfers to Reserves		(\$246,950)	(\$9,078)	(\$36,177)	(\$10,981)	(\$303,186)
36		Service Charge Reallocation		\$1,049,084	\$38,567	\$153,684	\$46,649	\$1,287,983
37		Total COS - Commercial	g=a*f	\$4,476,136	\$164,553	\$655,724	\$199,037	\$5,495,450
38							Annual water use (hcf)	429,355
39							\$ per hcf	\$12.80
40								
41		Grand Total Consumption Charge COS		\$10,889,913	\$395,158	\$1,529,138	\$464,151	\$13,278,361
42				\$0	\$0	\$0	\$0	\$0
43								
44								
45		Residential ONLY						
46		Tiered Consumption Rates		Tier 1	Tier 2	Tier 3	Tier 4	Total
47		Demand Condition		Base Day	Average Day	Max Day	Max Hour	
48								
49		Tier Structure						
50		Volume per tier (hcf)		0-6 hcf	7-7 hcf	8-14 hcf	15+ hcf	
51		hcf by Tier		428,610	39,263	131,871	58,328	658,072
52								
53		Cost of Service by Tier		\$6,413,778	\$230,605	\$873,414	\$265,114	\$7,782,911
54								
55								
56								

	A	B	C	D	E	F	G	H
1	Mid-Peninsula Water District							
2	Water Rate Model							
3	9 - Consumption Rates							
4								
57		Base	Average	Maximum	Maximum			
58	Residential COS per Unit	Day	Day	Day	Hour			
59								
60	Residential COS - Consumption	\$6,413,778	\$230,605	\$873,414	\$265,114		\$7,782,911	
61								
62	Demand Per Tier							
63	Tier 1 (0-6 hcf)	428,610						
64	Tier 2 (7-7 hcf)	39,263	39,263					
65	Tier 3 (8-14 hcf)	131,871	131,871	131,871				
66	Tier 4 (15+ hcf)	58,328	58,328	58,328	58,328			
67	Total hcf per Tier	658,072	229,462	190,199	58,328			
68								
69	Cost-of-Service per Unit (hcf)	\$9.75	\$1.00	\$4.59	\$4.55			
70	Breakpoint	6	7	14				
71								
72		Base	Average	Maximum	Maximum			
73	Unit Cost Calculation	Day	Day	Day	Hour			
74	Tier 1 (0-6 hcf)	\$9.75	\$9.75	\$9.75	\$9.75			
75	Tier 2 (7-7 hcf)		\$1.00	\$1.00	\$1.00			
76	Tier 3 (8-14 hcf)			\$4.59	\$4.59			
77	Tier 4 (15+ hcf)				\$4.55			
78	Unit Cost per hcf (by Tier)	\$9.75	\$10.75	\$15.34	\$19.89			
79	Breakpoint	6	7	14				
80								
81								
82		Base	Average Day/	Maximum				
83	Residential COS per Unit	Day	Max Day	Hour				
84					Total			
85	Residential COS - Consumption ¹	\$6,413,778	\$1,104,019	\$265,114	\$7,782,911			
86								
87	Demand Per Tier							
88	Tier 1 (0-6 hcf)	428,610						
89	Tier 2 (7-14 hcf)	171,134	171,134					
90	Tier 3 (15+ hcf)	58,328	58,328	58,328				
91	Total hcf per Tier	658,072	229,462	58,328				
92								
93	Cost-of-Service per Unit (hcf)	\$9.75	\$4.81	\$4.55				
94								
95		Base	Average Day/	Maximum				
96	Unit Cost Calculation	Day	Max Day	Hour				
97	Tier 1 (0-6 hcf)	\$9.75	\$9.75	\$9.75				
98	Tier 2 (7-14 hcf)		\$4.81	\$4.81				
99	Tier 3 (15+ hcf)			\$4.55				
100	Unit Cost per hcf (by Tier)	\$9.75	\$14.56	\$19.10				

	A	B	C	D	E	F	G	H	I	J
1	Mid-Peninsula Water District									
2	Water Rate Model									
3	10 - Fixed System Charges									
4										
5										
6	Account and EMU Summary									
7	Service		# of	Meter	Capacity					
8	Size		Accounts	Ratings (gpm)	Multiplier*	EMUs				
9		a	b	c = b ÷ 20	a * c					
10	5/8" meters	7,254	20	1.00	7,254					
11	1" meters	615	50	2.50	1,538					
12	1 1/2" meters	159	100	5.00	795					
13	2" meters	170	160	8.00	1,360					
14	3" meters	35	320	16.00	560					
15	4" meters	20	500	25.00	500					
16	6" meters	6	1000	50.00	300					
17	Total Accounts	8,259	Total EMUs	12,307						
18										
19	Units Costs	\$1,024,116		\$3,665,535						
20										
21	Monthly Cost		Monthly Cost							
22	per Account	\$10.33	per EMU	\$24.82						
23										
24										
25										
26										
27	Service Charge Component Calculation									
28			Account	Capacity Component		Proposed	Total			
29	Service	% of	Component	Capacity	Capacity	Service Charges	Current	\$		
30	Size	Meters	(\$/mo.)	\$/EMU	Multiplier	(\$/mo.)	Charge	Difference		
31			a	b	c	d = b * c	e = a + d			
32	5/8" meters	87.8%	\$10.33	\$24.82	1.00	\$24.82	\$35.15	\$28.00	\$7.15	
33	1" meters	7.4%	\$10.33	\$24.82	2.50	\$62.05	\$72.39	\$42.00	\$30.39	
34	1 1/2" meters	1.9%	\$10.33	\$24.82	5.00	\$124.11	\$134.44	\$70.00	\$64.44	
35	2" meters	2.1%	\$10.33	\$24.82	8.00	\$198.57	\$208.90	\$112.00	\$96.90	
36	3" meters	0.4%	\$10.33	\$24.82	16.00	\$397.14	\$407.47	\$168.00	\$239.47	
37	4" meters	0.2%	\$10.33	\$24.82	25.00	\$620.53	\$630.86	\$280.00	\$350.86	
38	6" meters	0.1%	\$10.33	\$24.82	50.00	\$1,241.06	\$1,251.39	\$700.00	\$551.39	
39										