

# DIABLO WATER DISTRICT Revised Water Rate Study

April 19, 2022



# **DIABLO WATER DISTRICT**

87 Carol Lane  
Oakley, CA 94561-0127

## **REVISED WATER RATE STUDY**

April 19, 2022

### **HF&H CONSULTANTS, LLC**

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Walnut Creek, CA 94596



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April 19, 2022

Mr. Dan Muelrath  
General Manager  
Diablo Water District  
87 Carol Lane  
Oakley, CA 94561-0127

Subject: **Revised Water Rate Study**

Dear Mr. Muelrath:

This report revises HF&H's December 14, 2021 rate study to correct a modeling error and to update for significant changed conditions in the subsequent five months. The rates proposed in this revised rate study adjust rates that became effective February 1, 2022. The adjustment is planned for June 1, 2022.

Very truly yours,

**HF&H CONSULTANTS, LLC**

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### Water Rate Model

## GLOSSARY

**AWWA** - American Water Works Association

**Board** - The Board of Directors of the District

**Breakpoint** - The volume of water per billing period separating tiers in tiered rate structures

**CCF** - Hundred cubic feet (see HCF below)

**CCWD** - Contra Costa Water District

**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

**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

**District** - Diablo Water District

**EMU** - Equivalent Meter Unit

**FY** - Fiscal Year; for the District this begins on July 1 and concludes on the immediately following June 30

**GPD** - Gallons Per Day

**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

**Monthly Service Charge** - Fixed charges per account that do not vary based on metered (volumetric) water use. Flat rates are not uniform rates (see below)

**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

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

**Water Charges** – The volumetric (usage) portion of the District’s rate structure that charges a rate per unit of consumption



## **ACKNOWLEDGEMENTS**

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### Board of Directors

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## **LIMITATIONS**

This document was prepared solely for the Diablo Water District (District) in accordance with the consulting 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, HF&H relied on information provided by the District, which we consider accurate and reliable. This study contains certain 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 and projections set out in this study.

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 study should be referred to a qualified attorney.

# **DIABLO WATER DISTRICT REVISED WATER RATE STUDY**



## I. EXECUTIVE SUMMARY

This report documents the process and basis for the proposed adjustments to the Diablo Water District's (District's) water rates and rate structures proposed for adoption for the next five years, beginning June 1, 2022 and each February 1 thereafter through February 1, 2026. The following discussion summarizes HF&H's findings and recommendations.

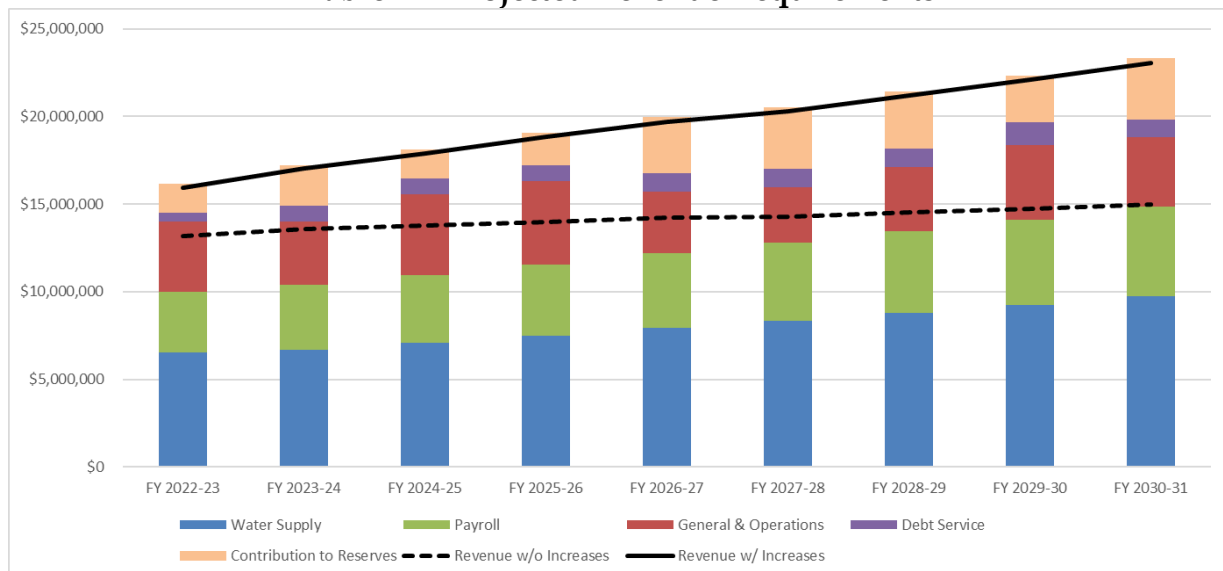
### PURPOSE OF REPORT

This report revises HF&H's December 14, 2021 rate study to correct a modeling error that resulted in rates that were set lower than intended and thereby were not generating sufficient revenue. It was also apparent that water supply conditions and certain expense projections had changed in the subsequent five months. This revised rate study updates the previous revenue requirement projections for the changed conditions at the same time that the rates are adjusted to generate the necessary revenue. The rates proposed in this revised rate study adjust rates that became effective February 1, 2022. The adjustment is planned for June 1, 2022.

### PROJECTED REVENUE REQUIREMENTS AND REVENUE INCREASES

The water revenue requirements were reviewed and analyzed by preparing a ten-year projection of District operating and capital expenses. The revised revenue requirement projections are shown in **Table I-1**.

**Table I-1 Projected Revenue Requirements**



The updated projections show the increases in revenue requirements needed to fund expenses, meet debt service coverage requirements, and maintain adequate reserves.

## CUSTOMER CLASS MODIFICATIONS

The District's previous rate structure applied to all customers regardless of customer class. In effect, the District had no customer classes. HF&H proposed that the District implement separate rate structures for the major customer classes that the District tracks in its billing system. HF&H proposed the following customer classes: (i) Single Family Residential, (ii) Multi-Family Residential, (iii) Non Residential (commercial), (iv) Irrigation, and (v) Hydrants.

## WATER RATE STRUCTURE MODIFICATIONS

The District's water rate structure comprises two components: monthly service charges and water charges. Service charges are charged on a monthly basis and vary depending on the size of the customer's meter. Water charges are also charged monthly and vary depending on how many units of water are used. This rate structure is applied to all customers without regard to customer class and has been in place for several years with periodic rate increases.

### Monthly Service Charges

The cost-of-service analysis indicates that the revenue from the monthly service charge should decrease from 24.5% to 22.7% of total rate revenue. In addition, the monthly service charges have been updated to reflect the rated capacities of each meter size. The proposed monthly service charges, shown by meter size, for the next five years are summarized in **Table I-2**.

**Table I-2. Proposed Monthly Service Charge Rates**

Service Size	Adopted 2/1/22	Proposed 6/1/22	2/1/2023	2/1/2024	2/1/2025	2/1/2026
5/8" meters	\$17.27	\$19.70	\$20.49	\$21.31	\$22.16	\$23.05
1" meters	\$39.36	\$44.94	\$46.74	\$48.61	\$50.55	\$52.57
1" w/ Fire meters	\$17.27	\$19.70	\$20.49	\$21.31	\$22.16	\$23.05
1 1/2" meters	\$76.18	\$87.01	\$90.49	\$94.11	\$97.88	\$101.79
2" meters	\$120.37	\$137.49	\$142.99	\$148.71	\$154.66	\$160.85
3" meters	\$260.29	\$297.36	\$309.25	\$321.62	\$334.49	\$347.87
4" meters	\$444.39	\$507.71	\$528.02	\$549.14	\$571.10	\$593.95
6" meters	\$996.71	\$1,138.76	\$1,184.31	\$1,231.68	\$1,280.95	\$1,332.19
8" meters	\$2,064.51	\$2,358.78	\$2,453.13	\$2,551.26	\$2,653.31	\$2,759.44
10" meters	\$3,095.50	\$3,536.74	\$3,678.21	\$3,825.34	\$3,978.35	\$4,137.48
12" meters	\$3,905.56	\$4,462.28	\$4,640.77	\$4,826.40	\$5,019.45	\$5,220.23
Fire Services	\$19.92	\$22.73	\$23.64	\$24.58	\$25.57	\$26.59
Fire Hydrant Meters	\$260.29	\$297.36	\$309.25	\$321.62	\$334.49	\$347.87

1. Source: **Figure V-4** plus 3.0% for recent higher than anticipated inflationary increases (e.g. fuel, labor, cost of purchased water)

Note: most of the service charge rates proposed for June 1, 2022 are greater than the February 1, 2022 rates but are less than the rates would have been if the full revenue increase were applied to the rates in effect prior to February 1, 2022.

## Water Charge Rates

The District's ratepayers were charged a two-tier increasing block rate for their metered water use. California case law<sup>1</sup> provides guidance on designing tiered rates that limits the amount of discretion that was previously common in designing conservation-oriented rates. First, the size of each tier should be based on actual customer demands that correspond 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 industry practices in which the rates for each tier were adjusted to reward low water use and discourage high water use. The proposed water charge rates are based on the cost of providing for levels of service corresponding to each of the tiers ranging from low peaking to high peaking.

With these modifications, the resulting proposed water charge rates are summarized in **Table I-3**.

**Table I-3. Proposed Water Charge Rates**

Customer Class	Adopted 2/1/22	Customer Class	Proposed 6/1/22	2/1/2023	2/1/2024	2/1/2025	2/1/2026
<b>Residential - Single Family</b>		<b>Residential - Single Family</b>					
Tier 1: 0 - 8 hcf	\$2.61	Tier 1: 0 - 8 hcf	\$2.93	\$3.05	\$3.17	\$3.30	\$3.43
Tier 2: 9 - 14 hcf	\$4.36	Tier 2: 9 - 14 hcf	\$4.88	\$5.08	\$5.28	\$5.49	\$5.71
Tier 3: 15+ hcf	\$5.96	Tier 3: 15+ hcf	\$6.70	\$6.97	\$7.25	\$7.54	\$7.84
<b>Residential - Multi Family</b>		<b>Residential - Multi Family</b>					
All Usage	\$3.83	All Usage	\$4.30	\$4.47	\$4.65	\$4.84	\$5.03
<b>Non Residential</b>		<b>Non Residential</b>					
Tier 1: 0 - 34 hcf	\$3.52	Tier 1: 0 - 34 hcf	\$3.93	\$4.09	\$4.25	\$4.42	\$4.60
Tier 2: 35+ hcf	\$4.30	Tier 2: 35+ hcf	\$4.83	\$5.02	\$5.22	\$5.43	\$5.65
<b>Irrigation</b>		<b>Irrigation</b>					
Tier 1: 0 - 113 hcf	\$3.52	Tier 1: 0 - 113 hcf	\$3.93	\$4.09	\$4.25	\$4.42	\$4.60
Tier 2: 114+ hcf	\$4.62	Tier 2: 114+ hcf	\$5.18	\$5.39	\$5.60	\$5.83	\$6.06
<b>Hydrant</b>		<b>Hydrant</b>					
Tier 1: 0 - 115 hcf	\$3.52	Tier 1: 0 - 115 hcf	\$3.93	\$4.09	\$4.25	\$4.42	\$4.60
Tier 2: 116+ hcf	\$4.29	Tier 2: 116+ hcf	\$4.81	\$5.00	\$5.20	\$5.41	\$5.63

1. Source: **Figures V-6, V-7, V-9, V-11, V-13** plus 3.0% for recent higher than anticipated inflationary increases (e.g. fuel, labor, cost of purchased water)

<sup>1</sup> *Howard Jarvis Taxpayers Association v. City of San Juan Capistrano*.

## II. INTRODUCTION

### STUDY PURPOSE

The purpose of this study is to conduct a cost-of-service analysis that will determine rates and a rate structure that proportionally recovers the cost of providing the District's water service to its customers. 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.

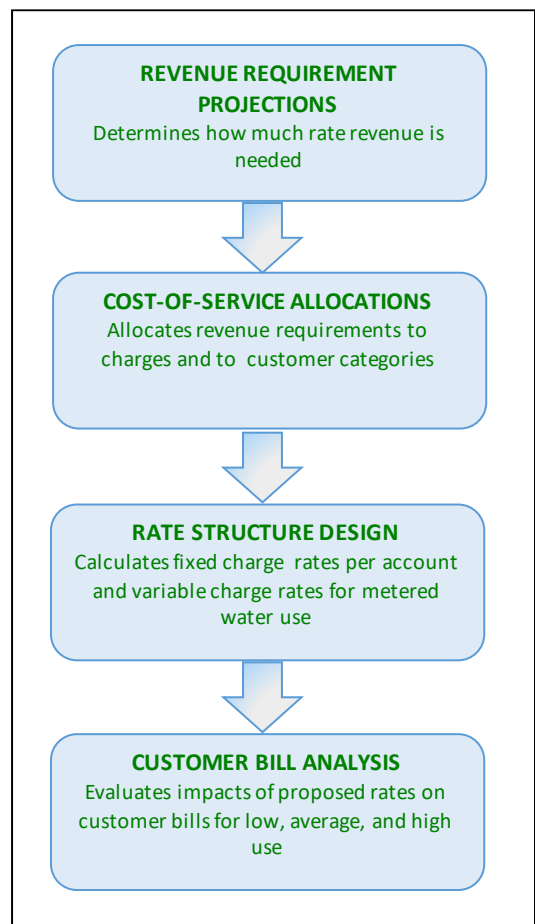
### STUDY PROCESS

The rate study was conducted following industry standards and practices promulgated by the American Water Works Association.<sup>2</sup> 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, debt service, 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.

### 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.



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

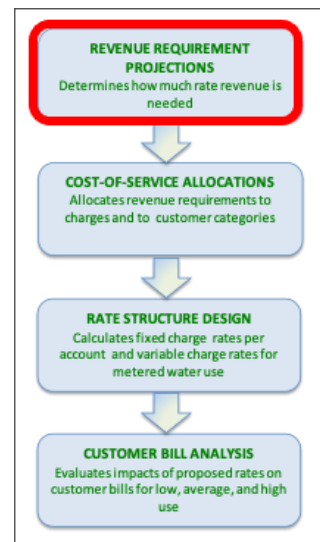
## III. REVENUE REQUIREMENTS

The revenue requirement analysis began with the FY 2021-22 budgeted O&M and capital expenditures for the District's General Operating Fund (Fund 01). 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.

As previously noted, this revised rate study includes updates that reflect changed water supply conditions and certain expense projections since the December 14, 2021 rate study was prepared.

### 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 2031-32.



**Table III-1. Projection Assumptions**

	Budget	Projected								
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
Annual Account Growth Rate		3.04%	1.72%	1.52%	1.50%	1.48%	1.46%	1.43%	1.41%	1.39%
Changes in Annual Water Demand	0.83%	-2.77%	3.53%	0.99%	1.50%	1.48%	0.11%	1.44%	1.42%	1.40%
General Inflation	Budgeted	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Salaries & Wages	Budgeted	7.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Benefits	Budgeted	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Utilities	Budgeted	50.78%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Fuel & Chemicals	Budgeted	50.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Construction Cost Inflation		2.92%	2.92%	2.92%	2.92%	2.92%	2.92%	2.92%	2.92%	2.92%
Interest on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Annual SFR conservation reduction	Budgeted	2.56%	0.79%	0.53%	0.00%	0.00%	1.33%	0.00%	0.00%	0.00%
CCWD Estimated Annual Increase	7.00%	6.00%	5.75%	5.25%	5.25%	5.25%	5.25%	4.00%	4.00%	4.00%

Source: Model Tab 1. Assumptions & Policies

The resulting revenue requirement projections are shown in **Figure III-1** as stacked bars. In addition, revenues from current rates are shown as a dashed black line and the revenue with revenue increases as a solid black line.

### Expense Projections

The detail for the line items in each expense category is shown in the model in the Appendix. The following updates to the expense projections were made in this revised rate study.



- FY 2022-23 Salaries and wages increased from 5% to 7%.
- FY 2022-23 Fuel and chemicals were increased from 3% to 50%.
- FY 2021-22 Contra Costa Water District (CCWD) wholesale water rates were increased from 6.25% to 7.00%.
- Delayed hires that will not occur in FY 2021-22.
- Greater reliance on purchased water from CCWD over well water produced by the District.
- Reduced consumption estimates due to continued drought conditions.
- Use of revenue from non-potable water sales to offset costs
- FY 2021-22 change in debt service.

### Water Supply Expenses

The projected water supply expenses are the cost of purchased water from CCWD. This cost is gradually increasing during the projection period as a result of increases in the CCWD's wholesale rates.

### Operating & Maintenance Expenses

The O&M expenses are projected to increase based on the escalation factors in **Table III-1**. O&M expenses include routine maintenance of the water system, chemicals used for treatment, and utilities. Of note, fire hydrant maintenance is now being performed by the District and this expense will increase from \$25,000 in FY 2021-22 to \$150,000 in FY 2022-23. Recent legislation<sup>3</sup> specifies that costs to construct, maintain, replace or repair public fire hydrants consistent with fire codes and industry standards (including costs of water distributed through those hydrants) may be included in water system costs and water rates.

### PAYGo Capital Projects

A significant portion of the District's revenue requirements comprises annual expenditures on capital improvements paid from rate revenues and capital reserves. These expenditures fund the on-going renewal and replacement of aging infrastructure. Renewal of system infrastructure is necessary in order to preserve and protect the operational readiness and service capabilities of the District's water system. A list of the projected capital projects is shown in **Table III-2**.

Because PAYGo capital project costs fluctuate from year to year, they are funded from capital reserves, which buffers the annual fluctuations in District cash flows 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 average of annual PAYGo capital expenses. The annual average expenditures for pay-as-you-go

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<sup>3</sup> Senate Bill 1386 (Moorlach) was passed into law in 2020 and became effective on January 1, 2021 as Statutes of 2020, Chapter 240

(PAYGo) capital projects averages \$1,915,938 in 2021 dollars over the ten-year period. **Table III-3** converts this average to an inflation-adjusted amount of \$2,192,728. The amount of these contributions is based on meeting reserve target balances, which are discussed further below.

**Table III-2. Capital Improvement Program - PAYGo Projects**

PAYGo Funded Projects		10-Year Costs
1	Public Right of Way Relocations	\$1,658,866
2	RBWTP - Projects & Improvements	\$7,293,923
3	Additional RBWTP Projects	\$14,000
4	Field Equipment Purchases	\$845,000
5	Valve Replacement	\$286,597
6	Add/Replace Vehicles - Construction Trucks	\$1,197,500
7	Corpyard VFD's	\$125,000
8	R1/R2 Seismic Upgrades	\$1,200,940
9	Scada Upgrade	\$606,500
10	New Office Equipment	\$41,500
11	Corpyard Improvements	\$160,278
12	Pipeline Corrosion Testing/Repairs	\$229,278
13	Unidentified Future CIP	\$5,500,000
<b>Total</b>		<b>\$19,159,382</b>

Source: District's 10-Year Budget Rate Model

**Table III-3. Capital Improvement Program - Inflation Adjusted Costs**

	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	Total Project Cost
PAYGo Funded Projects	\$1,720,763	\$1,952,701	\$1,508,920	\$1,436,477	\$1,536,527	\$1,802,216	\$2,182,428	\$1,629,611	\$2,715,906	\$2,673,832	\$19,159,382
ENR Multiplier	1.000	1.029	1.058	1.088	1.117	1.146	1.175	1.205	1.234	1.263	
Project Costs Escalated	\$1,720,763	\$2,009,756	\$1,597,096	\$1,562,393	\$1,716,108	\$2,065,507	\$2,565,033	\$1,962,915	\$3,350,745	\$3,376,961	\$21,927,279
Average Annual Cash-Funded CIP										\$2,192,728	

### General & Administrative Expenses

Like O&M expenses, General & Administrative expenses are projected to increase slightly over the projection period based on the escalation factors in **Table III-1**.

### Debt Service

The District currently pays debt service on previously issued Certificates of Participation (COPs) and plans to issue new debt in the ten-year planning period to fund solar generation projects to offset greenhouse gas emissions, a new corporation/operations yard, and water mains and service lines replacements.

### Contributions to Reserves

The revenue requirements include contributions to operating and capital reserves in addition to what is needed to fund the PAYGo capital projects. The operating reserve

provides working capital to meet month-to-month cash flow for O&M expenses. The capital reserve provides working capital for funding PAYGo capital projects. **Figure III-1** summarizes the projected revenue requirements.

**Figure III-1. Revenue Requirement Projections**



Source: Model Table 2. Revenue Requirement; data from District's FY 2021-22 Budget.

## Proposed Revenue Increases

In addition to showing the major components of the revenue requirements, **Figure III-1** also shows the revenues from current rates and revenues from rates after rate increases are added. The rates set for February 1, 2022 were set lower than intended due to a modeling error and thereby were not generating sufficient revenue. The revenue increase intended for February 1, 2022 was 17%; instead, the increase was only 7.1%. In order to achieve the full revenue increase that was intended and to also update the revenue requirement for current projections, an additional revenue increase of 12.5% is required effective June 1, 2022. With that revenue increase, there is not need to change any of the future 4% annual revenue increases that were projected in the December 14, 2021 rate study.

## 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 reserve fund balance.

Revenue increases that are proposed in this report would maintain reserves that meet certain conditions. One component of unrestricted reserves is needed to provide

adequate working capital to meet monthly cash flow needs during the year related to O&M and capital expenses.

The Operating Reserve target is set based on the lag time between when the District incurs operating expenses and when the District receives payments from ratepayers. Hence, the billing frequency is a key consideration in setting the Operating Reserve target balance. In the District's case, it bills customers on a monthly basis. A target of 25% of annual O&M expenses is recommended because of the lag time between when the District incurs costs and receives revenues from rate payers. This is consistent with the District's current reserve policy.

The District maintains a Rate Stabilization Reserve that can be used to buffer minor fluctuations in water purchases throughout the year. Furthermore, this reserve can be used to cover minor unexpected expenses. Given the size of the District's operating budget, the current target of \$1 million is viewed as sufficient for these purposes.

A proposed Capital Reserve target is based on the working capital that is needed to fund PAYGo project costs. In this case, the annual CIP average of the \$2,192,728 (which includes inflation) is used as the target balance for the Capital Reserve.

A proposed Emergency Reserve will be used to cover major repairs in the case of an emergency that severely damages District infrastructure beyond minor repairs. This reserve will allow the District to quickly pay for repairs without the need to borrow money on the capital markets which could delay the necessary repairs. This reserve will be initially funded at \$1 million and will be increased by \$1 million every year until it reaches \$5 million.

A comparison is made in **Table III-4** of the District's current target reserve balances with the proposed target balances. We regard these targets as minimums. The fund balance may exceed the targets from time to time but should not be allowed to continue to grow in excess of foreseeable needs.

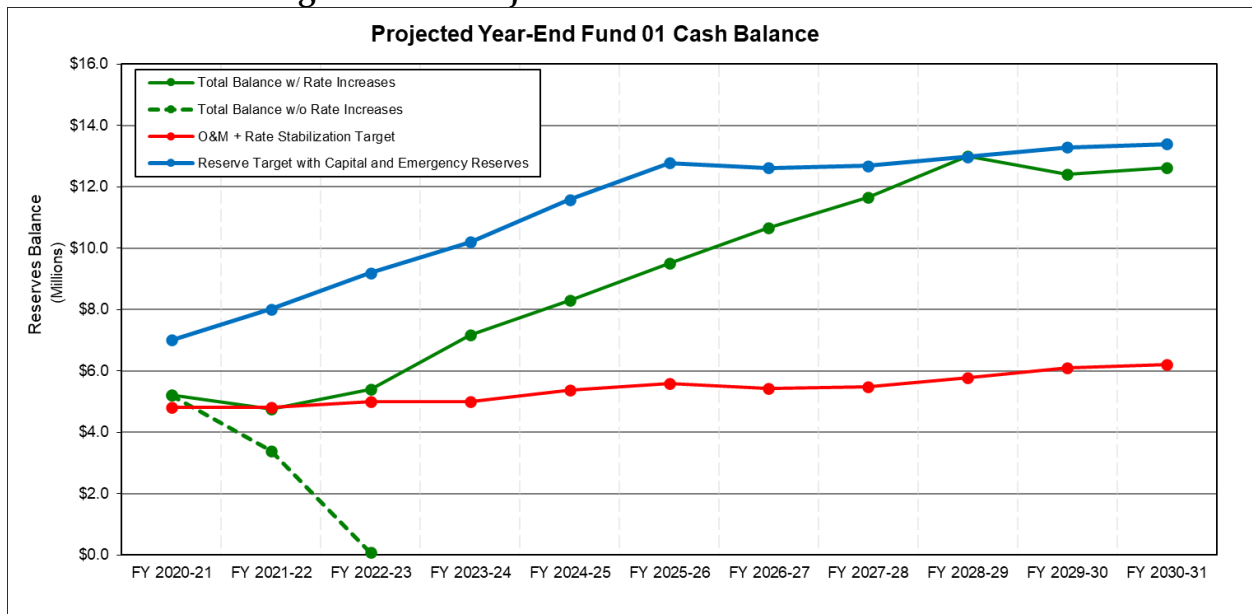
**Table III-4. Current and Proposed Target Reserve Balances**

<b>Current Targets</b>	<b>Target</b>
Operations & Maintenance	3 Months O&M Costs
Rate Stabilization	\$1 million
<b>HF&amp;H Recommended</b>	<b>Target</b>
Operations & Maintenance	3 Months O&M Costs
Rate Stabilization	\$1 million
Capital	1-Year Average CIP
Emergency Reserve	\$5 million

The projected fund balance over the planning period is graphed in **Figure III-2**. The solid green line represents the fund balance with the proposed annual revenue increases. The dashed green line shows the fund balance without revenue increases. Without revenue increases, the fund balance would drop off sharply beginning in FY 2021-22 because current revenues are unable to support the required capital improvement program.

**Figure III-2** also shows the current target balance for the District in red and the proposed target balance in blue. It can be seen that the current fund balance is less than the proposed fund balance, but above the current target. With the proposed revenue increases, the fund balance is projected to gradually climbing until it reaches the target balance in FY 2028-29. Higher revenue increases could reach the recommended target balance earlier. We regard the revenue increases as minimal because of the duration it takes to achieve the recommended target balance.

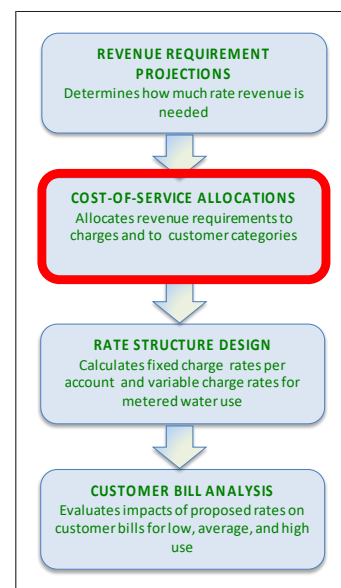
**Figure III-2. Projected Unrestricted Fund Balance**



## 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 monthly services charge and the water usage charge and further allocated the consumption charge costs between the proposed customer classes and among customers in each proposed class.

This revised rate study bases the cost-of-service allocations on the revised revenue requirement. As a result, there is a slight adjustment of the cost of service between the service charge and water charge components of the rates, which is reflected in slight changes in the rates themselves.



### 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),<sup>4</sup> which is referred to as the “base/extra capacity method.” The analytical procedure contains the following steps:

1. **Cost classification** - Costs in the FY 2021-22 revenue requirement are classified into the service categories related to providing for customer demands and for customer service. FY 2021-22 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

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

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:

**Demand services** - the basis for the consumption charge rates.

- Average day – average daily demand: facilities that do not provide for peak 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 service charge.

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

**Composite services** - these costs are recovered from both consumption and service charges.

- Indirect allocations for costs that are not directly related to either the demand or customer service functions: personnel, overhead, non-operating revenue.

Working with District staff, the individual line items in the revenue requirements were classified into either the demand, customer, or composite services categories. 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

The same flows used in the previous cost-of-service analysis were used in this revised rate study.

#### 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 for FY 2020-21.



### Maximum Day Demand

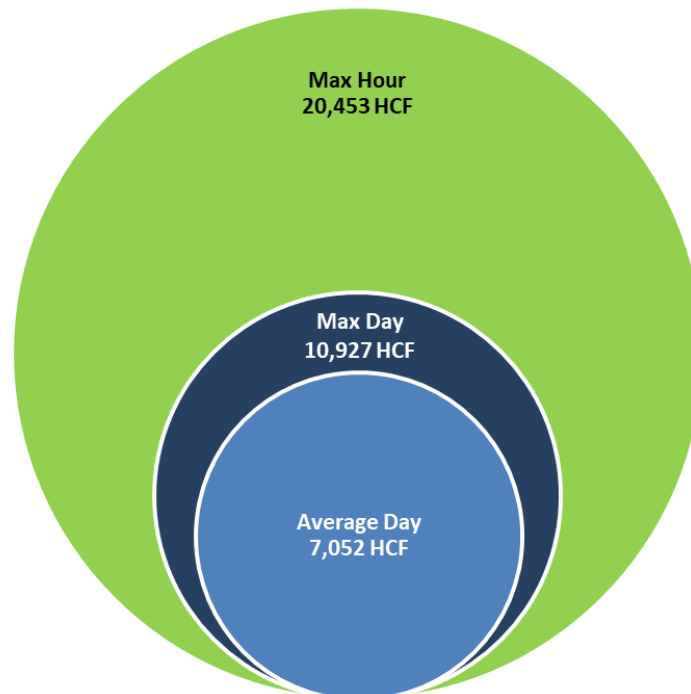
Maximum day demand includes average day demand plus peak day demand in the irrigation season. The District has daily readings for each customer class but not by individual meter. Hence, a maximum day demand can be established for each customer class.

### Maximum Hour Demand

Maximum hour demand represents the maximum hour demand on the maximum day. The District has hourly readings for each customer class but not by individual meter. Hence, a maximum hour demand can be established for each customer class.

**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 average day demand, which is demand when peaking is minimal. Maximum day demand requires a pipeline that is 1.55 times the capacity of average, non-peaking demand. To meet the highest level of service required by maximum hour demand, the pipeline capacity must be 2.9 times greater than the average demand. The larger capacities that are required to meet the higher levels of service require expenditures that the cost-of-service analysis allocates proportionately to those who require the service.

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

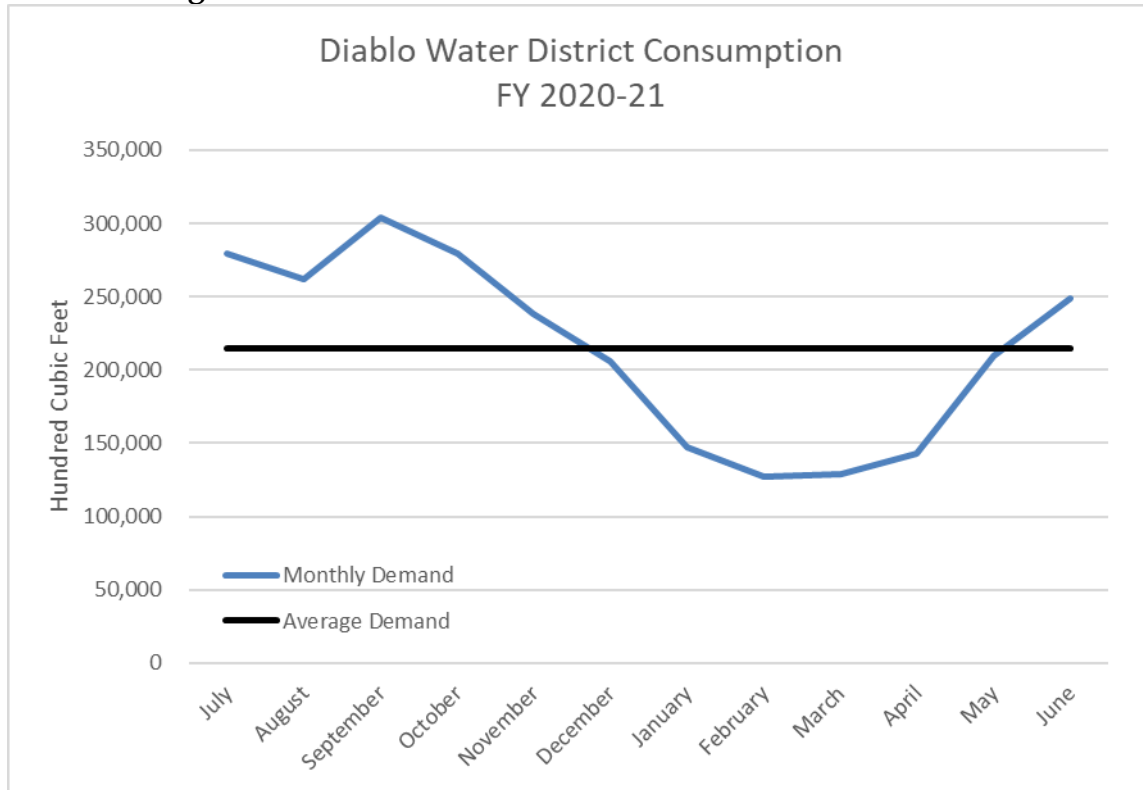


Note: Pipeline diameters drawn to relative scale



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

**Figure IV-2. Recent Seasonal Variation in Water Demand**



### Allocation Factors

The flows associated with the demand service levels for each proposed 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' 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**

		<b>Levels of Demand (hcf)</b>		
		<b>Average</b>	<b>Maximum</b>	<b>Maximum</b>
		<b>Day</b>	<b>Day</b>	<b>Hour</b>
		<b>a</b>	<b>b</b>	<b>c</b>
1	<b>Demand by Customer Category (hcf)</b>			
2	Residential - SF	5,688	8,485	17,829
3	Residential - MF	194	198	180
4	Non Residential	277	490	221
5	Hydrant	211	400	600
6	Irrigation	682	1,354	1,622
7	Total	7,052	10,927	20,453
8	<b>Ratio of Flows to Average Day</b>			
9	Residential - SF	1.00	1.49	3.13
10	Residential - MF	1.00	1.02	0.93
11	Non Residential	1.00	1.77	0.80
12	Hydrant	1.00	1.89	2.84
13	Irrigation	1.00	1.98	2.38
14	Total	1.00	1.55	2.90
15				
16	Level of Service	7,052	10,927	20,453
17	Average Day Demand	7,052	7,052	7,052
18	<b>Ratio of Level of Service to Average Day</b>	<b>1.00</b>	<b>1.55</b>	<b>2.90</b>

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 maximum hour are allocated to both average day and maximum day and not to maximum hour only. This is done because the capacity provided by maximum hour facilities also provides capacity to meet average day and maximum day demands, as well.

**Table IV-2. Service Level Allocation Factors**

		<b>Demand Service Levels</b>			
<b>Allocation Basis</b>	<b>Load Factors</b>	<b>Average Day</b>	<b>Maximum Day</b>	<b>Maximum Hour</b>	<b>Totals</b>
	<b>a</b>	<b>b</b>	<b>c</b>	<b>d</b>	<b>e</b>
1 <b>Average Day</b>	<b>1.00</b>	1.00			1.00
2 <i>Allocation %</i>		100%			100%
3					
4 <b>Maximum Day</b>	<b>1.55</b>	1.00	0.55		1.55
5 <i>Allocation %</i>		64.5%	35.5%		100%
6					
7 <b>Maximum Hour</b>	<b>2.90</b>	1.00	0.55	1.35	2.90
8 <i>Allocation %</i>		34.5%	18.9%	46.6%	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 allocation 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 Services		Total
		Average Day	Maximum Day	Maximum Hour	Accounts	Service Charge	
		a	b	c	d	e	f
1	<u>Demand Services</u>						
2	Average Day	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
3	Max Day	64.5%	35.5%	0.0%	0.0%	0.0%	100.0%
4	Max Hour	34.5%	18.9%	46.6%	0.0%	0.0%	100.0%
5	<u>Customer Services</u>						
6	Capacity	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
7	Accounts	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
8	<u>Composite Allocations</u>						
9	O&M Composite	85.1%	12.9%	0.4%	4.1%	-2.4%	100.0%
10	CIP Composite	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
11	Exp Composite	63.9%	9.7%	0.3%	3.0%	23.1%	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 revised FY 2021-22 revenue requirement allocated into the demand and customer services categories. Each line item was classified with the assistance of District staff according to the associated function. The allocation factors that are summarized in **Table IV-3** allocate the costs across the services based on the cost classification in column b.

Table IV-4. Direct Allocations - O&amp;M Expenses

	FY 2021-22 Revenue Requirement	Allocation Factor	Demand Services			Customer Services	
			Average Day	Maximum Day	Maximum Hour	Accounts	Capacity
	a	b	c	d	e	f	g
1 Direct O&M							
2 Operations and Maintenance							
3 Maintenance T&D	\$278,500	Average Day	\$278,500	\$0	\$0	\$0	\$0
4 Maintenance Backflow	\$48,000	Accounts	\$0	\$0	\$0	\$48,000	\$0
5 Maintenance Reservoirs	\$41,000	Max Hour	\$14,137	\$7,767	\$19,096	\$0	\$0
6 Maintenance Blending	\$17,000	Max Day	\$10,972	\$6,028	\$0	\$0	\$0
7 Maintenance Glen Park Well	\$10,260	Max Day	\$6,622	\$3,638	\$0	\$0	\$0
8 Maintenance Stonecreek Well	\$10,260	Max Day	\$6,622	\$3,638	\$0	\$0	\$0
9 Maintenance Delta Coves	\$5,250	Average Day	\$5,250	\$0	\$0	\$0	\$0
10 Water Samples	\$80,000	Average Day	\$80,000	\$0	\$0	\$0	\$0
11 Transmission and Distribution							
12 Chemicals Glen Park Well	\$7,210	Max Day	\$4,653	\$2,557	\$0	\$0	\$0
13 Chemicals Blending Facility	\$25,100	Max Day	\$16,200	\$8,900	\$0	\$0	\$0
14 Chemicals Stonecreek Well	\$5,000	Max Day	\$3,227	\$1,773	\$0	\$0	\$0
15 Chemicals Delta Coves	\$7,000	Average Day	\$7,000	\$0	\$0	\$0	\$0
16 General Operating - T&D	\$178,030	Average Day	\$178,030	\$0	\$0	\$0	\$0
17 General Operating Blending	\$36,450	Max Day	\$23,525	\$12,925	\$0	\$0	\$0
18 General Operating Glen Park Well	\$3,000	Max Day	\$1,936	\$1,064	\$0	\$0	\$0
19 General Operating Stonecreek Well	\$3,000	Max Day	\$1,936	\$1,064	\$0	\$0	\$0
20 General Operating Delta Coves	\$1,000	Average Day	\$1,000	\$0	\$0	\$0	\$0
21 Water Purchases - Source of Supply CCWD							
22 Service Charge	\$93	Capacity	\$0	\$0	\$0	\$0	\$93
23 Demand Charge	\$683,453	Max Day	\$441,112	\$242,341	\$0	\$0	\$0
24 Volumetric Charge	\$3,606,119	Average Day	\$3,606,119	\$0	\$0	\$0	\$0
25 Additional Water Purchases from CCWD	\$500,000	Average Day	\$500,000	\$0	\$0	\$0	\$0
26 Water Treatment and Maintenance - RBWTP O&M							
27 Randall Bold Water Treatment Plant O&M	\$1,886,016	Max Day	\$1,217,265	\$668,751	\$0	\$0	\$0
28 Other Expenses							
29 Pipeline Corrosion Testing/Repairs	\$20,000	Average Day	\$20,000	\$0	\$0	\$0	\$0
30 Groundwater Sustainability Expenses	\$0	Average Day	\$0	\$0	\$0	\$0	\$0
31 Fire Hydrant Maintenance	\$25,000	Accounts	\$0	\$0	\$0	\$25,000	\$0
32 Water Conservation Program	\$25,000	Max Hour	\$8,620	\$4,736	\$11,644	\$0	\$0
33 Finance	\$185,000	Accounts	\$0	\$0	\$0	\$185,000	\$0
34 Customer Service	\$46,000	Accounts	\$0	\$0	\$0	\$46,000	\$0
35 Non-Operating Revenue							
36 Check Valve Maintenance	(\$170,000)	Capacity	\$0	\$0	\$0	\$0	(\$170,000)
37 Check Valve Installation	(\$2,600)	Capacity	\$0	\$0	\$0	\$0	(\$2,600)
38 Destroyed Lock Charges	\$0	Capacity	\$0	\$0	\$0	\$0	\$0
39 Tampering Charges	(\$10,000)	Capacity	\$0	\$0	\$0	\$0	(\$10,000)
40 Meter Repairs	(\$530)	Capacity	\$0	\$0	\$0	\$0	(\$530)
41 Hydrant Meter Replacement	(\$3,183)	Max Hour	(\$1,097)	(\$603)	(\$1,482)	\$0	\$0
42 Delta Coves Property Tax Income	(\$59,883)	Average Day	(\$59,883)	\$0	\$0	\$0	\$0
43 Total Allocable O&M	\$7,486,544		\$6,371,747	\$964,577	\$29,258	\$304,000	(\$183,037)
44 O&M Composite			85.1%	12.9%	0.4%	4.1%	-2.4%
45							
46 Debt Service	\$289,095	Capacity	\$0	\$0	\$0	\$0	\$289,095
47							
48 Capital Expenses (PayGo)	\$2,192,728	CIP Composite	\$0	\$0	\$0	\$0	\$2,192,728
49							
50 Subtotal - O&M, Debt Service, and Capital	\$9,968,367		\$6,371,747	\$964,577	\$29,258	\$304,000	\$2,298,786
51		% of Consumption	86.5%	13.1%	0.4%		
52 Expense Composite		% of total	63.9%	9.7%	0.3%	3.0%	23.1%
53							

Table IV-5 shows the allocation of the capital expenses. Table IV-5 also includes the calculation of the capital composite allocation percentages that are used in Table IV-6 for the CIP PAYGo expense.

**Table IV-5. Direct Allocations - Capital Expenses**

Project		Total Cost	Allocation Factor	Average Day	Maximum Day	Maximum Hour	Accounts	Service Charge
		a	b	c	d	e	f	g
1	Public Right of Way Relocations	\$1,658,866	Capacity	\$0	\$0	\$0	\$0	\$1,658,866
2	RBWTP - Projects & Improvements	\$7,293,923	Capacity	\$0	\$0	\$0	\$0	\$7,293,923
3	Additional RBWTP Projects	\$14,000	Capacity	\$0	\$0	\$0	\$0	\$14,000
4	Field Equipment Purchases	\$845,000	Capacity	\$0	\$0	\$0	\$0	\$845,000
5	Valve Replacement	\$286,597	Capacity	\$0	\$0	\$0	\$0	\$286,597
6	Add/Replace Vehicles - Construction Trucks	\$1,197,500	Capacity	\$0	\$0	\$0	\$0	\$1,197,500
7	Corpyard VFD's	\$125,000	Capacity	\$0	\$0	\$0	\$0	\$125,000
8	R1/R2 Seismic Upgrades	\$1,200,940	Capacity	\$0	\$0	\$0	\$0	\$1,200,940
9	Scada Upgrade	\$606,500	Capacity	\$0	\$0	\$0	\$0	\$606,500
10	New Office Equipment	\$41,500	Capacity	\$0	\$0	\$0	\$0	\$41,500
11	Radio Read Upgrade	\$0	Capacity	\$0	\$0	\$0	\$0	\$0
12	Corpyard Improvements	\$160,278	Capacity	\$0	\$0	\$0	\$0	\$160,278
13	Pipeline Corrosion Testing/Repairs	\$229,278	Capacity	\$0	\$0	\$0	\$0	\$229,278
14	Maint T&D	\$0	Capacity	\$0	\$0	\$0	\$0	\$0
15	Unidentified Future CIP	\$5,500,000	Capacity	\$0	\$0	\$0	\$0	\$5,500,000
16		\$19,159,382		\$0	\$0	\$0	\$0	\$19,159,382
17				0.00%	0.00%	0.00%	0.00%	100.00%

**Table IV-6** shows the allocation of the O&M composite expenses, the CIP composite expense<sup>5</sup>, and non-operating revenues. **Table IV-6** also shows the distribution of the revenue requirement between the demand services and customer service categories. The demand service costs are recovered through the consumption charges and the customer accounts and capacity costs are combined for determining the service charges.

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 service charges, which are fixed based on the size of the service connection; they do not vary with demand. The analysis indicates that 22.7% of the revenue requirement is attributed to the service charges, which is a decrease from the current 24.5%.

<sup>5</sup> The CIP composite expense is the ten-year annual average of PAYGo projects (taking into account projected inflation).

Table IV-6. Composite and Non-Operating Revenue Allocations

	FY 2021-22 Revenue Requirement	Allocation Factor	Demand Services			Customer Services	
			Average Day	Maximum Day	Maximum Hour	Accounts	Capacity
	a	b	c	d	e	f	g
<b>Composite Allocations</b>							
<b>Operations &amp; Maintenance</b>							
Maintenance Corpyard	\$25,000	O&M Composite	\$21,277	\$3,221	\$98	\$1,015	(\$611)
General Operating Corpyard	\$40,950	O&M Composite	\$34,852	\$5,276	\$160	\$1,663	(\$1,001)
Telephone Services for Field	\$8,450	O&M Composite	\$7,192	\$1,089	\$33	\$343	(\$207)
Utilities for Field	\$172,450	O&M Composite	\$146,771	\$22,219	\$674	\$7,003	(\$4,216)
Automotive Fuel, Maintenance, Misc	\$87,000	O&M Composite	\$74,045	\$11,209	\$340	\$3,533	(\$2,127)
<b>Other</b>							
Corpyard Improvements	\$13,545	O&M Composite	\$11,528	\$1,745	\$53	\$550	(\$331)
Additional Staff	\$0	O&M Composite	\$0	\$0	\$0	\$0	\$0
Administrative and General	\$162,575	O&M Composite	\$138,366	\$20,946	\$635	\$6,602	(\$3,975)
Board of Directors	\$27,562	O&M Composite	\$23,458	\$3,551	\$108	\$1,119	(\$674)
Office	\$223,870	O&M Composite	\$190,534	\$28,844	\$875	\$9,091	(\$5,473)
Insurance	\$85,000	O&M Composite	\$72,343	\$10,952	\$332	\$3,452	(\$2,078)
Legal Expenses	\$39,000	O&M Composite	\$33,193	\$5,025	\$152	\$1,584	(\$954)
Training	\$42,800	O&M Composite	\$36,427	\$5,514	\$167	\$1,738	(\$1,046)
<b>Total Composite Expenses</b>	<b>\$928,202</b>		<b>\$789,986</b>	<b>\$119,591</b>	<b>\$3,627</b>	<b>\$37,691</b>	<b>(\$22,693)</b>
<b>Subtotal O&amp;M, Capital, Non-Operating</b>	<b>\$10,896,569</b>		<b>\$7,161,733</b>	<b>\$1,084,168</b>	<b>\$32,885</b>	<b>\$341,691</b>	<b>\$2,276,092</b>
<i>Expense Allocation</i>			<i>65.7%</i>	<i>9.9%</i>	<i>0.3%</i>	<i>3.1%</i>	<i>20.9%</i>
<b>Payroll - Salaries/Benefits/Taxes</b>	<b>\$3,179,691</b>	<b>Exp Composite</b>	<b>\$2,032,448</b>	<b>\$307,679</b>	<b>\$9,333</b>	<b>\$96,969</b>	<b>\$733,262</b>
<b>Engineering</b>							
Engineering	\$215,000	Exp Composite	\$137,427	\$20,804	\$631	\$6,557	\$49,581
Consulting	\$185,380	Exp Composite	\$118,494	\$17,938	\$544	\$5,653	\$42,750
<b>Non-Operating Revenue</b>							
Late Charges	(\$65,000)	Exp Composite	(\$41,548)	(\$6,290)	(\$191)	(\$1,982)	(\$14,990)
Trip Charges	(\$26,523)	Exp Composite	(\$16,953)	(\$2,566)	(\$78)	(\$809)	(\$6,116)
Call-Out Charges	(\$2,500)	Exp Composite	(\$1,598)	(\$242)	(\$7)	(\$76)	(\$577)
Returned Item Charges	(\$2,500)	Exp Composite	(\$1,598)	(\$242)	(\$7)	(\$76)	(\$577)
Hydrant Meter Repairs	\$0	Accounts	\$0	\$0	\$0	\$0	\$0
Field Service Charges	(\$1,591)	Exp Composite	(\$1,017)	(\$154)	(\$5)	(\$49)	(\$367)
Bad Debt Recovery	(\$2,652)	Exp Composite	(\$1,695)	(\$257)	(\$8)	(\$81)	(\$612)
Retirees Health Benefits - OPEB	(\$65,376)	Exp Composite	(\$41,788)	(\$6,326)	(\$192)	(\$1,994)	(\$15,076)
Other Income	(\$25,750)	Exp Composite	(\$16,459)	(\$2,492)	(\$76)	(\$785)	(\$5,938)
Rental Income	(\$127,308)	Exp Composite	(\$81,375)	(\$12,319)	(\$374)	(\$3,882)	(\$29,358)
Southpark Well - M24	(\$5,517)	Exp Composite	(\$3,526)	(\$534)	(\$16)	(\$168)	(\$1,272)
Knightsen Well - M25	(\$5,252)	Exp Composite	(\$3,357)	(\$508)	(\$15)	(\$160)	(\$1,211)
Willow Park Marina Well - M27	(\$10,821)	Exp Composite	(\$6,917)	(\$1,047)	(\$32)	(\$330)	(\$2,495)
Reimbursement from Developers	(\$400,000)	Exp Composite	(\$255,679)	(\$38,706)	(\$1,174)	(\$12,199)	(\$92,243)
<b>Total Non-Operating</b>	<b>\$2,839,281</b>		<b>\$1,814,859</b>	<b>\$274,740</b>	<b>\$8,333</b>	<b>\$86,588</b>	<b>\$654,761</b>
<b>Transfers to/(from) Reserves</b>	<b>(\$217,540)</b>	<b>Exp Composite</b>	<b>(\$139,051)</b>	<b>(\$21,050)</b>	<b>(\$638)</b>	<b>(\$6,634)</b>	<b>(\$50,166)</b>
<b>Emergency Reserve - Tier 1</b>	<b>\$1,000,000</b>	<b>Average Day</b>	<b>\$1,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Revenue Requirement</b>	<b>\$14,518,310</b>		<b>\$9,837,540</b>	<b>\$1,337,858</b>	<b>\$40,580</b>	<b>\$421,645</b>	<b>\$2,880,687</b>
					<b>\$11,215,978</b>	<b>\$421,645</b>	<b>\$2,880,687</b>
			% of revenue requirement			77.3%	
			Consumption Charge COS			22.7%	
						Service Charge COS	

## Fixed and Variable Revenues and Costs

Revenue from the service charges prior to February 1, 2022 was 24.5% of the combined rate revenue. Receiving 24.5% of revenue from fixed charges is within a reasonable range compared with industry averages, which are typically at least 20% in California with a trend toward over 30% as a means of improving revenue stability. The revised cost-of-service analysis decreased the service charge revenue to 22.7%, which is not a significant decrease.

## Allocation Comparison

**Table IV-7** compares the annual revenue from the rates adopted February 1, 2021 with the annual revenue from the revised cost-of-service rates. The comparison shows that the cost-of-service analysis shifts revenue from the service charges to the consumption charges.

**Table IV-7. Comparison of Customer Class Allocations**

Components of Rate Structure		Revenue at Current Rates (as of 2/1/2021)		Revised Cost-of-Service		Difference	
		a	b	c	d	e	f
1	Water Charge Revenue	\$9,367,728	75.5%	\$11,215,978	77.3%	\$1,848,251	19.7%
2	Service Charge Revenue	\$3,041,084	24.5%	\$3,302,331	22.7%	\$261,247	8.6%
3	<b>Total</b>	\$12,408,812	100.0%	\$14,518,310	100.0%	\$2,109,498	17.0%
4							
5	<b>Water Charge Revenue</b>						
6	Residential	\$7,486,455	79.9%	\$9,008,101	80.3%	\$1,521,646	20.3%
7	Multi Family	\$268,234	2.9%	\$295,234	2.6%	\$27,000	10.1%
8	Non Residential	\$379,879	4.1%	\$446,946	4.0%	\$67,067	17.7%
9	Irrigation	\$940,806	10.0%	\$1,120,553	10.0%	\$179,747	19.1%
10	Hydrant	\$292,354	3.1%	\$345,145	3.1%	\$52,791	18.1%
11		\$9,367,728	100.0%	\$11,215,978	100.0%	\$1,848,251	19.7%

## CONSUMPTION CHARGE COST ALLOCATIONS

As previously discussed, 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-8** derives the cost of service for each of the District's proposed customer classes. The allocation reflects each class' proportionate shares of the three demand service levels (i.e., average day, maximum day, and maximum hour) because they share common facilities. Moreover, the allocation of costs to the various proposed customers classes needs to be tracked by demand service level for purposes of calculating the tiered rates in **Section V** below.

Table IV-8. Consumption Charge Cost Allocations By Customer Class

Consumption Charge Cost of Service		Average Day	Maximum Day	Maximum Hour	Total
		a	b	c	d
1	Operations & Maintenance	\$7,161,733	\$1,084,168	\$32,885	\$8,278,786
2	Debt Service	\$0	\$0	\$0	\$0
3	Capital Expenses (PayGo)	\$0	\$0	\$0	\$0
4	Non-Operating Revenue	\$1,814,859	\$274,740	\$8,333	\$2,097,932
5	Transfers to/(from) Reserves	\$860,949	(\$21,050)	(\$638)	\$839,261
6	<b>Total Consumption Charge COS</b>	<b>\$9,837,540</b>	<b>\$1,337,858</b>	<b>\$40,580</b>	<b>\$11,215,978</b>
7					
8	<b>Units of Service (hcf)</b>				
9	Residential - SF	5,688	8,485	17,829	
10	Residential - MF	194	198	180	
11	Non Residential	277	490	221	
12	Hydrant	211	400	600	
13	Irrigation	682	1,354	1,622	
14		7,052	10,927	20,453	
15	<b>Proportional Allocation Factors</b>				
16	Residential - SF	80.65%	77.65%	87.17%	
17	Residential - MF	2.75%	1.82%	0.88%	
18	Non Residential	3.93%	4.48%	1.08%	
19	Hydrant	3.00%	3.66%	2.93%	
20	Irrigation	9.67%	12.39%	7.93%	
21		100.00%	100.00%	100.00%	
22					
23	Residential - Single Family	\$7,933,835	\$1,038,891	\$35,375	\$9,008,101
24	Residential - Multi Family	\$270,580	\$24,295	\$358	\$295,234
25	Non Residential	\$386,552	\$59,956	\$438	\$446,946
26	Hydrant	\$294,979	\$48,976	\$1,190	\$345,145
27	Irrigation	\$951,595	\$165,739	\$3,218	\$1,120,553
28	<b>Grand Total Consumption Charge COS</b>	<b>\$9,837,540</b>	<b>\$1,337,858</b>	<b>\$40,580</b>	<b>\$11,215,978</b>



## V. RATE DESIGN

This section discusses the derivation of the proposed rates associated with the two charges paid by customers in the District's five proposed customer classes. These rates are based on the results of the cost-of-service analysis in the preceding section. Note that the rate structures that were adopted effective February 1, 2022 are unchanged in this revised rate study (e.g., the same numbers of tiers and breakpoints). The same customer classes are proposed, with the same tier structures. The rates have increased in order to generate the intended revenue and to reflect the updated expense projections.

### CUSTOMER CLASSES

The District's current rate structure is applied to all customers regardless of customer class. In effect, the District has no customer classes despite tracking water use by a variety of different customer types.

It is recommended that the District implement separate rate structures for the major customer classes that are tracked in its billing system. HF&H proposes (i) Single Family Residential, (ii) Multi-Family Residential, (iii) Non Residential (commercial), (iv) Irrigation, and (v) Hydrants.

The following is proposed as defining each proposed customer class:

**Single Family Residential:** includes free-standing single family homes, single family with an accessory dwelling unit, duplexes, and triplexes.

**Multi-Family Residential:** includes parcels with four or more dwelling units, apartments, condominiums, and mobile homes/mobile home parks.

**Non-Residential:** includes commercial businesses, hotels, churches, entertainment venues, industrial, clubs, fire-line services, and publicly-owned properties/facilities.

**Irrigation:** water system connections/meters that are specifically installed for outdoor irrigation purposes only.

**Hydrants:** temporary water system connections/portable meters used for provision of construction water.

### FEBRUARY 1, 2022 RATE STRUCTURE

Customers are billed the sum of service charges and water consumption charges monthly. **Tables V-1** and **V-2** summarize the District's rates for its two existing charges

that became effective February 1, 2022. These rates were set lower than intended due to a modeling error and thereby were not generating sufficient revenue.

**Table V-1. Monthly Service Charge Rates as of 2/1/2022**

<b>Service Size</b>	<b>Current Rates</b>
5/8" meters	\$17.27
1" meters	\$39.36
1" w/ Fire meters	\$17.27
1 1/2" meters	\$76.18
2" meters	\$120.37
3" meters	\$260.29
4" meters	\$444.39
6" meters	\$996.71
8" meters	\$2,064.51
10" meters	\$3,095.50
12" meters	\$3,905.56
Fire Services	\$19.92
Fire Hydrant Meters	\$260.29

**Table V-2. Water Charges Rates per HCF as of 2/1/2022**

<b>Customer Class</b>	<b>Adopted 2/1/22</b>
<b>Residential - Single Family</b>	
Tier 1: 0 - 8 hcf	\$2.61
Tier 2: 9 - 14 hcf	\$4.36
Tier 3: 15+ hcf	\$5.96
<b>Residential - Multi Family</b>	
All Usage	\$3.83
<b>Non Residential</b>	
Tier 1: 0 - 34 hcf	\$3.52
Tier 2: 35+ hcf	\$4.30
<b>Irrigation</b>	
Tier 1: 0 - 113 hcf	\$3.52
Tier 2: 114+ hcf	\$4.62
<b>Hydrant</b>	
Tier 1: 0 - 115 hcf	\$3.52
Tier 2: 116+ hcf	\$4.29

## SERVICE CHARGE RATES

Service charges are fixed rates charged on a per account basis that recover the cost of the customer service function. Service charges are graduated in proportion to the capacity of the service (i.e., size of the water meter) serving a property. They 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 service charges are 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. 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 total 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 service 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 132 1-inch meters equal 330 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 \$2.79 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 \$16.34 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. Service Charge Unit Costs**

Service Size	# of Accounts	Meter Ratings (gpm)	Capacity Multiplier*	EMUs
	a	b	c = b ÷ 20	a * c
5/8" meters	10,492	20	1.00	10,492
1" meters	132	50	2.50	330
1" w/ Fire meters	1,727	20	1.00	1,727
1 1/2" meters	58	100	5.00	288
2" meters	64	160	8.00	511
3" meters	13	350	17.50	220
4" meters	4	600	30.00	126
6" meters	0	1350	67.50	0
8" meters	1	2800	140.00	147
10" meters	0	4200	210.00	0
12" meters	0	5300	265.00	0
Fire Services [1]	69	23.6	1.18	82
Fire Hydrant Meters [2]	44	350	17.50	770
<b>Total Accounts</b>	<b>12,604</b>		<b>Total EMUs</b>	<b>14,693</b>
<b>Units Costs</b>	<b>\$421,645</b>			<b>\$2,880,687</b>
<b>Monthly Cost</b>				
per Account	<b>\$2.79</b>			
per EMU				<b>\$16.34</b>

1. Set to maintain same 1.18 ratio as current rate structure capacity multipliers

2. Same as 3" meters

**Table V-4** combines the customer service and capacity components into a service charge for each size service. The rates in column e are what the rates would have been without the modeling error discussed above. An additional 3.0% is added to these rates to cover increased costs due to higher than anticipated inflation and cost of purchased water.

**Table V-4. Proposed Monthly Service Charges**

Service Size	% of Meters	Account Component	Capacity Component			COS Service Charges	Proposed Service Charges
		(\$/mo.)	\$/EMU	Capacity Multiplier	Capacity Total	(\$/mo.)	(\$/mo.)
		a	b	c	d = b * c	e = a + d	f = e + 3.0%
5/8" meters	83.2%	\$2.79	\$16.34	1.00	\$16.34	<b>\$19.13</b>	<b>\$19.70</b>
1" meters	1.0%	\$2.79	\$16.34	2.50	\$40.84	<b>\$43.63</b>	<b>\$44.94</b>
1" w/ Fire meters	13.7%	\$2.79	\$16.34	1.00	\$16.34	<b>\$19.13</b>	<b>\$19.70</b>
1 1/2" meters	0.5%	\$2.79	\$16.34	5.00	\$81.69	<b>\$84.48</b>	<b>\$87.01</b>
2" meters	0.5%	\$2.79	\$16.34	8.00	\$130.70	<b>\$133.49</b>	<b>\$137.49</b>
3" meters	0.1%	\$2.79	\$16.34	17.50	\$285.91	<b>\$288.70</b>	<b>\$297.36</b>
4" meters	0.0%	\$2.79	\$16.34	30.00	\$490.13	<b>\$492.92</b>	<b>\$507.71</b>
6" meters	0.0%	\$2.79	\$16.34	67.50	\$1,102.80	<b>\$1,105.59</b>	<b>\$1,138.76</b>
8" meters	0.0%	\$2.79	\$16.34	140.00	\$2,287.29	<b>\$2,290.08</b>	<b>\$2,358.78</b>
10" meters	0.0%	\$2.79	\$16.34	210.00	\$3,430.94	<b>\$3,433.73</b>	<b>\$3,536.74</b>
12" meters	0.0%	\$2.79	\$16.34	265.00	\$4,329.52	<b>\$4,332.31</b>	<b>\$4,462.28</b>
Fire Services	0.5%	\$2.79	\$16.34	1.18	\$19.28	<b>\$22.07</b>	<b>\$22.73</b>
Fire Hydrant Meters	0.3%	\$2.79	\$16.34	17.50	\$285.91	<b>\$288.70</b>	<b>\$297.36</b>

## WATER CHARGE RATES

The District's customers are currently charged a two-tier increasing block rate structure. These rates apply to all customers regardless of class. Increasing block rates are "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 used within Tier 2.

### Single Family Residential Water Charge Rates

#### Breakpoints Between Tiers

The base/extra capacity cost-of-service analysis leads to distinct levels of demand that are defined by the functions performed by facilities that are designed to provide each service level. Tier breakpoints were calculated for indoor use, average day demand, and peak day demand. Each of these service levels have an average flow that can be used as the divider (i.e., "breakpoint") between each service level.

Based on residential billing data and estimates of peak demands, the proposed breakpoints for Tier 1, Tier 2, and Tier 3 were calculated as shown in **Table V-5**. Given that the current Tier 1 breakpoint is at 8 hcf, the District favors keeping the breakpoint at 8 hcf instead of changing the breakpoint to 7 hcf. This level of indoor water use, 8 hcf, is consistent with historic demand patterns. The analysis used to calculate the 7 hcf indoor use is based on only one year of consumption and may not be reflective of a typical year.

**Table V-5. Calculated Breakpoint Locations – Single Family Tiers**

Flow per Customer	Tier 1	Tier 2	Tier 3
	Indoor Use	Average Day	Above Average
<b>Residential - SF</b>			
hcf per day	2,755	5,688	8,485
hcf per month	82,646	170,627	
# of Accounts	12,075	12,075	
<b>Average flow per Acct (hcf/mo)</b>	<b>7.0</b>	<b>14.0</b>	<b>14+</b>

#### Rates Per Tier

With breakpoints that correspond to the service levels in the cost-of-service analysis, it is possible to calculate the rate per tier by dividing the cost of service per tier by the water demand in each tier. The resulting rates represent the *unit cost* of service for each tier.<sup>6</sup> **Table V-6** shows the calculations of the incremental cost per tier. Note that the cost-of-service allocated \$7,933,835 to average day demand in **Table IV-8**. It is estimated that

<sup>6</sup> In this report, "rates" and "unit costs" are synonymous.

approximately 74.3%<sup>7</sup> or \$5,895,279 of average day demand is for indoor water use. This leaves \$2,038,556 for non-indoor water use in the average day demand service level and \$1,074,266 for peak day demand, which is the sum of maximum day and maximum hour cost allocations (see **Table IV-8**).

**Table V-6. Proposed Single Family Residential Water Charge Rates**

<b>Residential - SF Class COS per Unit</b>	<b>Indoor Use</b>	<b>Average Day</b>	<b>Peak Day</b>
<b>Residential COS - Consumption</b>	<b>\$5,895,279</b>	<b>\$2,038,556</b>	<b>\$1,074,266</b>
<b>Demand Per Tier</b>			
Tier 1: 0 - 8 hcf	1,005,529		
Tier 2: 9 - 14 hcf	457,008	457,008	
Tier 3: 15+ hcf	613,428	613,428	613,428
<b>Total hcf per Tier</b>	<b>2,075,965</b>	<b>1,070,436</b>	<b>613,428</b>
<b>Cost-of-Service per Unit (hcf)</b>	<b>\$2.84</b>	<b>\$1.90</b>	<b>\$1.75</b>

<b>Residential - SF Class Unit Cost Calculation</b>	<b>Indoor Use</b>	<b>Average Day</b>	<b>Peak Day</b>
Tier 1: 0 - 8 hcf	\$2.84	\$2.84	\$2.84
Tier 2: 9 - 14 hcf		\$1.90	\$1.90
Tier 3: 15+ hcf			\$1.75
Unit Cost per hcf	\$2.84	\$4.74	\$6.50
	3.0%	3.0%	3.0%
<b>Unit Cost per hcf plus 3.0%</b>	<b>\$2.93</b>	<b>\$4.88</b>	<b>\$6.70</b>

Indoor use costs apply to all tiers. Usage up to the 8 hcf Tier 1 breakpoint is charged the indoor use 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 costs apply to all water use greater than Tier 1, namely, to Tier 2, and Tier 3. Usage between 9 and 14 hcf would be charged the Tier 2 rate, which is the sum of the indoor use and remaining average day incremental costs. Usage greater than 14 hcf would pay the Tier 3 rate, which is the sum of the average day and maximum day incremental costs. As demand progresses through the tiers, the additional costs of higher

<sup>7</sup> Average winter water use (December, January, February, March) as a percent of average annual use.

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.

### Multi-Family Residential Water Charge Rates

The water charge rates for the proposed multi-family residential customer class are summarized in **Table V-7**. After analyzing the demand patterns of the District's customers, multi-family customers showed virtually no peaking. It is difficult to justify a tiered rate structure for a customer class with no peaking so a uniform rate was recommended for multi-family customers. The uniform rate is calculated in **Table V-7**.

**Table V-7. Proposed Multi-Family Residential Water Charge Rate**

<b>Residential - MF Class</b>	
<b>COS per Unit</b>	
COS Allocation	\$295,234
Consumption (hcf)	70,800
Unit Cost per hcf	\$4.17
	3.0%
<b>Unit Cost per hcf plus 3.0%</b>	<b>\$4.30</b>

### Non-Residential Water Charge Rates

#### Breakpoint Between Tiers

**Table V-8** shows the calculation of the breakpoint between the two proposed tiers for the proposed non-residential customer class. The breakpoint was set between average day demand and above average day demand. Each of these service levels have an average flow that can be used as the divider (i.e., "breakpoint") between each service level.

**Table V-8. Proposed Breakpoint Locations - Non-Residential Tiers**

<b>Flow per Customer</b>	<b>Tier 1</b>	<b>Tier 2</b>
	<b>Average Day</b>	<b>Above Average</b>
<b>Non-Residential</b>		
hcf per day	277	490
hcf per month	8,313	14,691
# of Accounts	246	246
<b>Average flow per Acct (hcf/mo)</b>	<b>34.0</b>	<b>34+</b>

#### Rates Per Tier

With breakpoints that correspond to the service levels in the cost-of-service analysis, it is possible to calculate the rate per tier by dividing the cost-of-service per tier by the water demand in each tier. The resulting rates represent the unit cost of service for each tier.

**Table V-9** shows the calculations of the incremental cost per tier for the proposed non-residential class.

**Table V-9. Proposed Non-Residential Water Charge Rates**

Non Residential Class COS per Unit	Average Day	Above Average
<b>Non Res COS - Consumption</b>	<b>\$386,552</b>	<b>\$60,394</b>
<b>Demand Per Tier</b>		
Tier 1: 0 - 34 hcf	31,269	
Tier 2: 35+ hcf	69,876	69,876
<b>Total hcf per Tier</b>	<b>101,145</b>	<b>69,876</b>
<b>Cost-of-Service per Unit (hcf)</b>	<b>\$3.82</b>	<b>\$0.86</b>

Non Residential Class Unit Cost Calculation	Average Day	Above Average
Tier 1: 0 - 34 hcf	\$3.82	\$3.82
Tier 2: 35+ hcf		\$0.86
Unit Cost per hcf	\$3.82	\$4.69
	3.0%	3.0%
<b>Unit Cost per hcf plus 3.0%</b>	<b>\$3.93</b>	<b>\$4.83</b>

## Hydrant Rates

### Breakpoint Between Tiers

**Table V-10** shows the calculation of the breakpoint between the two proposed tiers for the proposed hydrant customer class. The breakpoint was set between average day demand and above average day demand. Each of these service levels have an average flow that can be used as the divider (i.e., “breakpoint”) between each service level.

**Table V-10. Proposed Breakpoint Locations - Hydrant Tiers**

Flow per Customer	Tier 1	Tier 2
	Average Day	Above Average
<b>Hydrant (Customer)</b>		
hcf per day	211	400
hcf per month	6,344	12,000
# of Accounts	55	55
<b>Average flow per Acct (hcf/mo)</b>	<b>115.0</b>	<b>115+</b>



### Rates Per Tier

With breakpoints that correspond to the service levels in the cost-of-service analysis, it is possible to calculate the rate per tier by dividing the cost-of-service per tier by the water demand in each tier. The resulting rates represent the unit cost of service for each tier. **Table V-11** shows the calculations of the incremental cost per tier for the proposed hydrant customer class.

**Table V-11. Proposed Hydrant Water Charge Rates**

Hydrant Class COS per Unit	Average Day	Above Average
Hydrant COS - Consumption	\$294,979	\$50,166
<b>Demand Per Tier</b>		
Tier 1: 0 - 115 hcf	18,230	
Tier 2: 116+ hcf	58,954	58,954
<b>Total hcf per Tier</b>	<b>77,184</b>	<b>58,954</b>
<b>Cost-of-Service per Unit (hcf)</b>	<b>\$3.82</b>	<b>\$0.85</b>

Hydrant Class Unit Cost Calculation	Average Day	Above Average
Tier 1: 0 - 115 hcf	\$3.82	\$3.82
Tier 2: 116+ hcf		\$0.85
Unit Cost per hcf	\$3.82	\$4.67
	3.0%	3.0%
<b>Unit Cost per hcf plus 3.0%</b>	<b>\$3.93</b>	<b>\$4.81</b>

### Irrigation Water Charge Rates

#### Breakpoint Between Tiers

**Table V-12** shows the calculation of the breakpoint between the two proposed tiers for the proposed irrigation customer class. The breakpoint was set between average day demand and above average day demand. Each of these service levels have an average flow that can be used as the divider (i.e., “breakpoint”) between each service level.

**Table V-12. Proposed Breakpoint Locations – Irrigation Tiers**

Flow per Customer	Tier 1	Tier 2
	Average Day	Above Average
<b>Irrigation</b>		
hcf per day	682	1,354
hcf per month	20,465	40,610
# of Accounts	181	181
<b>Average flow per Acct (hcf/mo)</b>	<b>113.0</b>	<b>113+</b>

### Rates Per Tier

With breakpoints that correspond to the service levels in the cost-of-service analysis, it is possible to calculate the rate per tier by dividing the cost-of-service per tier by the water demand in each tier. The resulting rates represent the unit cost of service for each tier. **Table V-13** shows the calculations of the incremental cost per tier for the proposed irrigation customer class.

**Table V-13. Proposed Irrigation Water Charge Rates**

Irrigation Class COS per Unit	Average Day	Above Average
<b>Hydrant COS - Consumption</b>	<b>\$951,595</b>	<b>\$168,958</b>
<b>Demand Per Tier</b>		
Tier 1: 0 - 113 hcf	109,000	
Tier 2: 114+ hcf	139,994	139,994
<b>Total hcf per Tier</b>	<b>248,994</b>	<b>139,994</b>
<b>Cost-of-Service per Unit (hcf)</b>	<b>\$3.82</b>	<b>\$1.21</b>

Irrigation Class Unit Cost Calculation	Average Day	Above Average
Tier 1: 0 - 113 hcf	\$3.82	\$3.82
Tier 2: 114+ hcf		\$1.21
Unit Cost per hcf	\$3.82	\$5.03
	3.0%	3.0%
<b>Unit Cost per hcf plus 3.0%</b>	<b>\$3.93</b>	<b>\$5.18</b>

## **RATE SUMMARY**

The proposed rates for service charges and water charges are summarized for FY 2021-22 through FY 2025-26 in **Table V-14** and **Table V-15**.

**Table V-14. Proposed Monthly Service Charges**

Service Size	Adopted 2/1/22	Proposed 6/1/22	2/1/2023	2/1/2024	2/1/2025	2/1/2026
5/8" meters	\$17.27	\$19.70	\$20.49	\$21.31	\$22.16	\$23.05
1" meters	\$39.36	\$44.94	\$46.74	\$48.61	\$50.55	\$52.57
1" w/ Fire meters	\$17.27	\$19.70	\$20.49	\$21.31	\$22.16	\$23.05
1 1/2" meters	\$76.18	\$87.01	\$90.49	\$94.11	\$97.88	\$101.79
2" meters	\$120.37	\$137.49	\$142.99	\$148.71	\$154.66	\$160.85
3" meters	\$260.29	\$297.36	\$309.25	\$321.62	\$334.49	\$347.87
4" meters	\$444.39	\$507.71	\$528.02	\$549.14	\$571.10	\$593.95
6" meters	\$996.71	\$1,138.76	\$1,184.31	\$1,231.68	\$1,280.95	\$1,332.19
8" meters	\$2,064.51	\$2,358.78	\$2,453.13	\$2,551.26	\$2,653.31	\$2,759.44
10" meters	\$3,095.50	\$3,536.74	\$3,678.21	\$3,825.34	\$3,978.35	\$4,137.48
12" meters	\$3,905.56	\$4,462.28	\$4,640.77	\$4,826.40	\$5,019.45	\$5,220.23
Fire Services	\$19.92	\$22.73	\$23.64	\$24.58	\$25.57	\$26.59
Fire Hydrant Meters	\$260.29	\$297.36	\$309.25	\$321.62	\$334.49	\$347.87

Source: Figure V-4

**Table V-15. Proposed Water Charge Rates**

Customer Class	Adopted 2/1/22	Customer Class	Proposed 6/1/22	2/1/2023	2/1/2024	2/1/2025	2/1/2026
<b>Residential - Single Family</b>		<b>Residential - Single Family</b>					
Tier 1: 0 - 8 hcf	\$2.61	Tier 1: 0 - 8 hcf	\$2.93	\$3.05	\$3.17	\$3.30	\$3.43
Tier 2: 9 - 14 hcf	\$4.36	Tier 2: 9 - 14 hcf	\$4.88	\$5.08	\$5.28	\$5.49	\$5.71
Tier 3: 15+ hcf	\$5.96	Tier 3: 15+ hcf	\$6.70	\$6.97	\$7.25	\$7.54	\$7.84
<b>Residential - Multi Family</b>		<b>Residential - Multi Family</b>					
All Usage	\$3.83	All Usage	\$4.30	\$4.47	\$4.65	\$4.84	\$5.03
<b>Non Residential</b>		<b>Non Residential</b>					
Tier 1: 0 - 34 hcf	\$3.52	Tier 1: 0 - 34 hcf	\$3.93	\$4.09	\$4.25	\$4.42	\$4.60
Tier 2: 35+ hcf	\$4.30	Tier 2: 35+ hcf	\$4.83	\$5.02	\$5.22	\$5.43	\$5.65
<b>Irrigation</b>		<b>Irrigation</b>					
Tier 1: 0 - 113 hcf	\$3.52	Tier 1: 0 - 113 hcf	\$3.93	\$4.09	\$4.25	\$4.42	\$4.60
Tier 2: 114+ hcf	\$4.62	Tier 2: 114+ hcf	\$5.18	\$5.39	\$5.60	\$5.83	\$6.06
<b>Hydrant</b>		<b>Hydrant</b>					
Tier 1: 0 - 115 hcf	\$3.52	Tier 1: 0 - 115 hcf	\$3.93	\$4.09	\$4.25	\$4.42	\$4.60
Tier 2: 116+ hcf	\$4.29	Tier 2: 116+ hcf	\$4.81	\$5.00	\$5.20	\$5.41	\$5.63

Source: Figures V-6, V-7, V-9, V-11, V-13.

## Water Shortage Rate Adjustment

During prolonged shortages, customers are required to conserve or even ration their water use. These shortages can include locally declared water shortages caused by facility operations, State mandated reductions, or natural disasters including droughts. The magnitude of the water savings can significantly reduce water sales revenue from quantity charges.

During shortages, costs do not decrease in direct proportion to decreases in water use because typically over 70% of the costs are fixed regardless of how much water is supplied. Hence, a 10% reduction in water use may only reduce costs about 3% (i.e., 10% of

the 30% of costs that vary in proportion to water use). Because the District only receives 23% of its revenue from fixed charges, a 10% reduction in water sales results in an 7.7% reduction in revenue (i.e., 10% of 77% of the revenue from quantity charges). This means that, in a year-long 10% shortage, 97% of the costs are incurred while only 92.3% of the revenue is received, which is a 4.7% revenue shortfall.

Reserves may be able to cover the revenue shortfall during brief rationing periods. For longer or more severe rationing periods, rate increases are needed to offset this revenue shortfall in order to maintain service levels. On average, the rate increases are designed to be revenue neutral. In other words, customers that reduce their demand by the required amount will pay quantity charge rates, which when multiplied by their reduced demand, will generate only enough quantity charge revenue to cover costs.

The District proposes to use Water Shortage Response Multipliers to make the rate adjustments that are needed during emergency shortages declared by the Board of Directors to offset the revenue shortfalls caused by conservation. The adjustment could be made at the Board's discretion by applying the multipliers to the adopted rates only during the duration of the shortage. Rate payers would be given at least 30 days prior notice on their bills when an adjustment is made.

### **Methodology**

Since the passage of Proposition 218, water shortages have occurred that have led an increasing number of water suppliers to adopt revenue stabilization adjustments that do not trigger the Proposition 218 protest process each time an adjustment is made. This is accomplished by including the Water Shortage Response Multipliers adjustment procedure 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 multipliers by which water charge rates are adjusted in conjunction with the reduction stages in the Water Shortage Contingency Plan. The multipliers are only applied to the water charge rates and not to the 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 Water Shortage Response Multipliers, it is proposed that the shortage reductions will vary by customer class. Each class' reduction will be determined by reducing "outdoor" water use (seasonal water use) six times more than "indoor" (average winter water use) water use.<sup>8</sup> It is assumed that seasonal "outdoor" water demand is primarily for irrigation, which is a lower beneficial use

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<sup>8</sup> This 6-to-1 reduction formula was successfully implemented by the San Francisco Public Utilities Commission during the 1987-1992 drought.

than non-seasonal “indoor” demand, which is primarily related to health and safety needs.

### Analysis

Based on recent AMI data, the resulting reductions are summarized in **Table V-16**. 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 class’ water demand is seasonal.

**Table V-16. Shortage Reductions by Class**

Shortage Reductions By Class					
Class	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
	10% Reduction	20% Reduction	30% Reduction	40% Reduction	50% Reduction
<b>SFR</b>	9.5%	18.9%	28.3%	37.8%	47.6%
<b>MFR</b>	4.2%	8.5%	12.7%	16.9%	23.5%
<b>Commercial</b>	6.2%	12.4%	18.6%	24.8%	32.6%
<b>Irrigation</b>	20.9%	41.6%	62.4%	83.2%	100.0%
<b>Hydrant</b>	20.9%	41.6%	62.4%	83.2%	100.0%

**Table V-17** shows the calculation of each customer class’ respective shortage reduction required during each shortage stage. The annual demand for each class is separated into indoor and outdoor water use where indoor water use is defined as the period 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. In the case of the irrigation customer class, all of the demand is considered to be 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 3.48% reduction in indoor water use and an 20.88% reduction in outdoor water use are required of all customer classes to achieve an overall 10% reduction. Applying the same reduction multipliers to each class results in different overall reductions for the class based on the relative proportions of their indoor and outdoor water use.

To achieve the 10% Stage 1 reduction, hydrant and irrigation customers are required to conserve more than 10% because they have higher seasonal use compared to single family, multi-family and commercial customers. This pattern is consistently repeated for each stage. Note that the 50% reduction required in Stage 5 is so great that all outdoor water use is eliminated and indoor water use has to be cut back 20.0%, which is a 5.0-to-1.0 relationship, not 6.0-to-1.0. In Stage 5, a 100% reduction in water use by hydrant and irrigation customers is required.

Table V-17. Calculation of Shortage Reductions by Stage and Customer Class

10% Stage 1 Reduction									
Class	Baseline Annual Demand (HCF)			Reductions					
	Total	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Total	Total
SFR	2,075,965	1,359,932	716,033	3.48%	20.88%	47,326	149,508	196,833	9.5%
MFR	70,800	67,692	3,108	3.48%	20.88%	2,356	649	3,005	4.2%
Commercial	101,145	85,232	15,913	3.48%	20.88%	2,966	3,323	6,289	6.2%
Irrigation	248,994	-	248,994	3.48%	20.88%	-	51,990	51,990	20.9%
Hydrant	77,184	-	77,184	3.48%	20.88%	-	16,116	16,116	20.9%
<b>Total</b>	<b>2,574,088</b>	<b>1,512,856</b>	<b>984,048</b>	<b>3.48%</b>	<b>20.88%</b>	<b>52,647</b>	<b>205,469</b>	<b>258,117</b>	<b>10.0%</b>

20% Stage 2 Reduction									
Class	Baseline Annual Demand (HCF)			Reductions					
	Total	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Total	Total
SFR	2,075,965	1,359,932	716,033	6.94%	41.64%	94,379	298,156	392,535	18.9%
MFR	70,800	67,692	3,108	6.94%	41.64%	4,698	1,294	5,992	8.5%
Commercial	101,145	85,232	15,913	6.94%	41.64%	5,915	6,626	12,541	12.4%
Irrigation	248,994	-	248,994	6.94%	41.64%	-	103,681	103,681	41.6%
Hydrant	77,184	-	77,184	6.94%	41.64%	-	32,139	32,139	41.6%
<b>Total</b>	<b>2,574,088</b>	<b>1,512,856</b>	<b>984,048</b>	<b>6.94%</b>	<b>41.64%</b>	<b>104,992</b>	<b>409,758</b>	<b>514,750</b>	<b>20.0%</b>

30% Stage 3 Reduction									
Class	Baseline Annual Demand (HCF)			Reductions					
	Total	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Total	Total
SFR	2,075,965	1,359,932	716,033	10.40%	62.40%	141,433	446,805	588,238	28.3%
MFR	70,800	67,692	3,108	10.40%	62.40%	7,040	1,939	8,979	12.7%
Commercial	101,145	85,232	15,913	10.40%	62.40%	8,864	9,930	18,794	18.6%
Irrigation	248,994	-	248,994	10.40%	62.40%	-	155,372	155,372	62.4%
Hydrant	77,184	-	77,184	10.40%	62.40%	-	48,163	48,163	62.4%
<b>Total</b>	<b>2,574,088</b>	<b>1,512,856</b>	<b>984,048</b>	<b>10.40%</b>	<b>62.40%</b>	<b>157,337</b>	<b>614,046</b>	<b>771,383</b>	<b>30.0%</b>

40% Stage 4 Reduction									
Class	Baseline Annual Demand (HCF)			Reductions					
	Total	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Total	Total
SFR	2,075,965	1,359,932	716,033	13.87%	83.22%	188,623	595,883	784,505	37.8%
MFR	70,800	67,692	3,108	13.87%	83.22%	9,389	2,586	11,975	16.9%
Commercial	101,145	85,232	15,913	13.87%	83.22%	11,822	13,243	25,064	24.8%
Irrigation	248,994	-	248,994	13.87%	83.22%	-	207,213	207,213	83.2%
Hydrant	77,184	-	77,184	13.87%	83.22%	-	64,233	64,233	83.2%
<b>Total</b>	<b>2,574,088</b>	<b>1,512,856</b>	<b>984,048</b>	<b>13.87%</b>	<b>83.22%</b>	<b>209,833</b>	<b>818,925</b>	<b>1,028,758</b>	<b>40.0%</b>

50% Stage 5 Reduction									
Class	Baseline Annual Demand (HCF)			Reductions					
	Total	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Total	Total
SFR	2,075,965	1,359,932	716,033	20.00%	100.00%	271,986	716,033	988,019	47.6%
MFR	70,800	67,692	3,108	20.00%	100.00%	13,538	3,108	16,646	23.5%
Commercial	101,145	85,232	15,913	20.00%	100.00%	17,046	15,913	32,959	32.6%
Irrigation	248,994	-	248,994	20.00%	100.00%	-	248,994	248,994	100.0%
Hydrant	77,184	-	77,184	20.00%	100.00%	-	77,184	77,184	100.0%
<b>Total</b>	<b>2,574,088</b>	<b>1,512,856</b>	<b>984,048</b>	<b>20.00%</b>	<b>100.00%</b>	<b>302,571</b>	<b>984,048</b>	<b>1,286,619</b>	<b>50.0%</b>

The service charge rates are fixed and generate about 23% of the total rate revenue regardless of shortages. The remaining 77% of revenue is generated by the water charge rates. In deriving the multipliers, the multipliers will only apply to the water charge rates because fluctuations in water use correlate with fluctuations in variable costs. Each customer class has its own set of multipliers corresponding to its reduction in each stage of shortage.

As an example, the Tier 2 single family residential water charge rates in effect under non-shortage conditions would be multiplied by 1.111 to derive the water charge rates to be in effect during a Stage 1 water shortage. **Table 5-18** shows the adjustment factors that would be applied to the rates that would normally be in effect absent declared shortages.

**Table V-18. Water Shortage Response Multipliers by Class**

Revenue Stabilization Multipliers By Class					
Class	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
	10% Reduction	20% Reduction	30% Reduction	40% Reduction	50% Reduction
<b>SFR</b>	1.076	1.170	1.231	1.453	1.680
Tier 1	1.000	1.000	1.000	1.000	1.000
Tier 2	1.111	1.249	1.427	1.664	1.996
Tier 3	1.111	1.249	1.427	1.664	1.996
<b>MFR</b>	1.026	1.054	1.085	1.119	1.180
<b>Commercial</b>	1.039	1.083	1.133	1.193	1.282
<b>Irrigation</b>	1.154	1.417	1.970	3.898	3.898
<b>Hydrant</b>	1.154	1.417	1.970	3.898	3.898

### Implementation

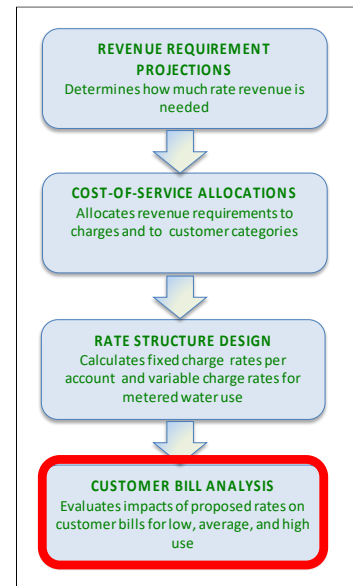
The recommended water shortage response multipliers in **Table V-18** are implemented only during periods of declared shortages. The adjustments can go in either direction from stage to stage depending on whether the level of reduction is increasing or decreasing during the shortage. At least 30 days 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.

## VI. CUSTOMER BILL IMPACTS

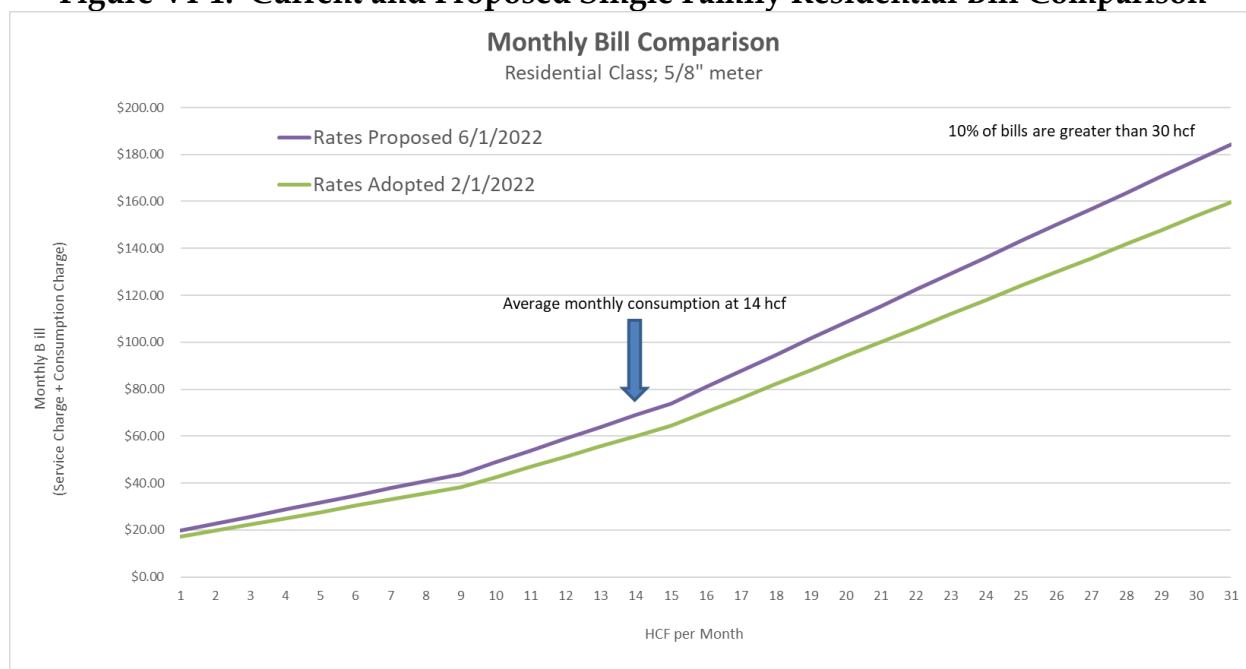
A further understanding of the differences between the current and proposed rates/rate structures is gained by comparing bills based on both rate structures. The monthly cost comparison is based on “typical” District customers or customers that are most representative of a group of customers. The typical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

The monthly bills for the rates adopted February 1, 2022 and proposed rates for June 1, 2022 are compared in **Figure VI-1** for single family residential customers with a 5/8” meter. The figure plots monthly bills for a range of consumption from 0 to 31 hcf.

During the year, consumption varies from billing period to billing period. Hence, for any given customer, a bill could fall somewhere along the X-axis in **Figure VI-1**. During periods of low use, the bill under the proposed rates will be lower than it would have been if the current rate structure were unchanged. During periods of higher water use, the bill could be less or greater, depending on the level of water use. For the entire year, the sum of the bills under the proposed rates will be more or less than it would have been if the current rates are unchanged, again, depending on that customer’s monthly/annual water use. 66% of the District’s bills are issued at 15 hcf per month or less, all of these single family bills will see a bill reduction compared to current rates.





**Figure VI-1. Current and Proposed Single Family Residential Bill Comparison**

Four sample bills are shown for multi-family, non-residential, irrigation, and hydrant customers in **Table VI-1**.

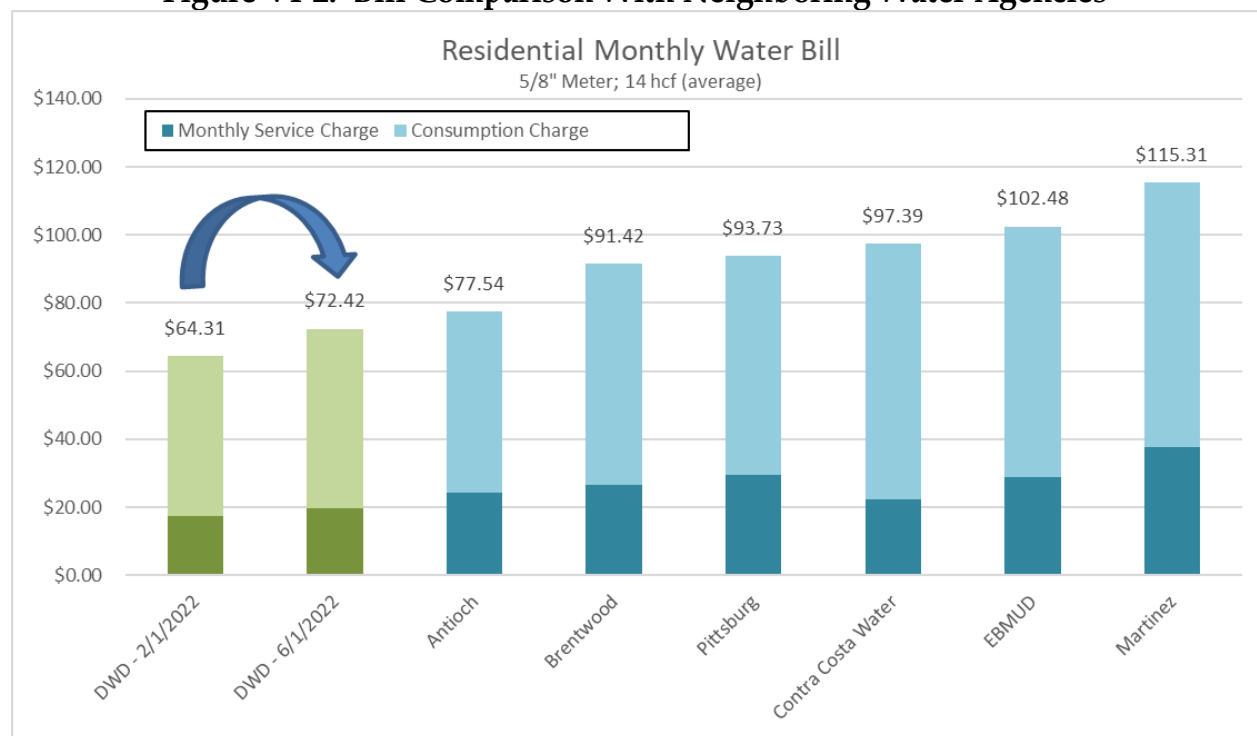
**Table VI-1. Sample Water Bill Impacts**

	Multi Family	Non Residential	Irrigation	Hydrant
<b>2/1/2022 Rates</b>				
Meter Size	2"	1"	2"	2"
Consumption (hcf/month)	300	60	250	250
Service Charge	\$120.37	\$39.36	\$120.37	\$120.37
Consumption Charge	\$1,149.00	\$231.48	\$1,030.70	\$983.95
Total Monthly Bill	\$1,269.37	\$270.84	\$1,151.07	\$1,104.32
<b>Proposed Rates</b>				
Meter Size	2"	1"	2"	2"
Consumption (hcf/month)	300	60	250	250
Service Charge	\$133.49	\$44.94	\$133.49	\$133.49
Consumption Charge	\$1,290.00	\$259.20	\$1,153.75	\$1,101.30
Total Monthly Bill	\$1,423.49	\$304.14	\$1,287.24	\$1,234.79
<b>Difference</b>				
\$ Difference	\$154.12	\$33.30	\$136.17	\$130.47
% Difference	12.1%	12.3%	11.8%	11.8%

**Figure VI-2** compares the District's residential monthly bills with a variety of water agencies in Contra Costa County. The comparison is for a customer with a 5/8- inch connection using the average amount of water for customers in each agency. Survey comparisons with other agencies are difficult to make on a comparable basis for various reasons:

- Every agency is physically unique. For example, some agencies are more expensive to operate because of hilly topography, which requires more booster pumping, etc..
- Each agency is fiscally unique. Some agencies have significant sources of non-operating revenues that may be utilized to reduce rates to customers.
- Finally, the size of the agency typically makes a difference, where larger agencies may have lower rates because of economies of scale.

**Figure VI-2. Bill Comparison With Neighboring Water Agencies**

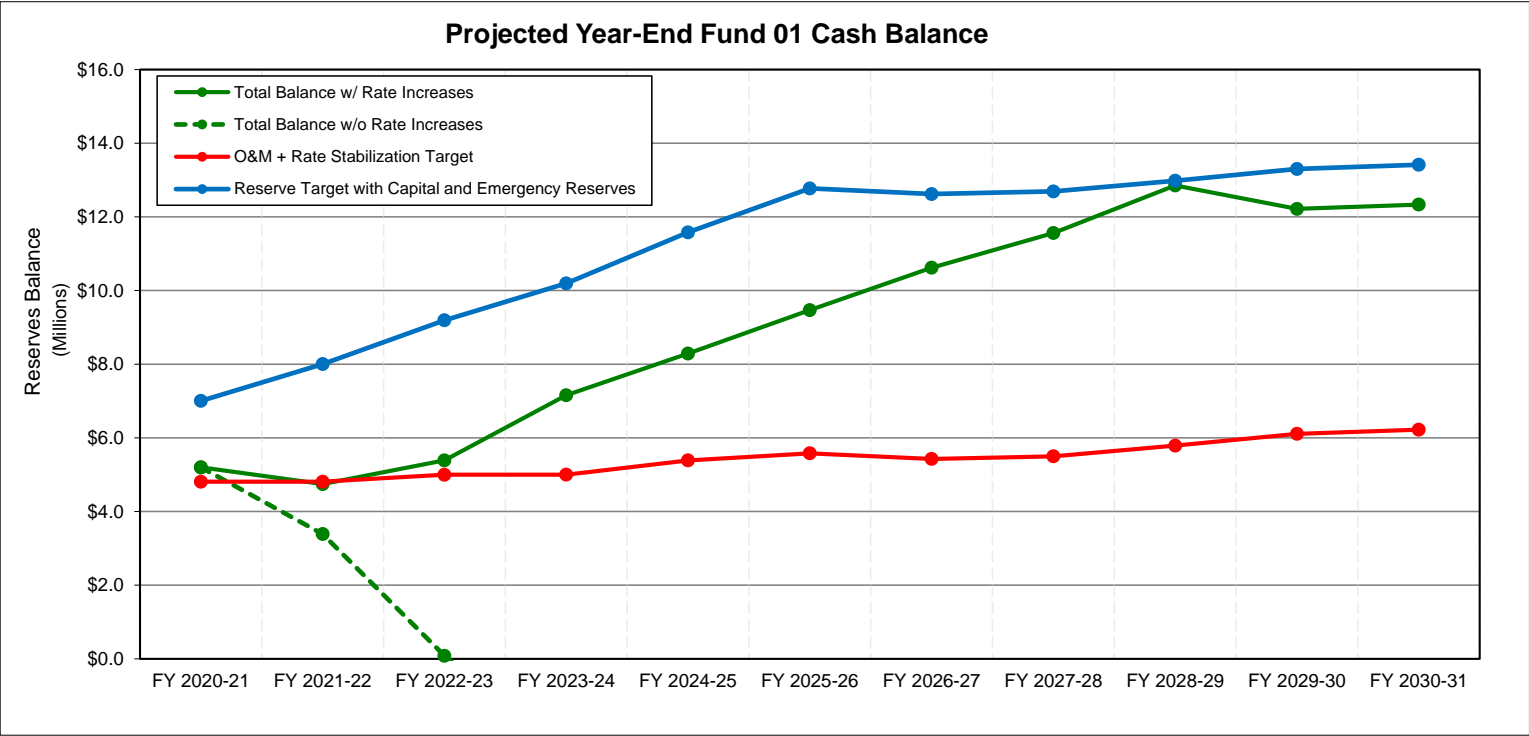


# **WATER RATE STUDY**

## **APPENDIX REVISED WATER RATE MODEL**



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Diablo Water District													
2	Water Rate Model		w/ 3%	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03		
3	Table 1A - Summary		w/o 3%	0.07	0.04	0.04	0.03	0.04	0.03	0.03	0.03	0.03		
4														
5		Fiscal year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31		
6	Rate Adjustments													
7		February 1	7.1%	4.0%	4.0%	4.0%	4.0%	2.0%	3.0%	3.0%	3.0%	3.0%		
8		June 1 COS	9.3%											
9		June 1 additional	3.0%											
10		TOTAL (w/ compounding)	20.5%											
11														
12	Debt Coverage (1.25 minimum) Per Original Model		4.61	3.06	2.97	2.66	2.76	2.92	3.21	3.14	2.60	6.64		
13	Debt Coverage (1.25 minimum)		4.18	3.34	3.05	2.73	2.81	2.85	3.02	2.89	2.35	4.01		
14	Debt Coverage (1.00 minimum)		0.78	1.55	1.77	1.40	1.45	1.57	1.70	1.53	1.07	2.06		
15	Cumulative Revenue Increase		20.5%	25.3%	30.3%	35.6%	41.0%	43.8%	48.1%	52.6%	57.1%	61.8%		
16														
17	Reserve Balance		\$4,745,880	\$5,388,748	\$7,157,070	\$8,289,321	\$9,469,177	\$10,618,986	\$11,560,999	\$12,853,260	\$12,216,523	\$12,334,369		
18	Original (Final Model)		\$5,271,003	\$5,844,920	\$7,302,409	\$8,132,537	\$9,027,528	\$10,080,858	\$11,154,559	\$12,640,941	\$12,270,950	\$12,728,997		
19			(\$525,123)	(\$456,173)	(\$145,338)	\$156,784	\$441,649	\$538,127	\$406,441	\$212,319	(\$54,427)	(\$394,628)		
20														



	A	B	C	D	E	F	G	H	I	J	K	L
1	<b>Diablo Water District</b>											
2	<b>Water Rate Model</b>											
3	<b>Table 1B - Assumptions</b>											
4												
5												
6												
7	<b>a</b>	Annual Account Growth Rate		3.04%	1.72%	1.52%	1.50%	1.48%	1.46%	1.43%	1.41%	1.39%
8	<b>b</b>	Changes in Annual Water Demand	0.83%	-2.77%	3.53%	0.99%	1.50%	1.48%	0.11%	1.44%	1.42%	1.40%
9	<b>c</b>	General Inflation	Budgeted	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
10	<b>d</b>	Salaries & Wages	Budgeted	7.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
11	<b>e</b>	Benefits	Budgeted	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
12	<b>f</b>	Utilities	Budgeted	50.78%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
13		Fuel & Chemicals	Budgeted	50.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
14	<b>g</b>	Construction Cost Inflation		2.92%	2.92%	2.92%	2.92%	2.92%	2.92%	2.92%	2.92%	2.92%
15	<b>h</b>	Interest on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
16	<b>i</b>	Annual SFR conservation reduction	Budgeted	2.56%	0.79%	0.53%	0.00%	0.00%	1.33%	0.00%	0.00%	0.00%
17	<b>j</b>	CCWD Estimated Annual Increase	7.00%	6.00%	5.75%	5.25%	5.25%	5.25%	5.25%	4.00%	4.00%	4.00%

	A	B	C	D	E	F	G	H	I	J	K	L
1	Diablo Water District											
2	Water Rate Model											
3	Table 2A - Revenue Requirements											
4												
5			Budgeted					Projected				
6			FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
7	<b>Administrative and General</b>											
8	District Regulatory Permits and Dues	3.0%	\$86,700	\$89,301	\$91,980	\$94,739	\$97,582	\$100,509	\$103,524	\$106,630	\$109,829	\$113,124
9	District Associations and Subscriptions		\$16,990	\$17,113	\$17,627	\$18,155	\$18,700	\$19,261	\$19,839	\$20,434	\$21,047	\$21,678
10	Audit		\$44,750	\$50,625	\$52,144	\$53,708	\$55,319	\$56,979	\$58,688	\$60,449	\$62,262	\$64,130
11	LAFCO - 50% GF and 50% FR		\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478	\$3,582	\$3,690	\$3,800	\$3,914
12	Taxes and Licenses		\$2,605	\$2,653	\$2,703	\$2,754	\$2,806	\$2,861	\$2,916	\$2,974	\$3,034	\$3,094
13	Office Record Imaging		\$8,530	\$9,376	\$6,928	\$9,936	\$9,600	\$10,520	\$7,797	\$11,131	\$8,272	\$14,270
14	Subtotal		\$162,575	\$172,158	\$174,563	\$182,570	\$187,384	\$193,608	\$196,347	\$205,308	\$208,244	\$220,211
15	<b>Board of Directors</b>											
16	Payroll & Taxes		\$14,100	\$14,523	\$14,959	\$15,407	\$15,870	\$16,346	\$16,836	\$17,341	\$17,861	\$18,397
17	Mailings/Worker's Comp/Elections/Training/Miscellaneous		\$13,462	\$31,141	\$6,325	\$36,515	\$6,710	\$31,912	\$7,119	\$33,333	\$7,552	\$34,779
18	Subtotal		\$27,562	\$45,664	\$21,284	\$51,922	\$22,580	\$48,257	\$23,955	\$50,674	\$25,414	\$53,176
19	<b>Engineering / Consulting</b>											
21	Engineering		\$215,000	\$41,200	\$42,436	\$43,709	\$215,020	\$71,371	\$47,762	\$224,195	\$50,671	\$132,191
22	Consulting		\$185,380	\$77,641	\$129,970	\$82,369	\$84,840	\$272,386	\$90,007	\$92,707	\$145,488	\$98,353
23	Subtotal		\$400,380	\$118,841	\$172,406	\$126,078	\$299,861	\$343,756	\$137,769	\$316,902	\$196,159	\$230,544
24	<b>Finance</b>											
26	Bank Charges		\$2,000	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319	\$2,388	\$2,460	\$2,534	\$2,610
27	Collections Expense		\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478	\$3,582	\$3,690	\$3,800	\$3,914
28	Bills/Envelopes/Mailing Service		\$22,000	\$22,660	\$23,340	\$24,040	\$24,761	\$25,504	\$26,269	\$27,057	\$27,869	\$28,705
29	Postage Account		\$52,000	\$53,560	\$55,167	\$56,822	\$58,526	\$60,282	\$62,091	\$63,953	\$65,872	\$67,848
30	Postage Meter		\$3,500	\$3,605	\$3,713	\$3,825	\$3,939	\$4,057	\$4,179	\$4,305	\$4,434	\$4,567
31	Upgrades for Software		\$2,500	\$2,575	\$2,652	\$2,732	\$2,814	\$2,898	\$2,985	\$3,075	\$3,167	\$3,262
32	Credit Card Processing		\$100,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
33	Subtotal		\$185,000	\$237,550	\$240,177	\$242,882	\$245,668	\$248,538	\$251,494	\$254,539	\$257,675	\$260,906
34	<b>Customer Service</b>											
36	Answering Service		\$2,100	\$2,163	\$2,228	\$2,295	\$2,364	\$2,434	\$2,508	\$2,583	\$2,660	\$2,740
37	Conservation		\$10,000	\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389	\$17,911	\$18,448	\$19,002
38	Website		\$2,400	\$2,472	\$2,546	\$2,623	\$2,701	\$2,782	\$2,866	\$2,952	\$3,040	\$3,131
39	Tyler Software - SMS Customer Notifications & IVR		\$1,500	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739	\$1,791	\$1,845	\$1,900	\$1,957
40	Public Information		\$30,000	\$30,900	\$31,827	\$32,782	\$33,765	\$34,778	\$35,822	\$36,896	\$38,003	\$39,143
41	Subtotal		\$46,000	\$52,080	\$53,642	\$55,252	\$56,909	\$58,616	\$60,375	\$62,186	\$64,052	\$65,973
42	<b>Office</b>											
44	Maintenance Agreements		\$48,910	\$50,377	\$51,889	\$53,445	\$55,049	\$56,700	\$58,401	\$60,153	\$61,958	\$63,816
45	Janitorial Service		\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389	\$17,911	\$18,448	\$19,002	\$19,572
46	Office Supplies		\$25,000	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982	\$29,851	\$30,747	\$31,669	\$32,619
47	Miscellaneous		\$3,500	\$3,605	\$3,713	\$3,825	\$3,939	\$4,057	\$4,179	\$4,305	\$4,434	\$4,567
48	New Equipment		\$7,500	\$7,725	\$7,957	\$8,195	\$8,441	\$8,695	\$8,955	\$9,224	\$9,501	\$9,786
49	General Manager Expenses		\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478	\$3,582	\$3,690	\$3,800	\$3,914
50	Landscaping Services		\$8,000	\$8,240	\$8,487	\$8,742	\$9,004	\$9,274	\$9,552	\$9,839	\$10,134	\$10,438
51	Office Building Maintenance		\$7,500	\$7,725	\$7,957	\$8,195	\$8,441	\$8,695	\$8,955	\$9,224	\$9,501	\$9,786
52	Software - Annual Fee		\$85,870	\$88,446	\$91,099	\$93,832	\$96,647	\$99,547	\$102,533	\$105,609	\$108,778	\$112,041
53	Office - Utilities		\$12,390	\$12,762	\$13,145	\$13,539	\$13,945	\$14,363	\$14,794	\$15,238	\$15,695	\$16,166
54	Office - Phone Line Services		\$7,200	\$7,416	\$7,638	\$7,868	\$8,104	\$8,347	\$8,597	\$8,855	\$9,121	\$9,394
55	Subtotal		\$223,870	\$230,586	\$237,504	\$244,629	\$251,968	\$259,527	\$267,312	\$275,332	\$283,592	\$292,100
56	<b>Insurance</b>											
58	Business, Auto, Liability, Commercial, Etc.		\$85,000	\$87,550	\$90,177	\$92,882	\$95,668	\$98,538	\$101,494	\$104,539	\$107,675	\$110,906
59	Subtotal		\$85,000	\$87,550	\$90,177	\$92,882	\$95,668	\$98,538	\$101,494	\$104,539	\$107,675	\$110,906
60	<b>Legal Expenses</b>											
62	Legal Expenses - 50% GF and 50% FR		\$39,000	\$40,170	\$41,375	\$42,616	\$43,895	\$45,212	\$46,568	\$47,965	\$49,404	\$50,886
63	Subtotal		\$39,000	\$40,170	\$41,375	\$42,616	\$43,895	\$45,212	\$46,568	\$47,965	\$49,404	\$50,886
64	<b>Operations and Maintenance</b>											
66	Maintenance Corpyard		\$25,000	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982	\$29,851	\$30,747	\$31,669	\$32,619
67	Maintenance T&D		\$278,500	\$276,495	\$279,685	\$303,575	\$263,673	\$417,983	\$278,512	\$283,268	\$294,256	\$304,483
68	Maintenance Backflow		\$48,400	\$49,440	\$50,923	\$52,451	\$54,024	\$55,645	\$57,315	\$59,034	\$60,805	\$62,629
69	Maintenance Reservoirs		\$41,000	\$187,080	\$38,192	\$789,338	\$790,518	\$41,734	\$42,986	\$44,275	\$45,604	\$46,972
70	Maintenance Blending		\$17,000	\$25,010	\$18,035	\$18,576	\$19,134	\$19,708	\$20,299	\$20,908	\$21,535	\$22,181
71	Maintenance Glen Park Well		\$10,260	\$10,568	\$10,885	\$11,211	\$11,548	\$11,894	\$12,251	\$12,619	\$13,000	\$13,387
72	Maintenance Stonecreek Well		\$10,260	\$10,568	\$10,885	\$11,211	\$11,548	\$11,894	\$12,251	\$12,619	\$13,000	\$13,387
73	Maintenance Delta Coves		\$5,250	\$5,408	\$5,570	\$5,737	\$5,909	\$6,086	\$6,269	\$6,457	\$6,651	\$6,850
74	Water Samples		\$80,000	\$132,400	\$84,872	\$87,418	\$90,041	\$92,742	\$95,524	\$98,390	\$101,342	\$104,382
75	General Operating Corpyard		\$40,950	\$41,630	\$42,845	\$44,595	\$46,382	\$48,207	\$50,069	\$51,969	\$53,909	\$55,890
76	Telephone Services for Field		\$8,450	\$8,704	\$8,965	\$9,234	\$9,511	\$9,796	\$10,090	\$10,392	\$10,704	\$11,025
77	Utilities for Field		\$172,450	\$260,024	\$267,824	\$275,859	\$284,135	\$292,659	\$301,439	\$310,482	\$319,796	\$329,390
78	Energy Savings from GHG Offset		\$0	\$0	(\$125,000)	(\$128,750)	(\$132,613)	(\$136,591)	(\$140,689)	(\$144,909)	(\$149,257)	(\$153,734)
79	Subtotal		\$737,120	\$1,033,075	\$720,203	\$1,510,774	\$1,480,947	\$899,239	\$774,168	\$793,756	\$1,473,519	\$849,481
80	<b>Payroll - Salaries/Benefits/Taxes</b>											
81	Salaries	5.0%	\$1,853,207	\$1,982,932	\$2,082,078	\$2,186,182	\$2,295,491	\$2,410,266	\$2,530,779	\$2,657,318	\$2,790,184	\$2,929,693
82	Overtime	5.0%	\$144,334	\$154,437	\$162,159	\$170,267	\$178,780	\$187,719	\$197,105	\$206,960	\$217,308	\$228,174
83	Benefits - Health/LTD/STD/Life Insurance/Retireme	5.0%	\$685,475	\$733,458	\$770,131	\$808,638	\$849,069	\$891,523	\$936,099	\$982,904	\$1,032,049	\$1,083,652
84	CalPERS UAL		\$230,513	\$248,874	\$268,040	\$280,579	\$299,342	\$306,545	\$313,944	\$321,549	\$329,362	\$337,420
85	Taxes - Worker's Compensation/FICA/Medi	5.0%	\$172,227	\$184,283	\$193,497	\$203,172	\$213,330	\$223,997	\$235,197	\$246,957	\$259,304	\$272,270
86	Retired Employees Health Benefits		\$69,793	\$71,886	\$74,043	\$76,264	\$78,552	\$80,909	\$83,336	\$85,836	\$88,411	\$91,063

	A	B	C	D	E	F	G	H	I	J	K	L
88	Contra Costa County Employee Retirement Association		\$121,143	\$124,777	\$128,521	\$132,376	\$136,348	\$140,438	\$144,651	\$148,991	\$153,460	\$158,064
89	Delayed Hiring (Fund 01)		(\$97,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
90		Subtotal	\$3,179,691	\$3,500,647	\$3,678,468	\$3,857,478	\$4,043,904	\$4,234,193	\$4,433,712	\$4,642,910	\$4,862,266	\$5,092,278
91												



	A	B	C	D	E	F	G	H	I	J	K	L
92	<b>Transmission and Distribution</b>			50.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
93	Automotive Fuel, Maintenance, Miscellaneous		\$87,000	\$130,500	\$134,415	\$138,447	\$142,601	\$146,879	\$151,285	\$155,824	\$160,499	\$165,313
94	Chemicals Glen Park Well		\$7,210	\$10,815	\$11,139	\$11,474	\$11,818	\$12,172	\$12,538	\$12,914	\$13,301	\$13,700
95	Chemicals Blending Facility		\$25,100	\$37,650	\$38,780	\$39,943	\$41,141	\$42,375	\$43,647	\$44,956	\$46,305	\$47,694
96	Chemicals Stonecreek Well		\$5,000	\$7,500	\$7,725	\$7,957	\$8,195	\$8,441	\$8,695	\$8,955	\$9,224	\$9,501
97	Chemicals Delta Coves		\$7,000	\$10,500	\$10,815	\$11,139	\$11,474	\$11,818	\$12,172	\$12,538	\$12,914	\$13,301
98	General Operating - T&D		\$178,030	\$179,621	\$56,260	\$57,947	\$59,686	\$61,476	\$63,321	\$65,220	\$67,177	\$69,192
99	General Operating Blending		\$36,540	\$37,544	\$38,670	\$39,830	\$41,025	\$42,256	\$43,523	\$44,829	\$46,174	\$47,559
100	General Operating Glen Park Well		\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478	\$3,582	\$3,690	\$3,800	\$3,914
101	General Operating Stonecreek Well		\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478	\$3,582	\$3,690	\$3,800	\$3,914
102	General Operating Delta Coves		\$1,000	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159	\$1,194	\$1,230	\$1,267	\$1,305
103	Subtotal		\$352,790	\$421,339	\$305,230	\$314,386	\$323,818	\$333,533	\$343,539	\$353,845	\$364,460	\$375,394
104												
105	<b>Training</b>											
106	Training & Professional Development		\$30,500	\$31,415	\$32,357	\$33,328	\$34,328	\$35,358	\$36,419	\$37,511	\$38,636	\$39,796
107	Safety		\$12,300	\$8,034	\$10,275	\$8,523	\$10,779	\$9,042	\$11,314	\$9,593	\$11,881	\$10,177
108	Subtotal		\$42,800	\$39,449	\$42,632	\$41,851	\$45,107	\$44,400	\$47,732	\$47,104	\$50,517	\$49,973
109												
110	<b>Water Purchases - Source of Supply CCWD</b>											
111	Water Purchases from CCWD		\$4,789,665	\$4,805,418	\$4,944,650	\$5,281,029	\$5,637,093	\$6,025,600	\$6,366,080	\$6,774,916	\$7,156,239	\$7,597,000
112	Subtotal		\$4,789,665	\$4,805,418	\$4,944,650	\$5,281,029	\$5,637,093	\$6,025,600	\$6,366,080	\$6,774,916	\$7,156,239	\$7,597,000
113												
114	<b>Water Treatment and Maintenance - RBWTP O&amp;M</b>											
115	Randall Bold Water Treatment Plant O&M		\$1,756,016	\$1,705,696	\$1,756,867	\$1,809,573	\$1,863,861	\$1,919,776	\$1,977,370	\$2,036,691	\$2,097,792	\$2,160,725
116	Additional True Up		\$130,000									
117	Subtotal		\$1,886,016	\$1,705,696	\$1,756,867	\$1,809,573	\$1,863,861	\$1,919,776	\$1,977,370	\$2,036,691	\$2,097,792	\$2,160,725
118												
119	<b>Other Expenses</b>											
120	Corpyard Improvements		\$13,545	\$13,951	\$14,370	\$14,801	\$15,245	\$20,702	\$16,173	\$16,659	\$17,158	\$17,673
121	Pipeline Corrosion Testing/Repairs		\$20,000	\$20,600	\$21,218	\$21,855	\$22,510	\$23,185	\$23,881	\$24,597	\$25,335	\$26,095
122	Groundwater Sustainability Expenses		\$0	\$48,250	\$48,250	\$48,250	\$48,250	\$73,250	\$48,250	\$48,250	\$48,250	\$48,250
123	Fire Hydrant Maintenance		\$25,000	\$150,000	\$154,500	\$159,135	\$163,909	\$168,826	\$173,891	\$179,108	\$184,481	\$190,016
124	Water Conservation Program		\$25,000	\$100,000	\$103,000	\$106,090	\$111,395	\$116,964	\$122,812	\$128,953	\$135,401	\$142,171
125	Additional Staff		\$0	\$175,000	\$183,750	\$342,938	\$360,084	\$553,089	\$580,743	\$789,780	\$829,269	\$1,055,733
126	Emergency Reserve Expense		\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0
127			\$1,083,545	\$1,507,801	\$1,525,088	\$1,693,068	\$1,721,393	\$956,017	\$965,751	\$1,187,347	\$1,239,895	\$1,479,938
128												
129	<b>Total Operations &amp; Maintenance</b>		<b>\$13,241,013</b>	<b>\$13,998,025</b>	<b>\$14,004,266</b>	<b>\$15,546,991</b>	<b>\$16,320,054</b>	<b>\$15,708,811</b>	<b>\$15,993,668</b>	<b>\$17,154,013</b>	<b>\$18,436,904</b>	<b>\$18,889,490</b>
130												
131	<b>Non-Operating Costs/Revenues</b>											
132	Check Valve Maintenance		(\$170,000)	(\$175,100)	(\$180,353)	(\$185,764)	(\$191,336)	(\$197,077)	(\$202,989)	(\$209,079)	(\$215,351)	(\$221,811)
133	Check Valve Installation		(\$2,600)	(\$2,678)	(\$2,758)	(\$2,841)	(\$2,926)	(\$3,014)	(\$3,105)	(\$3,198)	(\$3,294)	(\$3,392)
134	Late Charges		(\$65,000)	(\$66,950)	(\$68,959)	(\$71,027)	(\$73,158)	(\$75,353)	(\$77,613)	(\$79,942)	(\$82,340)	(\$84,810)
135	Trip Charges		(\$26,523)	(\$27,318)	(\$28,138)	(\$28,982)	(\$29,851)	(\$30,747)	(\$31,669)	(\$32,619)	(\$33,598)	(\$34,606)
136	Call-Out Charges		(\$2,500)	(\$2,575)	(\$2,652)	(\$2,732)	(\$2,814)	(\$2,898)	(\$2,985)	(\$3,075)	(\$3,167)	(\$3,262)
137	Destroyed Lock Charges		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
138	Tampering Charges		(\$10,000)	(\$10,300)	(\$10,609)	(\$10,927)	(\$11,255)	(\$11,593)	(\$11,941)	(\$12,299)	(\$12,668)	(\$13,048)
139	Returned Item Charges		(\$2,500)	(\$2,575)	(\$2,652)	(\$2,732)	(\$2,814)	(\$2,898)	(\$2,985)	(\$3,075)	(\$3,167)	(\$3,262)
140	Meter Repairs		(\$530)	(\$546)	(\$563)	(\$580)	(\$597)	(\$615)	(\$633)	(\$652)	(\$672)	(\$692)
141	Hydrant Meter Replacement		(\$3,183)	(\$3,278)	(\$3,377)	(\$3,478)	(\$3,582)	(\$3,690)	(\$3,800)	(\$3,914)	(\$4,032)	(\$4,153)
142	Hydrant Meter Repairs		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
143	Field Service Charges		(\$1,591)	(\$1,639)	(\$1,688)	(\$1,739)	(\$1,791)	(\$1,845)	(\$1,900)	(\$1,957)	(\$2,016)	(\$2,076)
144	Bad Debt Recovery		(\$2,652)	(\$2,732)	(\$2,814)	(\$2,898)	(\$2,985)	(\$3,075)	(\$3,167)	(\$3,262)	(\$3,360)	(\$3,461)
145	Delta Coves Property Tax Income		(\$59,883)	(\$61,680)	(\$63,530)	(\$65,436)	(\$67,399)	(\$69,421)	(\$71,504)	(\$73,649)	(\$75,859)	(\$78,134)
146	Reimbursement for Retirees Health Benefits - OPEB		(\$65,376)	(\$67,337)	(\$69,357)	(\$71,438)	(\$73,581)	(\$75,789)	(\$78,062)	(\$80,404)	(\$82,816)	(\$85,301)
147	Other Income		(\$25,750)	(\$26,523)	(\$27,318)	(\$28,138)	(\$28,982)	(\$29,851)	(\$30,747)	(\$31,669)	(\$32,619)	(\$33,598)
148	Rental Income		(\$127,308)	(\$131,127)	(\$135,061)	(\$139,113)	(\$143,286)	(\$147,585)	(\$152,012)	(\$156,573)	(\$161,270)	(\$166,108)
149	Southpark Well - M24		(\$5,517)	(\$5,682)	(\$5,853)	(\$6,028)	(\$6,209)	(\$6,395)	(\$6,587)	(\$6,785)	(\$6,988)	(\$7,198)
150	Knighten Well - M25		(\$5,252)	(\$5,410)	(\$5,572)	(\$5,739)	(\$5,911)	(\$6,088)	(\$6,271)	(\$6,459)	(\$6,653)	(\$6,853)
151	Reimbursement from Developers		(\$400,000)	(\$412,000)	(\$424,360)	(\$437,091)	(\$450,204)	(\$463,710)	(\$477,621)	(\$491,950)	(\$506,708)	(\$521,909)
152	Willow Park Marina Well - M27		(\$10,821)	(\$11,146)	(\$11,480)	(\$11,825)	(\$12,179)	(\$12,545)	(\$12,921)	(\$13,309)	(\$13,708)	(\$14,119)
153	Future Additional Fees											
154	<b>Total Non-Rate Revenue</b>		<b>(\$986,987)</b>	<b>(\$1,016,596)</b>	<b>(\$1,047,094)</b>	<b>(\$1,078,507)</b>	<b>(\$1,110,862)</b>	<b>(\$1,144,188)</b>	<b>(\$1,178,514)</b>	<b>(\$1,213,869)</b>	<b>(\$1,250,285)</b>	<b>(\$1,287,794)</b>
155												
156	<b>Subtotal</b>		<b>\$12,254,027</b>	<b>\$12,981,429</b>	<b>\$12,957,172</b>	<b>\$14,468,484</b>	<b>\$15,209,192</b>	<b>\$14,564,623</b>	<b>\$14,815,155</b>	<b>\$15,940,144</b>	<b>\$17,186,619</b>	<b>\$17,601,697</b>
157												
158	<b>Debt Service</b>											
159	2019 COPs (Refinancing of 2010s)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
160	2019 COPs (Restructuring of 2014s)		\$150,880	\$149,500	\$150,880	\$149,155	\$150,190	\$148,120	\$148,810	\$149,270	\$149,500	\$0
161	2019 COPs (\$4M New Money)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
162	2021 COPs (Refinancing of 2013s)		\$100,715	\$116,158	\$115,275	\$115,752	\$116,070	\$116,229	\$116,229	\$116,070	\$115,752	\$0
163	<b>Full GHG Offset, New Corp Yard, 2013 refi</b>		<b>\$37,500</b>	<b>\$257,700</b>	<b>\$484,800</b>	<b>\$482,200</b>	<b>\$484,400</b>	<b>\$481,200</b>	<b>\$484,000</b>	<b>\$484,000</b>	<b>\$484,800</b>	<b>\$485,200</b>
164	Mains and Service Line Replacements #1		\$0	\$0	\$153,058	\$153,058	\$153,058	\$153,058	\$153,058	\$153,058	\$153,058	\$153,058
165	Mains and Service Line Replacements #2		\$0	\$0	\$0	\$0	\$0	\$173,490	\$173,490	\$173,490	\$173,490	\$173,490
166	Mains and Service Line Replacements #3		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$195,154	\$195,154	\$195,154
167	Bond Fund CIP (Fys 2022-23, 2023-24)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
168	<b>Total Debt Service</b>		<b>\$289,095</b>	<b>\$523,358</b>	<b>\$904,013</b>	<b>\$900,165</b>	<b>\$903,718</b>	<b>\$1,072,097</b>	<b>\$1,074,387</b>	<b>\$1,075,888</b>	<b>\$1,271,754</b>	<b>\$1,006,902</b>
169												
170	<b>Transfers to/(from)</b>											
171	Operating Reserves		(\$217,540)	(\$575,599)	\$138,650	(\$532,826)	(\$325,981)	\$994,387	\$1,287,433	\$1,037,072	\$509,829	\$1,311,701
172	Capital Reserves		\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728
173			\$1,975,188	\$1,617,128	\$2,331,378	\$1,659,902	\$1,866,747	\$3,187,115	\$3,480,160	\$3,229,800	\$2,702,557	\$3,504,429
174												
175	<b>Total Revenue Requirement</b>		<b>\$14,518,310</b>	<b>\$15,121,916</b>	<b>\$16,192,563</b>	<b>\$17,028,551</b>	<b>\$17,979,657</b>	<b>\$18,823,836</b>	<b>\$19,369,702</b>	<b>\$20,245,833</b>	<b>\$21,160,930</b>	<b>\$22,113,028</b>
176	<i>Annual Change</i>			<i>4.2%</i>	<i>7.1%</i>	<i>5.2%</i>	<i>5.6%</i>	<i>4.7%</i>	<i>2.9%</i>	<i>4.5%</i>	<i>4.5%</i>	<i>4.5%</i>

Diablo Water District  
Water Rate Model  
Table 2E - Purchased Water Costs

	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30
Gallons per Connection per Day	390	380	377	375	375	375	370	370	370
Conservation Cutback (2/1/22 through 6/30/23)	-2.0%	5.0%							
Adjusted Consumption (weighted avg)	393	371	377	375	375	375	370	370	370
Gallons per Connection per Year	143,536	135,233	137,605	136,875	136,875	136,875	135,050	135,050	135,050
Number of Connections	12,491	12,891	13,116	13,316	13,516	13,716	13,916	14,116	14,316
Non Revenue Water	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Water Demand (tGal)	1,907,303	1,854,509	1,919,982	1,938,918	1,968,041	1,997,163	1,999,268	2,028,002	2,056,736
Well Water (tGal)	342,188	205,000	342,188	342,188	342,188	342,188	342,188	342,188	342,188
Purchased Water Needs (tGal)	1,565,116	1,649,509	1,577,794	1,596,731	1,625,853	1,654,976	1,657,081	1,685,815	1,714,549
Peak Month Demand	196,691	180,179	190,880	192,702	191,286	191,867	195,280	196,097	197,673
Service Charge per Month (8 months)	\$7.47	\$7.99	\$8.47	\$8.96	\$9.43	\$9.93	\$10.45	\$10.99	\$11.43
Service Charge per Month (4 months)	\$7.99	\$8.47	\$8.96	\$9.43	\$9.93	\$10.45	\$10.99	\$11.43	\$11.89
Demand Charge per tGal (8 months)	\$3.56	\$3.81	\$4.04	\$4.27	\$4.50	\$4.73	\$4.98	\$5.24	\$5.45
Demand Charge per tGal (4 months)	\$3.81	\$4.04	\$4.27	\$4.50	\$4.73	\$4.98	\$5.24	\$5.45	\$5.67
Volumetric Charge per tGal (8 months)	\$2.28	\$2.44	\$2.59	\$2.73	\$2.88	\$3.03	\$3.19	\$3.36	\$3.49
Volumetric Charge per tGal (4 months)	\$2.44	\$2.59	\$2.73	\$2.88	\$3.03	\$3.19	\$3.36	\$3.49	\$3.63
Service Charge	\$93.82	\$99.75	\$105.57	\$111.28	\$117.12	\$123.27	\$129.74	\$135.45	\$140.87
Demand Charge	\$717,200	\$700,693	\$786,203	\$837,971	\$875,487	\$924,245	\$990,074	\$1,042,129	\$1,092,522
Volumetric Charge	\$3,651,728	\$4,104,625	\$4,158,341	\$4,442,946	\$4,761,489	\$5,101,232	\$5,375,877	\$5,732,651	\$6,063,576
Additional Water Purchases	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$5,369,022	\$4,805,418	\$4,944,650	\$5,281,029	\$5,637,093	\$6,025,600	\$6,366,080	\$6,774,916	\$7,156,239
Annual Water Demand Increase (row 14)	0.83%	-2.77%	3.53%	0.99%	1.50%	1.48%	0.11%	1.44%	1.42%
Purchased Water Needs (tGal) (before 21/22 cutback)	1,891,540								

FY 2030-31

370
370
135,050
14,516
6.0%
2,085,470
342,188
1,743,283
206,168
\$11.89
\$12.37
\$5.67
\$5.90
\$3.63
\$3.77
\$146.51
\$1,185,051
\$6,411,803
\$0
\$7,597,000
1.40%

Diablo Water District  
Water Rate Model  
Table 3D - Revenue at Proposed Rates

		FY 2021-22			FY 2022-23		FY 2023-24		FY 2024-25		FY 2025-26		FY 2026-27	
Service Charge Revenue at Current Rates														
Meter Count by Size		Jul 1	Feb 1	Jun 1	Jul 1	Feb 1	Jul 1	Feb 1	Jul 1	Feb 1	Jul 1	Feb 1	Jul 1	Feb 1
months in effect		7	4	1	7	5	7	5	7	5	7	5	7	5
5/8" meters		10,492	10,492	10,492	10,828	10,828	11,017	11,017	11,185	11,185	11,353	11,353	11,521	11,521
1" meters		132	132	132	136	136	139	139	141	141	143	143	145	145
1" w/ Fire meters		1,727	1,727	1,727	1,783	1,783	1,814	1,814	1,841	1,841	1,869	1,869	1,897	1,897
1 1/2" meters		58	58	58	59	59	61	61	61	61	62	62	63	63
2" meters		64	64	64	66	66	67	67	68	68	69	69	70	70
3" meters		13	13	13	13	13	13	13	13	13	14	14	14	14
4" meters		4	4	4	4	4	4	4	4	4	5	5	5	5
6" meters		0	0	0	0	0	0	0	0	0	0	0	0	0
8" meters		1	1	1	1	1	1	1	1	1	1	1	1	1
10" meters		0	0	0	0	0	0	0	0	0	0	0	0	0
12" meters		0	0	0	0	0	0	0	0	0	0	0	0	0
Fire Services		69	69	69	71	71	73	73	74	74	75	75	76	76
Fire Hydrant Meters		44	44	44	25	25	22	22	22	22	22	22	22	22
		12,604	12,604	12,604	12,987	12,987	13,210	13,210	13,411	13,411	13,613	13,613	13,814	13,814
					3.0%		1.7%		1.5%		1.5%		1.5%	
Monthly Rate														
5/8" meters		\$17.52	\$17.27	\$19.70	\$19.70	\$20.49	\$20.49	\$21.31	\$21.31	\$22.16	\$22.16	\$23.05	\$23.05	\$23.51
1" meters		\$43.80	\$39.36	\$44.94	\$44.94	\$46.74	\$46.74	\$48.61	\$48.61	\$50.55	\$50.55	\$52.57	\$52.57	\$53.63
1" w/ Fire meters		\$17.52	\$17.27	\$19.70	\$19.70	\$20.49	\$20.49	\$21.31	\$21.31	\$22.16	\$22.16	\$23.05	\$23.05	\$23.51
1 1/2" meters		\$87.60	\$76.18	\$87.01	\$87.01	\$90.49	\$90.49	\$94.11	\$94.11	\$97.88	\$97.88	\$101.79	\$101.79	\$103.83
2" meters		\$140.16	\$120.37	\$137.49	\$137.49	\$142.99	\$142.99	\$148.71	\$148.71	\$154.66	\$154.66	\$160.85	\$160.85	\$164.07
3" meters		\$262.80	\$260.29	\$297.36	\$297.36	\$309.25	\$309.25	\$321.62	\$321.62	\$334.49	\$334.49	\$347.87	\$347.87	\$354.83
4" meters		\$438.00	\$444.39	\$507.71	\$507.71	\$528.02	\$528.02	\$549.14	\$549.14	\$571.10	\$571.10	\$593.95	\$593.95	\$605.83
6" meters		\$876.00	\$996.71	\$1,138.76	\$1,138.76	\$1,184.31	\$1,184.31	\$1,231.68	\$1,231.68	\$1,280.95	\$1,280.95	\$1,332.19	\$1,332.19	\$1,358.83
8" meters		\$1,401.60	\$2,064.51	\$2,358.78	\$2,358.78	\$2,453.13	\$2,453.13	\$2,551.26	\$2,551.26	\$2,653.31	\$2,653.31	\$2,759.44	\$2,759.44	\$2,814.63
10" meters		\$2,014.80	\$3,095.50	\$3,536.74	\$3,536.74	\$3,678.21	\$3,678.21	\$3,825.34	\$3,825.34	\$3,978.35	\$3,978.35	\$4,137.48	\$4,137.48	\$4,220.23
12" meters		\$3,766.80	\$3,905.56	\$4,462.28	\$4,462.28	\$4,640.77	\$4,640.77	\$4,826.40	\$4,826.40	\$5,019.45	\$5,019.45	\$5,220.23	\$5,220.23	\$5,324.64
Annual Revenue														
5/8" meters		\$1,286,374	\$724,698	\$206,683	\$1,493,115	\$1,109,171	\$1,579,944	\$1,173,673	\$1,668,198	\$1,239,233	\$1,760,984	\$1,308,160	\$1,858,524	\$1,354,068
1" meters		\$40,491	\$20,793	\$5,935	\$42,877	\$31,851	\$45,370	\$33,704	\$47,905	\$35,586	\$50,569	\$37,566	\$53,370	\$38,884
1" w/ Fire meters		\$211,783	\$119,311	\$34,027	\$245,820	\$182,609	\$260,115	\$193,228	\$274,644	\$204,022	\$289,920	\$215,369	\$305,979	\$222,927
1 1/2" meters		\$35,350	\$17,567	\$5,016	\$36,236	\$26,918	\$38,344	\$28,484	\$40,485	\$30,075	\$42,737	\$31,748	\$45,104	\$32,862
2" meters		\$62,729	\$30,783	\$8,791	\$63,507	\$47,177	\$67,200	\$49,920	\$70,954	\$52,709	\$74,901	\$55,640	\$79,049	\$57,593
3" meters		\$23,138	\$13,095	\$3,740	\$27,019	\$20,071	\$28,590	\$21,239	\$30,187	\$22,425	\$31,866	\$23,672	\$33,631	\$24,503
4" meters		\$12,854	\$7,453	\$2,129	\$15,377	\$11,423	\$16,272	\$12,087	\$17,181	\$12,763	\$18,136	\$13,473	\$19,141	\$13,945
6" meters		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8" meters		\$10,284	\$8,656	\$2,472	\$17,861	\$13,268	\$18,899	\$14,039	\$19,955	\$14,824	\$21,065	\$15,648	\$22,232	\$16,197
10" meters		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12" meters		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Service Charge Revenue		\$1,683,003	\$942,355	\$268,794	\$1,941,813	\$1,442,489	\$2,054,734	\$1,526,374	\$2,169,509	\$1,611,635	\$2,290,179	\$1,701,276	\$2,417,031	\$1,760,980
Water Consumption Revenue at Current Rates														
Residential - SF														
Tier 1 Usage		586,559	341,880	85,470	575,075	410,768	595,378	425,270	601,250	429,465	610,281	435,915	619,312	442,366
Tier 2 Usage		266,588	155,383	38,846	261,369	186,692	270,596	193,283	273,265	195,190	277,370	198,121	281,474	201,053
Tier 3 Usage		357,833	208,566	52,141	350,828	250,591	363,213	259,438	366,796	261,997	372,305	265,932	377,814	269,867
Tier 1 Rate		\$3.40	\$2.61	\$2.93	\$2.93	\$3.04	\$3.04	\$3.16	\$3.16	\$3.29	\$3.29	\$3.42	\$3.42	\$3.49
Tier 2 Rate		\$3.80	\$4.36	\$4.88	\$4.88	\$5.08	\$5.08	\$5.28	\$5.28	\$5.49	\$5.49	\$5.71	\$5.71	\$5.83
Tier 3 Rate		\$3.80	\$5.96	\$6.70	\$6.70	\$6.96	\$6.96	\$7.24	\$7.24	\$7.53	\$7.53	\$7.83	\$7.83	\$7.99
Tier 1 Revenue		\$1,994,299	\$893,238	\$250,017	\$1,682,210	\$1,249,642	\$1,811,264	\$1,345,510	\$1,902,294	\$1,413,132	\$2,008,101	\$1,491,732	\$2,119,328	\$1,544,082

Tier 2 Revenue	\$1,013,034	\$678,226	\$189,652	\$1,276,055	\$947,927	\$1,373,950	\$1,020,649	\$1,443,001	\$1,071,944	\$1,523,262	\$1,131,566	\$1,607,635	\$1,171,277	
Tier 3 Revenue	\$1,359,765	\$1,243,105	\$349,087	\$2,348,791	\$1,744,816	\$2,528,982	\$1,878,673	\$2,656,083	\$1,973,090	\$2,803,816	\$2,082,835	\$2,959,118	\$2,155,929	
Consumption Revenue - Residential SF	\$4,367,099	\$2,814,568	\$788,756	\$5,307,056	\$3,942,385	\$5,714,197	\$4,244,832	\$6,001,378	\$4,458,166	\$6,335,179	\$4,706,133	\$6,686,081	\$4,871,288	
<b>Residential - MF</b>														
	Tier 1 Usage	41,300	24,072	6,018	40,491	28,922	41,921	29,944	42,334	30,239	42,970	30,693	43,606	31,147
	Tier 1 Rate	\$3.40	\$3.83	\$4.30	\$4.30	\$4.47	\$4.47	\$4.65	\$4.65	\$4.83	\$4.83	\$5.02	\$5.02	\$5.13
	Tier 1 Revenue	\$140,420	\$92,278	\$25,848	\$173,914	\$129,193	\$187,256	\$139,104	\$196,667	\$146,095	\$207,605	\$154,221	\$219,105	\$159,633
Consumption Revenue - Residential MF	\$140,420	\$92,278	\$25,848	\$173,914	\$129,193	\$187,256	\$139,104	\$196,667	\$146,095	\$207,605	\$154,221	\$219,105	\$159,633	
<b>Non-Residential</b>														
	Tier 1 Usage	18,240	10,631	2,658	17,883	12,774	18,515	13,225	18,697	13,355	18,978	13,556	19,259	13,756
	Tier 2 Usage	40,761	23,758	5,939	39,963	28,545	41,374	29,553	41,782	29,844	42,410	30,293	43,037	30,741
	Tier 1 Rate	\$3.40	\$3.52	\$3.93	\$3.93	\$4.09	\$4.09	\$4.26	\$4.26	\$4.43	\$4.43	\$4.60	\$4.60	\$4.69
	Tier 2 Rate	\$3.80	\$4.30	\$4.83	\$4.83	\$5.02	\$5.02	\$5.22	\$5.22	\$5.43	\$5.43	\$5.65	\$5.65	\$5.76
	Tier 1 Revenue	\$62,017	\$37,382	\$10,458	\$70,363	\$52,270	\$75,761	\$56,280	\$79,569	\$59,108	\$83,994	\$62,396	\$88,647	\$64,585
	Tier 2 Revenue	\$154,892	\$102,244	\$28,668	\$192,887	\$143,288	\$207,685	\$154,280	\$218,123	\$162,034	\$230,255	\$171,046	\$243,008	\$177,049
	Consumption Revenue - Non-residential	\$216,909	\$139,626	\$39,125	\$263,250	\$195,557	\$283,446	\$210,560	\$297,691	\$221,142	\$314,249	\$233,442	\$331,655	\$241,635
	<b>Irrigation</b>													
		Tier 1 Usage	63,583	37,060	9,265	62,339	44,528	64,539	46,100	65,176	46,554	66,155	47,253	67,134
Tier 2 Usage		81,663	47,598	11,899	80,064	57,189	82,891	59,208	83,709	59,792	84,966	60,690	86,223	61,588
Tier 1 Rate		\$3.40	\$3.52	\$3.93	\$3.93	\$4.09	\$4.09	\$4.26	\$4.26	\$4.43	\$4.43	\$4.60	\$4.60	\$4.69
Tier 2 Rate		\$3.80	\$4.62	\$5.18	\$5.18	\$5.39	\$5.39	\$5.60	\$5.60	\$5.83	\$5.83	\$6.06	\$6.06	\$6.18
Tier 1 Revenue	\$216,183	\$130,310	\$36,454	\$245,277	\$182,206	\$264,094	\$196,184	\$277,367	\$206,044	\$292,794	\$217,504	\$309,012	\$225,137	
Tier 2 Revenue	\$310,320	\$219,696	\$61,634	\$414,695	\$308,059	\$446,509	\$331,692	\$468,949	\$348,362	\$495,032	\$367,738	\$522,452	\$380,643	
Consumption Revenue - Irrigation	\$526,503	\$350,006	\$98,088	\$659,972	\$490,265	\$710,603	\$527,876	\$746,316	\$554,406	\$787,826	\$585,242	\$831,464	\$605,781	
<b>Hydrant</b>														
	Tier 1 Usage	10,634	6,198	1,550	10,426	7,447	10,794	7,710	10,901	7,786	11,064	7,903	11,228	8,020
	Tier 2 Usage	34,390	20,044	5,011	33,717	24,083	34,907	24,934	35,251	25,179	35,781	25,558	36,310	25,936
	Tier 1 Rate	\$3.40	\$3.52	\$3.93	\$3.93	\$4.09	\$4.09	\$4.26	\$4.26	\$4.43	\$4.43	\$4.60	\$4.60	\$4.69
	Tier 2 Rate	\$3.80	\$4.29	\$4.81	\$4.81	\$5.01	\$5.01	\$5.21	\$5.21	\$5.41	\$5.41	\$5.63	\$5.63	\$5.74
Tier 1 Revenue	\$36,156	\$21,794	\$6,097	\$41,022	\$30,474	\$44,169	\$32,811	\$46,389	\$34,460	\$48,969	\$36,377	\$51,682	\$37,654	
Tier 2 Revenue	\$130,681	\$86,018	\$24,118	\$162,274	\$120,546	\$174,723	\$129,794	\$183,504	\$136,317	\$193,710	\$143,899	\$204,440	\$148,949	
Consumption Revenue - Hydrant	\$166,838	\$107,812	\$30,215	\$203,296	\$151,020	\$218,892	\$162,605	\$229,893	\$170,777	\$242,680	\$180,276	\$256,121	\$186,603	
<b>Fire Service/Hydrant</b>														
<b>Meter Count</b>														
Fire Services	69	69	69	71	71	73	73	74	74	75	75	76	76	
Fire Hydrant Meters	44	44	44	25	25	22	22	22	22	22	22	22	22	
<b>Monthly Rate</b>														
Fire Services (average per acct)	\$20.69	\$19.92	\$22.73	\$22.73	\$23.64	\$23.64	\$24.58	\$24.58	\$25.57	\$25.57	\$26.59	\$26.59	\$27.12	
Fire Hydrant Meters	\$262.80	\$260.29	\$297.36	\$297.36	\$309.25	\$309.25	\$321.63	\$321.63	\$334.49	\$334.49	\$347.87	\$347.87	\$354.83	
<b>Annual Revenue</b>														
Fire Services	\$10,020	\$5,512	\$1,572	\$19,472	\$20,251	\$20,604	\$21,428	\$21,755	\$22,625	\$22,965	\$23,884	\$24,237	\$24,722	
Fire Hydrant Meters	\$80,942	\$45,810	\$13,084	\$89,208	\$92,776	\$81,643	\$84,909	\$84,909	\$88,305	\$88,305	\$91,838	\$91,838	\$93,674	
	\$90,963	\$51,322	\$14,656	\$108,680	\$113,027	\$102,247	\$106,337	\$106,664	\$110,930	\$111,270	\$115,721	\$116,075	\$118,396	
<b>Revenue Recap</b>														

Service Charge Revenue	\$1,683,003	\$942,355	\$268,794	\$1,941,813	\$1,442,489	\$2,054,734	\$1,526,374	\$2,169,509	\$1,611,635	\$2,290,179	\$1,701,276	\$2,417,031	\$1,760,980
Fire Service/Hydrant	\$90,963	\$51,322	\$14,656	\$108,680	\$113,027	\$102,247	\$106,337	\$106,664	\$110,930	\$111,270	\$115,721	\$116,075	\$118,396
Consumption Revenue	\$5,417,769	\$3,504,291	\$982,031	\$6,607,488	\$4,908,419	\$7,114,393	\$5,284,977	\$7,471,944	\$5,550,587	\$7,887,539	\$5,859,315	\$8,324,426	\$6,064,939
	\$7,191,734	\$4,497,968	\$1,265,481	\$8,657,980	\$6,463,936	\$9,271,374	\$6,917,688	\$9,748,118	\$7,273,153	\$10,288,988	\$7,676,312	\$10,857,531	\$7,944,315
	\$12,955,183			\$15,121,916		\$16,189,063		\$17,021,271		\$17,965,300		\$18,801,846	

Monthly Revenue	\$1,027,391	\$1,124,492	\$1,265,481	\$1,236,854	\$1,292,787	\$1,324,482	\$1,383,538	\$1,392,588	\$1,454,631	\$1,469,855	\$1,535,262	\$1,551,076	\$1,588,863
% Change		9.451%	12.538%	-2.3%	4.5%	2.5%	4.5%	0.7%	4.5%	1.0%	4.4%	1.0%	2.4%

	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31			
Revenue Recap	\$12,955,183	\$15,121,916	\$16,189,063	\$17,021,271	\$17,965,300	\$18,801,846	\$19,335,991	\$20,199,495	\$21,097,407	\$22,031,014			
Annual Revenue Requirement	\$14,518,310	\$15,121,916	\$16,192,563	\$17,028,551	\$17,979,657	\$18,823,836	\$19,369,702	\$20,245,833	\$21,160,930	\$22,113,028			
Transfer to/(from) Operating Reserves	(\$1,563,127)	\$0	(\$3,500)	(\$7,280)	(\$14,357)	(\$21,990)	(\$33,711)	(\$46,337)	(\$63,523)	(\$82,014)	to Tab 4 Reserves		

FY 2027-28		FY 2028-29		FY 2029-30		FY 2030-31	
Jul 1	Feb 1	Jul 1	Feb 1	Jul 1	Feb 1	Jul 1	Feb 1
7	5	7	5	7	5	7	5
11,689	11,689	11,857	11,857	12,025	12,025	12,193	12,193
147	147	149	149	151	151	153	153
1,924	1,924	1,952	1,952	1,980	1,980	2,007	2,007
64	64	65	65	66	66	67	67
71	71	72	72	73	73	74	74
14	14	14	14	14	14	15	15
5	5	5	5	5	5	5	5
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
77	77	78	78	79	79	80	80
22	22	22	22	22	22	22	22
14,015	14,015	14,216	14,216	14,417	14,417	14,618	14,618
1.5%		1.4%		1.4%		1.4%	
\$23.51	\$24.21	\$24.21	\$24.94	\$24.94	\$25.69	\$25.69	\$26.46
\$53.63	\$55.24	\$55.24	\$56.89	\$56.89	\$58.60	\$58.60	\$60.36
\$23.51	\$24.21	\$24.21	\$24.94	\$24.94	\$25.69	\$25.69	\$26.46
\$103.83	\$106.94	\$106.94	\$110.15	\$110.15	\$113.45	\$113.45	\$116.86
\$164.07	\$168.99	\$168.99	\$174.06	\$174.06	\$179.28	\$179.28	\$184.66
\$354.83	\$365.47	\$365.47	\$376.44	\$376.44	\$387.73	\$387.73	\$399.36
\$605.83	\$624.00	\$624.00	\$642.72	\$642.72	\$662.00	\$662.00	\$681.86
\$1,358.83	\$1,399.59	\$1,399.59	\$1,441.58	\$1,441.58	\$1,484.83	\$1,484.83	\$1,529.37
\$2,814.63	\$2,899.07	\$2,899.07	\$2,986.04	\$2,986.04	\$3,075.62	\$3,075.62	\$3,167.89
\$4,220.23	\$4,346.84	\$4,346.84	\$4,477.25	\$4,477.25	\$4,611.56	\$4,611.56	\$4,749.91
\$5,324.64	\$5,484.38	\$5,484.38	\$5,648.91	\$5,648.91	\$5,818.37	\$5,818.37	\$5,992.92
\$1,923,338	\$1,415,027	\$2,009,510	\$1,478,425	\$2,099,121	\$1,544,354	\$2,192,301	\$1,612,907
\$55,231	\$40,634	\$57,706	\$42,455	\$60,279	\$44,348	\$62,955	\$46,317
\$316,649	\$232,963	\$330,836	\$243,401	\$345,590	\$254,255	\$360,930	\$265,542
\$46,677	\$34,341	\$48,769	\$35,880	\$50,943	\$37,480	\$53,205	\$39,144
\$81,806	\$60,186	\$85,471	\$62,882	\$89,283	\$65,687	\$93,246	\$68,602
\$34,804	\$25,606	\$36,364	\$26,753	\$37,985	\$27,946	\$39,671	\$29,187
\$19,808	\$14,573	\$20,696	\$15,226	\$21,619	\$15,905	\$22,578	\$16,611
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$23,007	\$16,926	\$24,038	\$17,685	\$25,110	\$18,473	\$26,224	\$19,293
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$2,501,321	\$1,840,258	\$2,613,389	\$1,922,708	\$2,729,930	\$2,008,448	\$2,851,111	\$2,097,603
619,965	442,832	628,875	449,196	637,785	455,561	646,695	461,925
281,771	201,265	285,821	204,158	289,870	207,050	293,920	209,943
378,212	270,152	383,648	274,034	389,084	277,917	394,520	281,800
\$3.49	\$3.60	\$3.60	\$3.70	\$3.70	\$3.81	\$3.81	\$3.93
\$5.83	\$6.00	\$6.00	\$6.18	\$6.18	\$6.37	\$6.37	\$6.56
\$7.99	\$8.23	\$8.23	\$8.48	\$8.48	\$8.73	\$8.73	\$8.99
\$2,163,994	\$1,592,081	\$2,260,948	\$1,663,412	\$2,361,772	\$1,737,589	\$2,466,611	\$1,814,721

\$1,641,516	\$1,207,687	\$1,715,062	\$1,261,795	\$1,791,543	\$1,318,064	\$1,871,069	\$1,376,572
\$3,021,482	\$2,222,947	\$3,156,855	\$2,322,543	\$3,297,630	\$2,426,114	\$3,444,012	\$2,533,809
\$6,826,992	\$5,022,715	\$7,132,864	\$5,247,750	\$7,450,945	\$5,481,767	\$7,781,691	\$5,725,101
43,652	31,180	44,280	31,628	44,907	32,076	45,534	32,524
\$5.13	\$5.28	\$5.28	\$5.44	\$5.44	\$5.60	\$5.60	\$5.77
\$223,722	\$164,596	\$233,746	\$171,970	\$244,169	\$179,639	\$255,008	\$187,613.01
\$223,722	\$164,596	\$233,746	\$171,970	\$244,169	\$179,639	\$255,008	\$187,613
19,279	13,771	19,556	13,969	19,833	14,167	20,110	14,365
43,082	30,773	43,702	31,215	44,321	31,658	44,940	32,100
\$4.69	\$4.84	\$4.84	\$4.98	\$4.98	\$5.13	\$5.13	\$5.28
\$5.76	\$5.93	\$5.93	\$6.11	\$6.11	\$6.29	\$6.29	\$6.48
\$90,515	\$66,593	\$94,570	\$69,577	\$98,788	\$72,679	\$103,173	\$75,905.67
\$248,130	\$182,553	\$259,247	\$190,732	\$270,808	\$199,237	\$282,829	\$208,081
\$338,645	\$249,146	\$353,817	\$260,308	\$369,595	\$271,917	\$386,002	\$283,987
67,205	48,003	68,170	48,693	69,136	49,383	70,102	50,073
86,314	61,653	87,555	62,539	88,795	63,425	90,036	64,311
\$4.69	\$4.84	\$4.84	\$4.98	\$4.98	\$5.13	\$5.13	\$5.28
\$6.18	\$6.37	\$6.37	\$6.56	\$6.56	\$6.75	\$6.75	\$6.96
\$315,524	\$232,136	\$329,661	\$242,536	\$344,362	\$253,352	\$359,648	\$264,598.09
\$533,463	\$392,476	\$557,364	\$410,060	\$582,218	\$428,346	\$608,063	\$447,361
\$848,987	\$624,612	\$887,024	\$652,597	\$926,580	\$681,698	\$967,711	\$711,959
11,240	8,028	11,401	8,144	11,563	8,259	11,724	8,375
36,348	25,963	36,871	26,336	37,393	26,709	37,916	27,083
\$4.69	\$4.84	\$4.84	\$4.98	\$4.98	\$5.13	\$5.13	\$5.28
\$5.74	\$5.92	\$5.92	\$6.09	\$6.09	\$6.28	\$6.28	\$6.46
\$52,771	\$38,824	\$55,135	\$40,564	\$57,594	\$42,373	\$60,150	\$44,253.42
\$208,749	\$153,579	\$218,101	\$160,460	\$227,827	\$167,616	\$237,940	\$175,056
\$261,519	\$192,403	\$273,236	\$201,024	\$285,421	\$209,988	\$298,091	\$219,310
77	77	78	78	79	79	80	80
22	22	22	22	22	22	22	22
\$27.12	\$27.93	\$27.93	\$28.77	\$28.77	\$29.64	\$29.64	\$30.52
\$354.83	\$365.47	\$365.47	\$376.44	\$376.44	\$387.73	\$387.73	\$399.36
\$25,082	\$25,835	\$26,206	\$26,992	\$27,375	\$28,196	\$28,590	\$29,447
\$93,674	\$96,485	\$96,485	\$99,379	\$99,379	\$102,360	\$102,360	\$105,431
\$118,756	\$122,319	\$122,690	\$126,371	\$126,754	\$130,556	\$130,950	\$134,879



\$2,501,321	\$1,840,258	\$2,613,389	\$1,922,708	\$2,729,930	\$2,008,448	\$2,851,111	\$2,097,603
\$118,756	\$122,319	\$122,690	\$126,371	\$126,754	\$130,556	\$130,950	\$134,879
\$8,499,865	\$6,253,472	\$8,880,688	\$6,533,649	\$9,276,711	\$6,825,009	\$9,688,502	\$7,127,970
\$11,119,942	\$8,216,049	\$11,616,768	\$8,582,728	\$12,133,394	\$8,964,013	\$12,670,563	\$9,360,451
\$19,335,991		\$20,199,495		\$21,097,407		\$22,031,014	

\$1,588,563	\$1,643,210	\$1,659,538	\$1,716,546	\$1,733,342	\$1,792,803	\$1,810,080	\$1,872,090
0.0%	3.4%	1.0%	3.4%	1.0%	3.4%	1.0%	3.4%

	A	B	C	D	E	F	G	H	I	J	K	L
1	Diablo Water District											
2	Water Rate Model											
3	Table 4 - Reserve Funds											
4		Rate Adj. +/-	7.1%	4.0%	4.0%	4.0%	4.0%	2.0%	3.0%	3.0%	3.0%	3.0%
5	Fiscal Year	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
6												
7	FUND 01 General Operating Fund											
8	O&M (includes Rate Stabilization)											
9	Beginning Balance		\$3,136,421	\$1,187,341	\$620,737	\$762,770	\$227,591	(\$112,173)	\$863,965	\$2,132,595	\$3,149,610	\$3,629,643
10	Transfers											
11	(to/from) Operations		(\$1,563,127)	\$0	(\$3,500)	(\$7,280)	(\$14,357)	(\$21,990)	(\$33,711)	(\$46,337)	(\$63,523)	(\$82,014)
12	(to/from) Rev. Requirements		(\$217,540)	(\$575,599)	\$138,650	(\$532,826)	(\$325,981)	\$994,387	\$1,287,433	\$1,037,072	\$509,829	\$1,311,701
13	(to/from) Non-potable fund		\$300,000									
14	Savings from delay of new hires		\$74,357									
15	Net additional CCWD (costs)/savings (demand increase partially offset)		(\$579,357)									
16	Debt Service cost change		\$15,075									
17	(to/from) Capital											
18	(to/from) Emergency											
19	CalPERS Interfund Loan PMT - FUND 02		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
20	Fund Subtotal		\$1,165,830	\$611,742	\$755,887	\$222,664	(\$112,747)	\$860,225	\$2,117,686	\$3,123,330	\$3,595,916	\$4,859,331
21	Estimated Interest Earnings		\$21,511	\$8,995	\$6,883	\$4,927	\$574	\$3,740	\$14,908	\$26,280	\$33,728	\$42,445
22	Ending Balance with Rate Increase	\$3,136,421	\$1,187,341	\$620,737	\$762,770	\$227,591	(\$112,173)	\$863,965	\$2,132,595	\$3,149,610	\$3,629,643	\$4,901,775
23	Target Balance	\$4,810,253	\$4,810,253	\$4,999,506	\$5,001,066	\$5,386,748	\$5,580,014	\$5,427,203	\$5,498,417	\$5,788,503	\$6,109,226	\$6,222,373
24	Fund Balance Compared to Target		25%	12%	15%	4%	-2%	16%	39%	54%	59%	79%
25												
26	Capital											
27	Beginning Balance		\$2,063,579	\$2,558,539	\$2,768,011	\$3,394,300	\$4,061,730	\$4,581,350	\$4,755,021	\$4,428,405	\$4,703,650	\$3,586,880
28	Revenues											
29	(to/from) Rev. Requirements		\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728
30	(to/from) Operating Fund		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
31	Cash Funded CIP Expenditures		(\$1,720,763)	(\$2,009,756)	(\$1,597,096)	(\$1,562,393)	(\$1,716,108)	(\$2,065,507)	(\$2,565,033)	(\$1,962,915)	(\$3,350,745)	(\$3,376,961)
32	Fund Subtotal		\$2,535,543	\$2,741,510	\$3,363,642	\$4,024,635	\$4,538,350	\$4,708,571	\$4,382,716	\$4,658,217	\$3,545,633	\$2,402,646
33	Estimated Interest Earnings		\$22,996	\$26,500	\$30,658	\$37,095	\$43,000	\$46,450	\$45,689	\$45,433	\$41,246	\$29,948
34	Ending Balance with Rate Increase	\$2,063,579	\$2,558,539	\$2,768,011	\$3,394,300	\$4,061,730	\$4,581,350	\$4,755,021	\$4,428,405	\$4,703,650	\$3,586,880	\$2,432,594
35	Target Balance	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728
36	Fund Balance Compared to Target		117%	126%	155%	185%	209%	217%	202%	215%	164%	111%
37												
38	Emergency Reserve											
39	Beginning Balance		\$0	\$1,005,000	\$2,020,050	\$3,045,251	\$4,080,703	\$5,126,510	\$5,177,775	\$5,229,553	\$5,281,848	\$5,334,667
40	(to/from) Rev. Requirements		\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0
41	(to/from) Operating Fund		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
42	Fund Subtotal		\$1,000,000	\$2,005,000	\$3,020,050	\$4,045,251	\$5,080,703	\$5,126,510	\$5,177,775	\$5,229,553	\$5,281,848	\$5,334,667
43	Estimated Interest Earnings		\$5,000	\$15,050	\$25,201	\$35,453	\$45,807	\$51,265	\$51,778	\$52,296	\$52,818	\$53,347
44	Ending Balance with Rate Increase	\$0	\$1,005,000	\$2,020,050	\$3,045,251	\$4,080,703	\$5,126,510	\$5,177,775	\$5,229,553	\$5,281,848	\$5,334,667	\$5,388,014
45	Target Balance	\$0	\$1,000,000	\$2,000,000	\$3,000,000	\$4,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000
46	Fund Balance Compared to Target		101%	101%	102%	102%	103%	104%	105%	106%	107%	108%
47												
48												
49	FUND 02 Facilities Reserve Fund											
50	Beginning Balance		\$6,200,000	\$7,426,616	\$6,120,119	\$5,357,003	\$5,567,466	\$5,636,426	\$5,862,899	\$6,188,383	\$6,556,300	\$6,405,810
51	Developer Fees Income		\$4,040,720	\$2,506,376	\$2,294,727	\$2,363,569	\$2,434,476	\$2,507,510	\$2,582,735	\$2,660,217	\$2,740,024	\$2,822,224
52	Non Operating Revenues		\$95,472	\$62,674	\$40,602	\$41,556	\$30,776	\$31,700	\$32,651	\$33,630	\$34,639	\$35,678
53	O&M Expenses		(\$817,598)	(\$1,003,092)	(\$1,102,837)	(\$1,094,777)	(\$1,224,022)	(\$1,220,685)	(\$1,259,886)	(\$1,351,752)	(\$1,676,412)	(\$1,509,007)
54	New Corp Yard Cash Expense		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
55	Debt Service		(\$898,331)	(\$878,875)	(\$884,045)	(\$880,093)	(\$877,540)	(\$882,051)	(\$887,060)	(\$880,748)	(\$884,000)	(\$884,000)
56	Capital Expenses		(\$1,261,441)	(\$2,060,977)	(\$1,168,663)	(\$274,142)	(\$350,471)	(\$267,211)	(\$207,411)	(\$160,526)	(\$432,481)	(\$553,265)
57	CalPERS Interfund Loan - FUND 01		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
58	CalPERS Interfund Loan PMT - FUND 01		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
59	Fund Subtotal		\$7,358,822	\$6,052,722	\$5,299,902	\$5,513,115	\$5,580,686	\$5,805,688	\$6,128,427	\$6,492,894	\$6,341,322	\$6,758,441
60	Estimated Interest Earnings		\$67,794	\$67,397	\$57,100	\$54,351	\$55,741	\$57,211	\$59,957	\$63,406	\$64,488	\$65,821
61	Ending Balance	\$6,200,000	\$7,426,616	\$6,120,119	\$5,357,003	\$5,567,466	\$5,636,426	\$5,862,899	\$6,188,383	\$6,556,300	\$6,405,810	\$6,824,262
62	Target Balance	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
63	Fund Balance Compared to Target		248%	204%	179%	186%	188%	195%	206%	219%	214%	227%
64												
65												
66	Operating Fund w/o Rate Increases											
67	Beginning Balance		\$3,136,421	\$829,112	(\$2,685,865)	(\$6,192,850)	(\$11,067,819)	(\$16,497,544)	(\$21,261,572)	(\$26,221,610)	(\$32,120,539)	(\$39,274,210)
68	Transfers											
69	(to/from) Operations		(\$2,109,498)	(\$2,939,377)	(\$3,645,635)	(\$4,342,143)	(\$5,103,743)	(\$5,758,415)	(\$6,247,471)	(\$6,936,002)	(\$7,663,500)	(\$8,427,999)
70	(to/from) Rev. Requirements		(\$217,540)	(\$575,599)	\$138,650	(\$532,826)	(\$325,981)	\$994,387	\$1,287,433	\$1,037,072	\$509,829	\$1,311,701
71	(to/from) Capital Reserve		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
72	(to/from) Emergency		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
73	CalPERS Interfund Loan PMT - FUND 02		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
74	Fund Subtotal		\$809,383	(\$2,685,865)	(\$6,192,850)	(\$11,067,819)	(\$16,497,544)	(\$21,261,572)	(\$26,221,610)	(\$32,120,539)	(\$39,274,210)	(\$46,390,508)
75	Estimated Interest Earnings		\$19,729	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
76	Ending Balance with Rate Increase	\$3,136,421	\$829,112	(\$2,685,865)	(\$6,192,850)	(\$11,067,819)	(\$16,497,544)	(\$21,261,572)	(\$26,221,610)	(\$32,120,539)	(\$39,274,210)	(\$46,390,508)
77	Target Balance	\$4,810,253	\$4,810,253	\$4,999,506	\$5,001,066	\$5,386,748	\$5,580,014	\$5,427,203	\$5,498,417	\$5,788,503	\$6,109,226	\$6,222,373
78	Fund Balance Compared to Target		17%	-54%	-124%	-205%	-296%	-392%	-477%	-555%	-643%	-746%
79												
80												
81	Reserve Funds Summary											
82	Total Balance with Rate Increases (Corrected)	\$5,200,000	\$4,745,880	\$5,388,748	\$7,157,070	\$8,289,321	\$9,469,177	\$10,618,986	\$11,560,999	\$12,853,260	\$12,216,523	\$12,334,369
83	Total Balance with Rate Increases (Corrected)	\$5,200,000	\$4,750,880	\$5,408,798	\$7,202,321	\$8,370,024	\$9,595,687	\$10,796,761	\$11,790,552	\$13,135,108	\$12,551,190	\$12,722,383
84	Total Balance w/o Rate Increases	\$5,200,000	\$3,387,651	\$82,146	(\$2,798,550)	(\$7,006,090)	(\$11,916,194)	(\$16,506,551)	(\$21,793,205)	(\$27,416,889)	(\$35,687,331)	(\$43,957,914)
85												
86	O&M Target Balance	\$3,310,253	\$3,310,253	\$3,499,506	\$3,501,066	\$3,886,748	\$4,080,014	\$3,927,203	\$3,998,417	\$4,288,503	\$4,609,226	\$4,722,373
87												
88	O&M + Rate Stabilization Target	\$4,810,253	\$4,810,253	\$4,999,506	\$5,001,066	\$5,386,748	\$5,580,014	\$5,427,203	\$5,498,417	\$5,788,503	\$6,109,226	\$6,222,373
89	Fund 01 Capital Target	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728	\$2,192,728
90	Reserve Target	\$7,002,981	\$7,002,981	\$7,192,234	\$7,193,794	\$7,579,476	\$7,772,741	\$7,619,931	\$7,691,145	\$7,981,231	\$8,301,954	\$8,415,100
91												
92	Emergency Reserve Target	\$0	\$1,000,000	\$2,000,000	\$3,000,000	\$4,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000
93	Reserve Target with Capital and Emergency Reserve	\$7,002,981	\$8,002,981	\$9,192,234	\$10,193,794	\$11,579,476	\$12,772,741	\$12,619,931	\$12,691,145	\$12,981,231	\$13,301,954	\$13,415,100
94												

	A	B	C	D	E	F	G	H	I	J	K	L
1	Diablo Water District											
2	Water Rate Model											
3	Table 5 - Capital Improvement Program											
4												
5												
6												Total
7	Fund 01 Projects	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	Project Cost
8												
9	PAYGo Funded Projects											
10	Public Right of Way Relocations	\$135,000	\$150,000	\$154,500	\$159,135	\$163,909	\$168,826	\$173,891	\$179,108	\$184,481	\$190,016	\$1,658,866
11	RBWTP - Projects & Improvements (WTP 66.5% GF & 33.5% FR)	\$591,178	\$290,000	\$780,809	\$722,869	\$816,726	\$1,039,020	\$877,131	\$247,000	\$833,262	\$1,095,928	\$7,293,923
12	Additional RBWTP Projects	\$14,000										\$14,000
13	Field Equipment Purchases	\$51,500	\$151,500	\$101,500	\$51,500	\$51,500	\$81,500	\$51,500	\$51,500	\$201,500	\$51,500	\$845,000
14	Valve Replacement	\$25,000	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982	\$29,851	\$30,747	\$31,669	\$32,619	\$286,597
15	Add/Replace Vehicles - Construction Trucks 50% GF and 50% FR	\$177,500	\$140,000	\$150,000	\$160,000	\$170,000	\$180,000	\$0	\$70,000	\$150,000	\$0	\$1,197,500
16	Corpyard VFD's	\$125,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$125,000
17	R1/R2 Seismic Upgrades - 52% GF and 48% FR	\$300,040	\$900,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200,940
18	Scada Upgrade - 50% GF and 50% FR	\$18,000	\$10,000	\$10,000	\$10,000	\$18,500	\$10,000	\$10,000	\$10,000	\$250,000	\$260,000	\$606,500
19	New Office Equipment	\$0	\$0	\$0	\$19,000	\$0	\$0	\$0	\$0	\$22,500	\$0	\$41,500
20	Radio Read Upgrade	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	Corpyard Improvements	\$13,545	\$13,951	\$14,370	\$14,801	\$15,245	\$20,702	\$16,173	\$16,659	\$17,158	\$17,673	\$160,278
22	Pipeline Corrosion Testing/Repairs	\$20,000	\$20,600	\$21,218	\$21,855	\$22,510	\$23,185	\$23,881	\$24,597	\$25,335	\$26,095	\$229,278
23	Maint T&D	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
24	Additional CIP Placeholder	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$5,500,000
25		\$1,720,763	\$1,952,701	\$1,508,920	\$1,436,477	\$1,536,527	\$1,802,216	\$2,182,428	\$1,629,611	\$2,715,906	\$2,673,832	\$19,159,382
26	ENR Multiplier	1.000	1.029	1.058	1.088	1.117	1.146	1.175	1.205	1.234	1.263	
27	Project Costs Escalated	\$1,720,763	\$2,009,756	\$1,597,096	\$1,562,393	\$1,716,108	\$2,065,507	\$2,565,033	\$1,962,915	\$3,350,745	\$3,376,961	
28												
29												Total
30		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	Project Cost
31	PAYGo Funded Projects	\$1,720,763	\$1,952,701	\$1,508,920	\$1,436,477	\$1,536,527	\$1,802,216	\$2,182,428	\$1,629,611	\$2,715,906	\$2,673,832	\$19,159,382
32	ENR Multiplier	1.000	1.029	1.058	1.088	1.117	1.146	1.175	1.205	1.234	1.263	
33	Project Costs Escalated	\$1,720,763	\$2,009,756	\$1,597,096	\$1,562,393	\$1,716,108	\$2,065,507	\$2,565,033	\$1,962,915	\$3,350,745	\$3,376,961	\$21,927,279
34									Average Annual Cash-Funded CIP		\$2,192,728	
35												
36												
37												Total
38	Fund 02 Projects	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	Project Cost
39												
40	PAYGo Funded Projects											
41	Scada Upgrade - 50% GF and 50% FR	\$15,000	\$10,000	\$10,000	\$10,000	\$18,500	\$10,000	\$10,000	\$10,000	\$10,000	\$20,000	\$123,500
42	Asset Management System / GIS / Mapping Update	\$50,301	\$50,868	\$52,244	\$68,661	\$55,121	\$56,624	\$58,173	\$59,768	\$61,411	\$63,104	\$576,273
43	New Software - 50% GF and 50% FR	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
44	RBWTP Improvements and Projects - 66.5% GF and 33.5% FR	\$121,941	\$0	\$254,397	\$173,388	\$240,175	\$166,526	\$108,300	\$63,500	\$279,131	\$354,964	\$1,762,321
45	Additional RBWTP Projects	\$39,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$39,500
46	Stonecreek Well Filter (Manganese Treatment)	\$282,500	\$847,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,130,000
47	Add/Replace District Vehicles - Construction Trucks 50%GF and 50% FR	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
48	Relocation of Downtown Railroad Pipeline - 20% GF and 80% FR	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250,000
49	Glen Park Permanent Generator	\$225,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$225,000
50	Parallel R2/R3 Transmission Main	\$0	\$262,500	\$787,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,050,000
51	R1 and R2 Seismic Upgrades - 52% GF and 48% FR	\$277,200	\$831,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,108,800
52		\$1,261,441	\$2,002,468	\$1,104,141	\$252,048	\$313,796	\$233,150	\$176,473	\$133,268	\$350,542	\$438,068	\$6,265,395
53	ENR Multiplier	1.000	1.029	1.058	1.088	1.117	1.146	1.175	1.205	1.234	1.263	
54	Project Costs Escalated	\$1,261,441	\$2,060,977	\$1,168,663	\$274,142	\$350,471	\$267,211	\$207,411	\$160,526	\$432,481	\$553,265	
55												
56												
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75												
76												

	Project	Total Cost	Allocation Factor	Average Day	Maximum Day	Maximum Hour	Accounts	Service Charge
		a	b	c	d	e	f	g
1	Public Right of Way R	\$1,658,866	Capacity	\$0	\$0	\$0	\$0	\$1,658,866
2	RBWTP - Projects & In	\$7,293,923	Capacity	\$0	\$0	\$0	\$0	\$7,293,923
3	Additional RBWTP Prc	\$14,000	Capacity	\$0	\$0	\$0	\$0	\$14,000
4	Field Equipment Purcl	\$845,000	Capacity	\$0	\$0	\$0	\$0	\$845,000
5	Valve Replacement	\$286,597	Capacity	\$0	\$0	\$0	\$0	\$286,597
6	Add/Replace Vehicles	\$1,197,500	Capacity	\$0	\$0	\$0	\$0	\$1,197,500
7	Corpyard VFD's	\$125,000	Capacity	\$0	\$0	\$0	\$0	\$125,000
8	R1/R2 Seismic Upgrad	\$1,200,940	Capacity	\$0	\$0	\$0	\$0	\$1,200,940
9	Scada Upgrade	\$606,500	Capacity	\$0	\$0	\$0	\$0	\$606,500
10	New Office Equipmen	\$41,500	Capacity	\$0	\$0	\$0	\$0	\$41,500
11	Radio Read Upgrade	\$0	Capacity	\$0	\$0	\$0	\$0	\$0
12	Corpyard Improvemer	\$160,278	Capacity	\$0	\$0	\$0	\$0	\$160,278
13	Pipeline Corrosion Tes	\$229,278	Capacity	\$0	\$0	\$0	\$0	\$229,278
14	Maint T&D	\$0	Capacity	\$0	\$0	\$0	\$0	\$0
15	Unidentified Future Ci	\$5,500,000	Capacity	\$0	\$0	\$0	\$0	\$5,500,000
16		\$19,159,382		\$0	\$0	\$0	\$0	\$19,159,382
17				0.00%	0.00%	0.00%	0.00%	100.00%

	A	B	C	D	E	F	G	H	I	J	K
1	Diablo Water District										
2	Water Rate Model										
3	Table 6 - Debt Service & Coverage										
4											
5											
6											
7											
8											
9	Operations Fund D/S										
10	2019 COPs (Refinancing of 2010s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	2019 COPs (Restructuring of 2014s)	\$150,880	\$149,500	\$150,880	\$149,155	\$150,190	\$148,120	\$148,810	\$149,270	\$149,500	\$0
12	2019 COPs (\$4M New Money)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13	2022 COPs (Refinancing of 2013s)	\$100,715	\$116,158	\$115,275	\$115,752	\$116,070	\$116,229	\$116,229	\$116,070	\$115,752	\$0
14	Total	\$251,595	\$265,658	\$266,155	\$264,907	\$266,260	\$264,349	\$265,039	\$265,340	\$265,252	\$0
15											
16	Facilities Fund D/S										
17	2019 COPs (Refinancing of 2010s)	\$234,200	\$233,800	\$238,200	\$237,200	\$231,000	\$234,800	\$238,200	\$231,200	\$234,200	\$231,800
18	2019 COPs (Restructuring of 2014s)	\$111,520	\$110,500	\$111,520	\$110,245	\$111,010	\$109,480	\$109,990	\$110,330	\$110,500	\$0
19	2019 COPs (\$4M New Money)	\$215,200	\$212,400	\$214,600	\$211,600	\$213,600	\$215,400	\$212,000	\$213,600	\$215,000	\$211,200
20	2022 COPs (Refinancing of 2013s)	\$337,411	\$322,175	\$319,725	\$321,048	\$321,930	\$322,371	\$322,371	\$321,930	\$321,048	\$0
21		\$898,331	\$878,875	\$884,045	\$880,093	\$877,540	\$882,051	\$882,561	\$877,060	\$880,748	\$443,000
22											
23	Future Operations Fund D/S										
24	Full GHG Offset, New Corp Yard, 2013 refi	\$37,500	\$257,700	\$484,800	\$482,200	\$484,400	\$481,200	\$482,800	\$484,000	\$484,800	\$485,200
25	Mains and Service Line Replacements #1	\$0	\$0	\$153,058	\$153,058	\$153,058	\$153,058	\$153,058	\$153,058	\$153,058	\$153,058
26	Mains and Service Line Replacements #2	\$0	\$0	\$0	\$0	\$0	\$173,490	\$173,490	\$173,490	\$173,490	\$173,490
27	Mains and Service Line Replacements #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$195,154	\$195,154
28	Bond Fund CIP (FYs 2022-23, 2023-24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29		\$37,500	\$257,700	\$637,858	\$635,258	\$637,458	\$807,748	\$809,348	\$810,548	\$1,006,502	\$1,006,902
30											
31	Total Debt Service	\$1,187,426	\$1,402,233	\$1,788,058	\$1,780,258	\$1,781,258	\$1,954,148	\$1,956,948	\$1,952,948	\$2,152,502	\$1,449,902
32											
33	Debt Coverage Calculation										
34	Funds Available for Debt Service										
35	Rate Revenue	\$12,955,183	\$15,121,916	\$16,189,063	\$17,021,271	\$17,965,300	\$18,801,846	\$19,335,991	\$20,199,495	\$21,097,407	\$22,031,014
36	Connection Fees	\$4,040,720	\$2,506,376	\$2,294,727	\$2,363,569	\$2,434,476	\$2,507,510	\$2,582,735	\$2,660,217	\$2,740,024	\$2,822,224
37	Non-Operating Income	\$986,987	\$1,016,596	\$1,047,094	\$1,078,507	\$1,110,862	\$1,144,188	\$1,178,514	\$1,213,869	\$1,250,285	\$1,287,794
38	Interest Income	\$44,507	\$35,496	\$37,541	\$42,022	\$43,575	\$50,190	\$60,597	\$71,713	\$74,974	\$72,392
39	Total Funds Available w/ Connection Fees	\$18,027,397	\$18,680,384	\$19,568,425	\$20,505,368	\$21,554,212	\$22,503,734	\$23,157,837	\$24,145,294	\$25,162,690	\$26,213,425
40	Total Funds Available w/o Connection Fees	\$13,986,677	\$16,174,008	\$17,273,698	\$18,141,799	\$19,119,736	\$19,996,224	\$20,575,102	\$21,485,077	\$22,422,666	\$23,391,200
41											
42	Expenses										
43	Fund 01 O&M	\$12,241,013	\$12,998,025	\$13,004,266	\$14,546,991	\$15,320,054	\$15,708,811	\$15,993,668	\$17,154,013	\$18,436,904	\$18,889,490
44	Fund 02 O&M	\$817,598	\$1,003,092	\$1,102,837	\$1,094,777	\$1,224,022	\$1,220,685	\$1,259,886	\$1,351,752	\$1,676,412	\$1,509,007
45	Total Expenses	\$13,058,611	\$14,001,118	\$14,107,103	\$15,641,768	\$16,544,076	\$16,929,496	\$17,253,555	\$18,505,765	\$20,113,316	\$20,398,497
46											
47	Net Revenue w/ Connection Fees	\$4,968,785	\$4,679,266	\$5,461,322	\$4,863,600	\$5,010,136	\$5,574,238	\$5,904,282	\$5,639,530	\$5,049,374	\$5,814,928
48	Net Revenue w/o Connection Fees	\$928,065	\$2,172,890	\$3,166,595	\$2,500,031	\$2,575,660	\$3,066,728	\$3,321,547	\$2,979,312	\$2,309,350	\$2,992,703
49											
50	Debt Service	\$1,187,426	\$1,402,233	\$1,788,058	\$1,780,258	\$1,781,258	\$1,954,148	\$1,956,948	\$1,952,948	\$2,152,502	\$1,449,902
51	Debt Coverage Ratio w/ Connection Fees	4.18	3.34	3.05	2.73	2.81	2.85	3.02	2.89	2.35	4.01
52	Debt Coverage Ratio w/o Connection Fees	0.78	1.55	1.77	1.40	1.45	1.57	1.70	1.53	1.07	2.06
53											
54											
55	Allocation of 2022 Bond Debt Service										
56											
57	Refunding 2013 COPs - Par Amount		\$438,333	\$435,000	\$436,800	\$438,000	\$438,600	\$438,600	\$438,000	\$436,800	\$0
58	Capital Projects Financing - Par Amount		\$257,700	\$484,800	\$482,200	\$484,400	\$481,200	\$482,800	\$484,000	\$484,800	\$485,200
59	Annual Total D/S		\$696,033	\$919,800	\$919,000	\$922,400	\$919,800	\$921,400	\$922,000	\$921,600	\$485,200
60											
61	Refunding 2013 COPs allocation	Alloc %	\$438,333	\$435,000	\$436,800	\$438,000	\$438,600	\$438,600	\$438,000	\$436,800	\$0
62	Operations Fund	26.50%	\$116,158	\$115,275	\$115,752	\$116,070	\$116,229	\$116,229	\$116,070	\$115,752	\$0
63	Facilities Fund	73.50%	\$322,175	\$319,725	\$321,048	\$321,930	\$322,371	\$322,371	\$321,930	\$321,048	\$0
64			\$438,333	\$435,000	\$436,800	\$438,000	\$438,600	\$438,600	\$438,000	\$436,800	\$0
65											
66	Recap of D/S by Fund										
67	Operations Fund										
68	100% of Capital Projects Financing		\$257,700	\$484,800	\$482,200	\$484,400	\$481,200	\$482,800	\$484,000	\$484,800	\$485,200
69	Allocated % of Refunding 2013 COPs		\$116,158	\$115,275	\$115,752	\$116,070	\$116,229	\$116,229	\$116,070	\$115,752	\$0
70	Total		\$373,858	\$600,075	\$597,952	\$600,470	\$597,429	\$599,029	\$600,070	\$600,552	\$485,200
71											
72	Facilities Fund		\$322,175	\$319,725	\$321,048	\$321,930	\$322,371	\$322,371	\$321,930	\$321,048	\$0
73											
74	Grand Total		\$696,033	\$919,800	\$919,000	\$922,400	\$919,800	\$921,400	\$922,000	\$921,600	\$485,200
75		check s/b \$0-->	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

	A	B	C	D	E	F	G	H	I	J
1			Diablo Water District							
2			Water Rate Model							
3			Table 9 - Allocations							
4										
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	A	B	C	D	E	F	G	H	I	J
69		44	O&M Composite			85.1%	12.9%	0.4%	4.1%	-2.4%
70		45								
71		46	Debt Service	\$289,095	Capacity	\$0	\$0	\$0	\$0	\$289,095
72		47								
73		48	Capital Expenses (PayGo)	\$2,192,728	CIP Composite	\$0	\$0	\$0	\$0	\$2,192,728
74		49								
75		50	Subtotal - O&M, Debt Service, and Capital	\$9,968,367		\$6,371,747	\$964,577	\$29,258	\$304,000	\$2,298,786
76		51			% of Consumption	86.5%	13.1%	0.4%		
77		52	Expense Composite		% of total	63.9%	9.7%	0.3%	3.0%	23.1%
78		53								
79		1	Composite Allocations							
80		2	Operations & Maintenance							
81		3	Maintenance Corpyard	\$25,000	O&M Composite	\$21,277	\$3,221	\$98	\$1,015	(\$611)
82		4	General Operating Corpyard	\$40,950	O&M Composite	\$34,852	\$5,276	\$160	\$1,663	(\$1,001)
83		5	Telephone Services for Field	\$8,450	O&M Composite	\$7,192	\$1,089	\$33	\$343	(\$207)
84		6	Utilities for Field	\$172,450	O&M Composite	\$146,771	\$22,219	\$674	\$7,003	(\$4,216)
85		7	Automotive Fuel, Maintenance, Misc	\$87,000	O&M Composite	\$74,045	\$11,209	\$340	\$3,533	(\$2,127)
86		8	Other							
87		9	Corpyard Improvements	\$13,545	O&M Composite	\$11,528	\$1,745	\$53	\$550	(\$331)
88		10	Additional Staff	\$0	O&M Composite	\$0	\$0	\$0	\$0	\$0
89		11	Administrative and General	\$162,575	O&M Composite	\$138,366	\$20,946	\$635	\$6,602	(\$3,975)
90		12	Board of Directors	\$27,562	O&M Composite	\$23,458	\$3,551	\$108	\$1,119	(\$674)
91		13	Office	\$223,870	O&M Composite	\$190,534	\$28,844	\$875	\$9,091	(\$5,473)
92		14	Insurance	\$85,000	O&M Composite	\$72,343	\$10,952	\$332	\$3,452	(\$2,078)
93		15	Legal Expenses	\$39,000	O&M Composite	\$33,193	\$5,025	\$152	\$1,584	(\$954)
94		16	Training	\$42,800	O&M Composite	\$36,427	\$5,514	\$167	\$1,738	(\$1,046)
95		17	Total Composite Expenses	\$928,202		\$789,986	\$119,591	\$3,627	\$37,691	(\$22,693)
96		18								
97		19	Subtotal O&M, Capital, Non-Operating	\$10,896,569		\$7,161,733	\$1,084,168	\$32,885	\$341,691	\$2,276,092
98		20	Expense Allocation			65.7%	9.9%	0.3%	3.1%	20.9%
99		21								
100		22	Payroll - Salaries/Benefits/Taxes	\$3,179,691	Exp Composite	\$2,032,448	\$307,679	\$9,333	\$96,969	\$733,262
101		23	Engineering							
102		24	Engineering	\$215,000	Exp Composite	\$137,427	\$20,804	\$631	\$6,557	\$49,581
103		25	Consulting	\$185,380	Exp Composite	\$118,494	\$17,938	\$544	\$5,653	\$42,750
104		26	Non-Operating Revenue							
105		27	Late Charges	(\$65,000)	Exp Composite	(\$41,548)	(\$6,290)	(\$191)	(\$1,982)	(\$14,990)
106		28	Trip Charges	(\$26,523)	Exp Composite	(\$16,953)	(\$2,566)	(\$78)	(\$809)	(\$6,116)
107		29	Call-Out Charges	(\$2,500)	Exp Composite	(\$1,598)	(\$242)	(\$7)	(\$76)	(\$577)
108		30	Returned Item Charges	(\$2,500)	Exp Composite	(\$1,598)	(\$242)	(\$7)	(\$76)	(\$577)
109		31	Hydrant Meter Repairs	\$0	Accounts	\$0	\$0	\$0	\$0	\$0
110		32	Field Service Charges	(\$1,591)	Exp Composite	(\$1,017)	(\$154)	(\$5)	(\$49)	(\$367)
111		33	Bad Debt Recovery	(\$2,652)	Exp Composite	(\$1,695)	(\$257)	(\$8)	(\$81)	(\$612)
112		34	Retirees Health Benefits - OPEB	(\$65,376)	Exp Composite	(\$41,788)	(\$6,326)	(\$192)	(\$1,994)	(\$15,076)
113		35	Other Income	(\$25,750)	Exp Composite	(\$16,459)	(\$2,492)	(\$76)	(\$785)	(\$5,938)
114		36	Rental Income	(\$127,308)	Exp Composite	(\$81,375)	(\$12,319)	(\$374)	(\$3,882)	(\$29,358)
115		37	Southpark Well - M24	(\$5,517)	Exp Composite	(\$3,526)	(\$534)	(\$16)	(\$168)	(\$1,272)
116		38	Knightsen Well - M25	(\$5,252)	Exp Composite	(\$3,357)	(\$508)	(\$15)	(\$160)	(\$1,211)
117		39	Willow Park Marina Well - M27	(\$10,821)	Exp Composite	(\$6,917)	(\$1,047)	(\$32)	(\$330)	(\$2,495)
118		40	Reimbursement from Developers	(\$400,000)	Exp Composite	(\$255,679)	(\$38,706)	(\$1,174)	(\$12,199)	(\$92,243)
119		41	Total Non-Operating	\$2,839,281		\$1,814,859	\$274,740	\$8,333	\$86,588	\$654,761
120		42								
121		43	Transfers to/(from) Reserves	(\$217,540)	Exp Composite	(\$139,051)	(\$21,050)	(\$638)	(\$6,634)	(\$50,166)
122		44	Emergency Reserve - Tier 1	\$1,000,000	Average Day	\$1,000,000	\$0	\$0	\$0	\$0
123		45								
124		46	Total Revenue Requirement	\$14,518,310		\$9,837,540	\$1,337,858	\$40,580	\$421,645	\$2,880,687
125		47						\$11,215,978	\$421,645	\$2,880,687
126		48				% of revenue requirement	77.3%			22.7%
127		49					Consumption Charge COS		Service Charge COS	

	A	B	C	D	E	F	G	H
1	Diablo Water District							
2	Water Rate Model							
3	Tab 8 - Load Factors							
4								
5		Levels of Demand (hcf)						
6			Average	Maximum	Maximum			
7			Day	Day	Hour			
8			a	b	c			
9	1	Demand by Customer Category (hcf)						
10	2	Residential - SF	5,688	8,485	17,829			
11	3	Residential - MF	194	198	180			
12	4	Non Residential	277	490	221			
13	5	Hydrant	211	400	600			
14	6	Irrigation	682	1,354	1,622			
15	7	Total	7,052	10,927	20,453			
16	8	Ratio of Flows to Average Day						
17	9	Residential - SF	1.00	1.49	3.13			
18	10	Residential - MF	1.00	1.02	0.93			
19	11	Non Residential	1.00	1.77	0.80			
20	12	Hydrant	1.00	1.89	2.84			
21	13	Irrigation	1.00	1.98	2.38			
22	14	Total	1.00	1.55	2.90			
23	15							
24	16	Level of Service	7,052	10,927	20,453			
25	17	Average Day Demand	7,052	7,052	7,052			
26	18	Ratio of Level of Service to Average	1.00	1.55	2.90			
27								
28								
29		Demand Service Levels						
30			Load	Average	Maximum	Maximum		
31		Allocation Basis	Factors	Day	Day	Hour	Totals	
32			a	b	c	d	e	
33	1	Average Day	1.00	1.00			1.00	
34	2	Allocation %		100%			100%	
35	3							
36	4	Maximum Day	1.55	1.00	0.55		1.55	
37	5	Allocation %		64.5%	35.5%		100%	
38	6							
39	7	Maximum Hour	2.90	1.00	0.55	1.35	2.90	
40	8	Allocation %		34.5%	18.9%	46.6%	100%	
41								

	A	B	C	D	E	F	G	H
42								
43								
44			<b>Flow per Customer</b>	<b>Average Day</b>	<b>Maximum Day</b>	<b>Maximum Hour</b>		
45			<b>Residential - SF</b>					
46			hcf per day	5,688	8,485	17,829		
47			hcf per month	170,627	254,549		x 30 days	
48			# of Accounts	12,075	12,075			
49			<b>Average flow per Acct (hcf/mo)</b>	<b>14.0</b>	<b>21.0</b>	<b>21+</b>	hcf per month ÷ Monthly bills	
50								
51			<b>Residential - MF</b>					
52			hcf per day	194	198	180		
53			hcf per month	5,819	5,953			
54			# of Accounts	21	21			
55			<b>Average flow per Acct (hcf/mo)</b>	<b>277.0</b>	<b>283.0</b>	<b>283+</b>		
56								
57			<b>Non Residential</b>					
58			hcf per day	277	490	221		
59			hcf per month	8,313	14,691			
60			# of Accounts	246	246			
61			<b>Average flow per Acct (hcf/mo)</b>	<b>34.0</b>	<b>60.0</b>	<b>60+</b>		
62								
63			<b>Irrigation</b>					
64			hcf per day	682	1,354	1,622		
65			hcf per month	20,465	40,610			
66			# of Accounts	181	181			
67			<b>Average flow per Acct (hcf/mo)</b>	<b>113.0</b>	<b>225.0</b>	<b>225+</b>		
68								
69			<b>Hydrant</b>					
70			hcf per day	211	400	600		
71			hcf per month	6,344	12,000			
72			# of Accounts	55	55			
73			<b>Average flow per Acct (hcf/mo)</b>	<b>115.0</b>	<b>218.0</b>	<b>218+</b>		
74								
75			<b>Combined</b>					
76			hcf per day	7,052	10,927	20,453		
77			hcf per month	211,569	327,802			
78			# of Accounts	12,577	12,577			
79			<b>Average flow per Acct (hcf/mo)</b>	<b>17.0</b>	<b>26.0</b>	<b>26+</b>		
80								



	A	B	C	D	E	F	G	H	I
1			Diablo Water District						
2			Water Rate Model						
3			Table 9 - Consumption Charges						
4									
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	A	B	C	D	E	F	G	H	I
79									
80									
81									
82									
83	1	Water Charge Revenue		a	b	c	d	e	f
84	2	Service Charge Revenue		\$3,041,084	24.5%	\$3,302,331	22.7%	\$261,247	8.6%
85	3		Total	\$12,408,812	100.0%	\$14,518,310	100.0%	\$2,109,498	17.0%
86	4								
87	5	Water Charge Revenue							
88	6	Residential		\$7,486,455	79.9%	\$9,008,101	80.3%	\$1,521,646	20.3%
89	7	Multi Family		\$268,234	2.9%	\$295,234	2.6%	\$27,000	10.1%
90	8	Non Residential		\$379,879	4.1%	\$446,946	4.0%	\$67,067	17.7%
91	9	Irrigation		\$940,806	10.0%	\$1,120,553	10.0%	\$179,747	19.1%
92	10	Hydrant		\$292,354	3.1%	\$345,145	3.1%	\$52,791	18.1%
93	11			\$9,367,728	100.0%	\$11,215,978	100.0%	\$1,848,251	19.7%
94									

	A	B	C	D	E	F	G	H	I
1	Diablo Water District								
2	Water Rate Model								
3	Tab 10. Fixed Monthly 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	10,492	20	1.00	10,492	C712-15 Singlejet Type		
11		1" meters	132	50	2.50	330	C712-15 Singlejet Type		
12		1" w/ Fire meters	1,727	20	1.00	1,727	C712-15 Singlejet Type		
13		1 1/2" meters	58	100	5.00	288	C712-15 Singlejet Type		
14		2" meters	64	160	8.00	511	C712-15 Singlejet Type		
15		3" meters	13	350	17.50	220	Compound Type II		
16		4" meters	4	600	30.00	126	Compound Type II		
17		6" meters	0	1350	67.50	0	Compound Type II		
18		8" meters	1	2800	140.00	147	Turbine Class II		
19		10" meters	0	4200	210.00	0	Turbine Class II		
20		12" meters	0	5300	265.00	0	Turbine Class II		
21		Fire Services [1]	69	23.6	1.18	82	Set to maintain same ratio		
22		Fire Hydrant Meters [2]	44	350	17.50	770	Same as 3 inch meter		
23		Total Accounts	12,604		Total EMUs	14,693			
24									
25		Units Costs	\$421,645			\$2,880,687			
26									
27		Monthly Cost							
28		per Account	\$2.79						
29		per EMU				\$16.34			
30									
31									
32									
33									
34	Meter Charge Unit Cost Calculation								
35		Service Charge Components		Total Service					
36		Accounts	Capacity	Charge					
37		Operations & Maintenance	\$341,691	(\$205,730)	\$135,960	From Table 9			
38		Debt Service	\$0	\$289,095	\$289,095	From Table 9			
39		Capital Expenses (PayGo)	\$0	\$2,192,728	\$2,192,728	From Table 9			
40		Non-Operating Revenue	\$86,588	\$654,761	\$741,349	From Table 9			
41		Transfers to/(from) Rese	(\$6,634)	(\$50,166)	(\$56,801)	From Table 9			
42		Service Charge Expenses	\$421,645	\$2,880,687	\$3,302,331		\$0		
43		% of Component	13%	87%	100%				
44									
45		Units of Service	12,604	14,693					
46		Accounts		EMUs					
47									
48		Monthly Cost							
49		per Account	\$2.79						
50		per EMU		\$16.34					
51									

	A	B	C	D	E	F	G	H	I
52		Expenses from Tab 8. Allocations							
53									

	A	B	C	D	E	F	G	H	I
54									
55									
56									
57		<div>Account</div> <div>Capacity Component</div>						COS	Proposed
58		Service	% of	Account		Capacity	Capacity	Service Charges	Service Charges
59		Size	Meters	Component	\$/EMU	Multiplier	Total	(\$/mo.)	(\$/mo.)
60				a	b	c	d = b * c	e = a + d	f = e + 3.0%
61		5/8" meters	83.2%	\$2.79	\$16.34	1.00	\$16.34	\$19.13	\$19.70
62		1" meters	1.0%	\$2.79	\$16.34	2.50	\$40.84	\$43.63	\$44.94
63		1" w/ Fire meters	13.7%	\$2.79	\$16.34	1.00	\$16.34	\$19.13	\$19.70
64		1 1/2" meters	0.5%	\$2.79	\$16.34	5.00	\$81.69	\$84.48	\$87.01
65		2" meters	0.5%	\$2.79	\$16.34	8.00	\$130.70	\$133.49	\$137.49
66		3" meters	0.1%	\$2.79	\$16.34	17.50	\$285.91	\$288.70	\$297.36
67		4" meters	0.0%	\$2.79	\$16.34	30.00	\$490.13	\$492.92	\$507.71
68		6" meters	0.0%	\$2.79	\$16.34	67.50	\$1,102.80	\$1,105.59	\$1,138.76
69		8" meters	0.0%	\$2.79	\$16.34	140.00	\$2,287.29	\$2,290.08	\$2,358.78
70		10" meters	0.0%	\$2.79	\$16.34	210.00	\$3,430.94	\$3,433.73	\$3,536.74
71		12" meters	0.0%	\$2.79	\$16.34	265.00	\$4,329.52	\$4,332.31	\$4,462.28
72		Fire Services	0.5%	\$2.79	\$16.34	1.18	\$19.28	\$22.07	\$22.73
73		Fire Hydrant Meters	0.3%	\$2.79	\$16.34	17.50	\$285.91	\$288.70	\$297.36
74									