

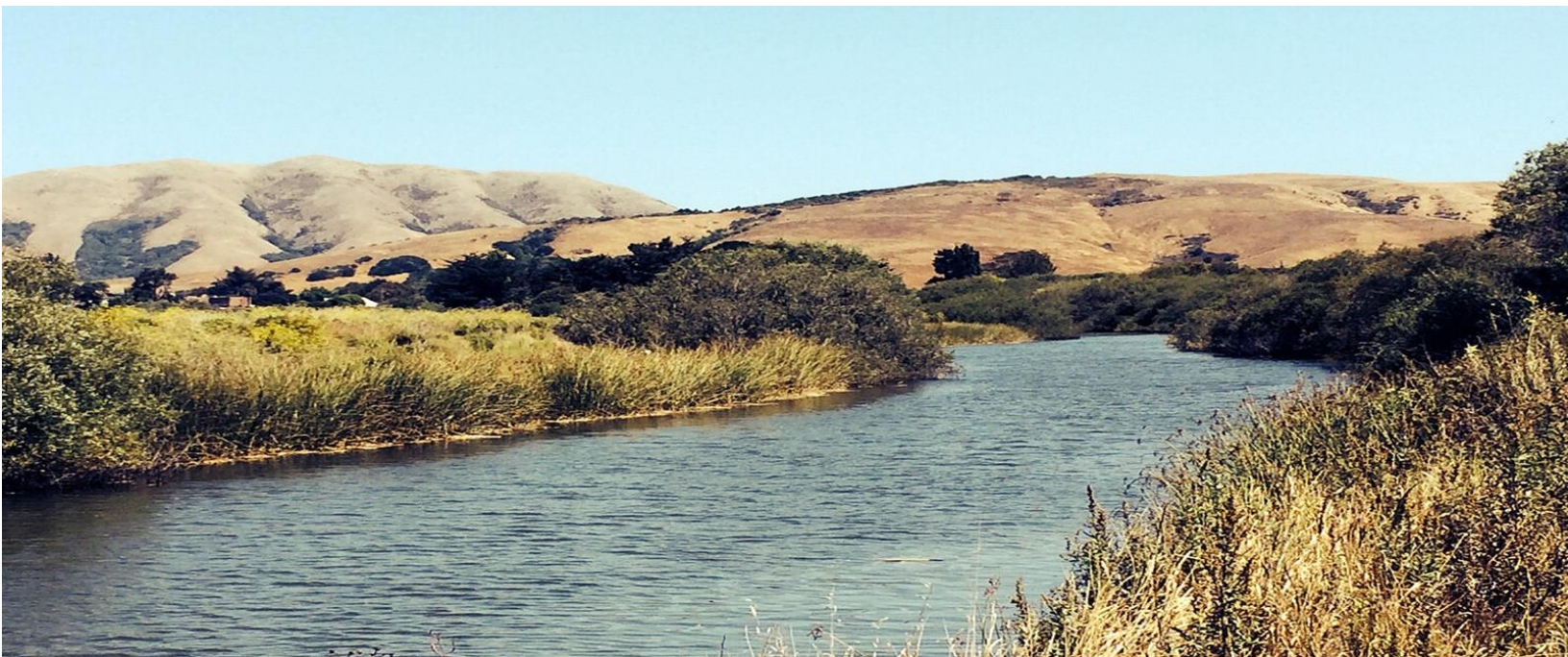


# **NORTH MARIN WATER DISTRICT**

2021 West Marin Water Rate Study

Final Report

April 14, 2021



**HILDEBRAND**  
CONSULTING

April 14, 2021

Mr. Drew McIntyre  
General Manager  
North Marin Water District  
999 Rush Dr.  
Novato, CA 94945



Re: Final 2021 West Marin Water Rate Study

Dear Mr. McIntyre,

Hildebrand Consulting is pleased to present this 2021 Water Rate Study (Study) for the West Marin Water System that was performed for North Marin Water District (District). We appreciate the helpful assistance provided by you and all of the members of the District staff who participated in the Study.

If you or others at the District have any questions, please do not hesitate to contact me at:

[mhildebrand@hildco.com](mailto:mhildebrand@hildco.com)  
(510) 316-0621

We appreciate the opportunity to be of service to the District and look forward to the possibility of doing so again in the near future.

Sincerely,

A handwritten signature in blue ink, appearing to read 'M. Hildebrand', written in a cursive style.

Mark Hildebrand  
Hildebrand Consulting, LLC

Enclosure

## Executive Summary

Hildebrand Consulting, LLC has been retained by North Marin Water District (District) to conduct a water rate study (Study) for the West Marin Water service area (also referred to as the West Marin Water enterprise). The full report describes in detail the assumptions, procedures, and results of the Study, including recommendations for water rates over the next 5 years.

The District's West Marin Water System serves primarily the Point Reyes Station (PRS), Olema, Bear Valley, Inverness Park and Paradise Ranch Estates (PRE) communities and parcels later annexed in to the PRS and PRE-improvement district within NMWD's West Marin service territory in Marin County, encompassing approximately 24 square miles with an estimated service area population of 1,700.

The water supply for the West Marin Water System is currently derived from two sources: wells located on the former Coast Guard housing facility property and Gallagher Well #1. All groundwater is treated at the Point Reyes Water Treatment Plant (PRTP) before entering the potable water distribution system.

**Scope of Study** - The scope of this Study is to prepare multi-year financial plans, review the rate structures, and propose a 5-year rate schedule. The primary objectives of this Study are to develop a multi-year financial management plan, identify future rate adjustments to ensure revenue adequacy, determine the cost of providing water service, and recommend specific modifications to the District's existing rate structures in order to ensure that the District is equitably recovering the cost of service and comporting with industry standards and California's legal requirements.

**Methodology** - This Study applied methodologies that are aligned with industry standard practices for rate setting as laid out in the American Water Works Association (AWWA) M1 Manual (7<sup>th</sup> edition), and all applicable laws, including California Constitution Article XIII D, Section 6(b), commonly known as Proposition 218.

The Study began with a review of the West Marin Water enterprise’s current financial condition and latest available data for the utility’s operations. A multi-year financial management plan was then developed to determine the level of annual rate revenue required to cover projected annual operating expenses, debt service (including coverage targets), and capital cost requirements while maintaining adequate reserves. Revenue requirements calculated for fiscal year ending June 2022 (FY 2021/22<sup>1</sup>) were then used to perform a detailed cost-of-service (COS) analysis. The COS analysis and rate structure design were conducted based upon principles outlined by AWWA, legal requirements (Proposition 218) and other generally accepted industry practices to develop rates that reflect the cost of providing service.

**Financial Plan** - The 10-year financial plan was developed through several interactive work sessions with both District staff and the District Board’s Ad Hoc Water Rate Study Subcommittee. The Study has produced a robust financial plan that will allow the District to meet revenue requirements and achieve financial performance objectives throughout the projection period while striving to minimize rate increases.

Rate revenue is the revenue generated from customers for water service. The District collects rate revenue from water customers based on a fixed “Service Charge” (assessed based on meter sizes) and a “Quantity Rate” based on actual water usage. The analysis identifies a revenue shortfall in upcoming years which leads to a conclusion that revenue adjustments are required for the West Marin Water service area.

In addition to rate revenue, the District receives some “non-rate revenue” from sources such as miscellaneous service fees, property tax, Connection Fees revenue, grants, and interest revenue on investments. Projections of all non-rate revenues were based on FY 2020/21 budgeted revenues with the exception of interest income which was calculated

---

<sup>1</sup> Fiscal years are sometimes indicated by their ending years. For example, FY 2019/20, starts on July 1, 2019 and ends on June 30, 2020, can also be expressed as FY 2020.

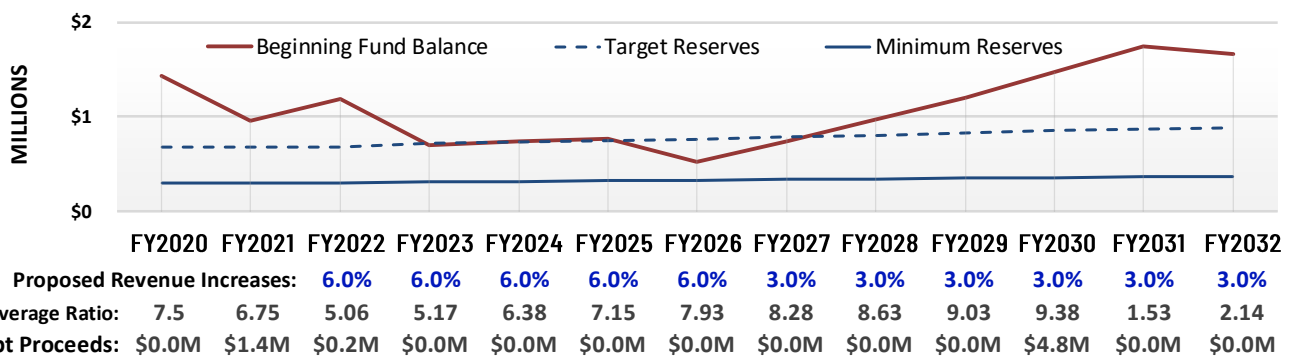
annually based upon projected fund balances and assumed interest rate of 0.88% on invested funds.

West Marin Water System expenses include operating and maintenance (O&M) expenses and debt service. Future operating expenses were projected based upon the budgeted expenditures from FY 2020/21 and adjusted for inflation (3% per year). The current annual debt service is \$71 thousand, which will be paid off in FY 2031/32.

The West Marin Water service area is experiencing a spike in capital spending as detailed in the full report. This increase in capital spending is necessary in order to increase water supply (new Gallagher Well #2), bolster the service area water storage and fire protection capacity (replacement and upsizing of PRE Tank #4A), and pro-actively address aging infrastructure (series of replacement projects). In addition, the District expects that a major rehabilitation project will be required at the PRTP in about 10 years. This Study assumes that \$1.6 million will be borrowed from the Novato Enterprise to help fund immediate capital spending needs in the West Marin Water enterprise. In addition, it is assumed that the District will debt finance the \$3.8 million (in current dollars) PRTP improvement project in about 10 years.

**Reserve Targets** - Target reserves for utilities are cash balances retained for specific cash flow needs. The target for reserves is an important component when developing a multi-year financial plan. Utilities rely on reserves for financial stability; credit rating agencies evaluate utilities in part on their adherence to formally adopted reserve targets; and lending agencies require utilities to maintain specific debt reserves for outstanding loans. The District has formal reserve policies which includes three reserve targets that are relevant to the West Marin Water enterprise. The target levels of the policies below are consistent with: 1) the findings of reserve studies conducted by AWWA; 2) a healthy level of reserves for a utility per the evaluation criteria published by rating agencies (e.g., Fitch, Moody's, and Standard & Poor's); and 3) Hildebrand Consulting's industry experience for similar systems.

**Proposed Rate Increases** - All of the above information was entered into a financial planning model to produce a 10-year projection of the sufficiency of revenues to meet current and projected financial requirements and determine the level of rate revenue increases necessary in each year of the projection period. The figure below shows the projected cash flow impacts of increasing rate revenue by 6% per year for the next 5 years, followed by inflationary adjustments.



**Cost-of-Service (COS)** – The COS analysis evaluates the cost of providing water service and allocates those costs to rate structure components to ensure the proposed rates are aligned with costs to provide service. The COS analysis is done in order to comply with Proposition 218, which requires water rates to be equitably apportioned and proportional to the cost of providing water service. The rate structure proposed by this Study is designed to fairly and equitably recover costs through rates, conform to accepted industry practice and legal requirements, and provide fiscal stability and recovery of utility fixed costs. This Study employed a COS methodology that is consistent with the “commodity-demand” COS methodology promulgated in AWWA’s *Manual M1: Principles of Water Rates, Fees, and Charges (M1)*.

The structure for the District’s current water rates follow a common industry practice with a two-part structure that is comprised of a fixed Service Charge and a consumption-based Quantity Charge. In addition, some water customers pay an additional Hydraulic Zone Charge, which is a consumption-based charge based on the elevation of the property. The Quantity Charge is assessed based on actual water usage



(measured in thousand-gallon increments or “TGALs”) and the rate varies by customer class. Residential water customers pay inclining block rates (three tiers) and receive water allocations for each tier. Commercial (i.e., all non-residential) water customers currently pay a uniform season rate.

This Study has found that the District’s current rate structures are consistent with common industry practices and recommends the following modifications and updates.

1. Update the meter equivalency schedule
2. Structure the tiered and seasonal rates to reflect the cost of water supply
3. Eliminate the special service charges for PRE
4. Update the hydraulic zone charges
5. Update the private fire charge

This Study proposes to use water supply costs and availability to calculate the rates and the allocations for the tiered/seasonal rates. The Residential **Tier 1 rate** and the Commercial **Winter rate** are designed to recover all of the District’s operating, maintenance and capital costs that are associated with the West Marin Water service area’s “Baseline” water demands. For the purposes of establishing a cost basis for the District’ rate structure, this Study assumes that half of the supply from future Gallagher Well #2 will be needed to meet the demands created by higher volume water users (“Marginal” water supply). As such, the rate differential between Tier 1 vs. **Tier 2** rates is based on half of the operating and capital costs associated with Gallagher Well #2. The costs of the District’s Conservation Program are “layered” over the Tier 2 rates to create the **Tier 3** rate. The Gallagher Well #2 costs and conservation program costs are also recovered through Commercial **Summer Rates**.

**Proposed Rates** – The following table summarizes the rates that are proposed for the 5-year planning period. The full report contains a detailed explanation of how these rates were calculated.

	Effective Date				
	July 1, 2021	July 1, 2022	July 1, 2023	July 1, 2024	July 1, 2025
<b>Residential Quantity Charges (\$/TGAL)</b>					
Tier 1 <sup>1</sup>	\$8.88	\$9.41	\$9.97	\$10.57	\$11.20
Tier 2 <sup>2</sup>	\$12.91	\$13.68	\$14.50	\$15.37	\$16.29
Tier 3	\$18.33	\$19.43	\$20.60	\$21.84	\$23.15
<b>Commercial Quantity Charges (\$/TGAL)</b>					
Winter (Oct. to June)	\$8.88	\$9.41	\$9.97	\$10.57	\$11.20
Summer (July to Sept.)	\$18.33	\$19.43	\$20.60	\$21.84	\$23.15
<b>Hydraulic Zone Charge (\$/TGAL)</b>					
Zone 3	\$1.10	\$1.17	\$1.24	\$1.31	\$1.39
Zone 2	\$2.19	\$2.32	\$2.46	\$2.61	\$2.77
Zone 4	\$6.16	\$6.53	\$6.92	\$7.34	\$7.78
<b>Other Quantity Charges (\$/TGAL)</b>					
Temporary Meter	\$15.10	\$16.01	\$16.97	\$17.99	\$19.07
<b>Service Charges (bi-monthly fixed charge based on meter size)</b>					
5/8"	\$42.59	\$45.15	\$47.86	\$50.73	\$53.77
1" Fire <sup>3</sup>	\$42.59	\$45.15	\$47.86	\$50.73	\$53.77
PRE 5/8" & 1"	\$42.59	\$45.15	\$47.86	\$50.73	\$53.77
1"	\$104.80	\$111.09	\$117.76	\$124.83	\$132.32
1 1/2"	\$208.47	\$220.98	\$234.24	\$248.29	\$263.19
2"	\$332.88	\$352.85	\$374.02	\$396.46	\$420.25
3"	\$664.64	\$704.52	\$746.79	\$791.60	\$839.10
4"	\$1,037.87	\$1,100.14	\$1,166.15	\$1,236.12	\$1,310.29

<sup>1</sup> Allocation is 250 gpd per dwelling unit

<sup>2</sup> Allocation is 350 gpd per dwelling unit

<sup>3</sup> Only for 1" residential meters that are upsized due to fire code requirements

**Conclusion** - This Study used methodologies that are aligned with industry standard practices for rate setting as promulgated by AWWA and all applicable laws, including California’s Proposition 218. The proposed annual adjustments to the rates will allow the District to continue to provide reliable service to customers while meeting operational and infrastructure needs of the service area. The water rates will need to be adopted in accordance with the noticing requirements of Proposition 218.



## TABLE OF CONTENTS

<b>SECTION 1.</b>	<b>INTRODUCTION.....</b>	<b>2</b>
1.1	UTILITY BACKGROUND.....	2
1.2	SCOPE & OBJECTIVES OF STUDY .....	3
1.3	STUDY METHODOLOGY .....	3
<b>SECTION 2.</b>	<b>FINANCIAL PLAN.....</b>	<b>5</b>
2.1	BEGINNING FUND BALANCES .....	5
2.2	WEST MARIN AREA CUSTOMER GROWTH .....	6
2.3	RATE REVENUES.....	6
2.4	NON-RATE REVENUES.....	7
2.5	OPERATING AND DEBT EXPENSES.....	7
2.6	COST ESCALATION .....	8
2.7	CAPITAL IMPROVEMENT PROGRAM.....	9
2.8	RESERVE TARGETS.....	10
2.9	FUTURE BORROWING ASSUMPTIONS .....	11
2.9.1	<i>Proposed Rate Revenue Increases .....</i>	<i>12</i>
<b>SECTION 3.</b>	<b>COST OF SERVICE &amp; RATE STRUCTURE .....</b>	<b>14</b>
3.1	CURRENT RATES .....	14
3.2	PROPOSED RATE STRUCTURE CHANGES.....	16
3.2.1	<i>Meter Equivalency .....</i>	<i>16</i>
3.2.2	<i>Tier and Seasonal Rate Pricing and Allocation .....</i>	<i>17</i>
3.3	RATE STRUCTURE DEVELOPMENT.....	20
3.3.1	<i>Cost Functions.....</i>	<i>20</i>
3.3.2	<i>Units of Service.....</i>	<i>22</i>
3.3.3	<i>Unit Costs .....</i>	<i>24</i>
3.3.4	<i>Service Charges.....</i>	<i>24</i>
3.3.5	<i>Hydraulic Zone Charge.....</i>	<i>25</i>
3.3.6	<i>Total Quantity Charge.....</i>	<i>25</i>
3.4	PRIVATE FIRE SERVICE CHARGE.....	26
3.5	ADOPTION OF PROPOSED RATES.....	27
<b>SECTION 4.</b>	<b>CONCLUSION .....</b>	<b>28</b>

**Schedule 1 –Budgeted and Projected Cash Inflows**

**Schedule 2 – Budgeted and Projected Cash Outflows**

**Schedule 3 - Capital Improvement Program**

**Schedule 4 - Cash Flow Pro Forma**

**Schedule 5 – Allocation of Costs to System Functions**

**Schedule 6 – Schedule of Proposed Rates**

## List of Acronyms

AWWA	American Water Works Association
CIP	capital improvement program
COS	cost of service
DCR	debt service coverage ratio
FY	fiscal year (which ends on June 30 for the District)
gpm	gallons per minute
gpd	gallons per day
O&M	operations and maintenance
OPEB	Other Post-Employment Benefits
pay-go	“pay as you go” (i.e., cash financing for capital projects)
TGAL	thousand gallons
PRE	Paradise Ranch Estates
PRS	Pt. Reyes Station
P RTP	Pt. Reyes water treatment plant
RCNLD	replacement cost new less depreciation

## **Section 1. INTRODUCTION**

Hildebrand Consulting, LLC has been retained by North Marin Water District (District) to conduct a rate study (Study) for the West Marin Water service area (also referred to as the West Marin Water enterprise). This report describes in detail the assumptions, procedures, and results of the Study, including conclusions and recommendations.

### **1.1 UTILITY BACKGROUND**

The District's West Marin Water System serves primarily the Point Reyes Station (PRS), Olema, Bear Valley, Inverness Park and Paradise Ranch Estates (PRE) communities and parcels later annexed in to the PRS and PRE-improvement district within NMWD's West Marin service territory in Marin County, encompassing approximately 24 square miles. During fiscal year (FY) 2019/20<sup>2</sup>, the West Marin Service area had approximately 767 active service connections serving approximately 832 dwelling units. The estimated service area population is 1,800.

The North Marin Water District was formed by voter approval in April 1948 pursuant to provisions of the County Water District Law and is governed by a five-member Board of Directors, elected by division from within the District's service area.

The water supply for the West Marin Water System is currently derived from two sources: wells located on the former Coast Guard housing facility property in Point Reyes Station (referred to as the "Coast Guard Wells") and Gallagher Well #1 which is 1.3 miles northeast of Highway 1 within the Gallagher Ranch. All groundwater is treated at

---

<sup>2</sup> Fiscal years are sometimes indicated by their ending years. For example, FY 2019/20, starts on July 1, 2019 and ends on June 30, 2020, can also be expressed as FY 2020.

the Point Reyes Water Treatment Plant (PRTP) before entering the potable water distribution system.

Due to the Coast Guard Wells' location in the lower tidal reach of Lagunitas Creek, they are subject to periodic salinity intrusion and occasional flooding. Gallagher Well #1 is located upstream of any tidal reach of Lagunitas Creek. Due to continued water quality issues at the Coast Guard wells, the District plans to install a second well on the Gallagher Ranch (Gallagher Well #2).

## **1.2 SCOPE & OBJECTIVES OF STUDY**

The scope of this Study is to prepare multi-year financial plans, review the rate structures, and propose a 5-year rate schedule.

The primary objectives of this Study are to:

- i. Develop a multi-year financial management plan that integrate operational and capital project funding needs.
- ii. Identify future rate adjustments to water rates to help ensure adequate revenues to meet the enterprise's ongoing financial obligations.
- iii. Determine the cost of providing water service using industry-accepted methodologies.
- iv. Recommend specific modifications to the District's existing rate structures in order to ensure that the District is equitably recovering the cost of service and comporting with industry standards and California's legal requirements.

## **1.3 STUDY METHODOLOGY**

This Study applied methodologies that are aligned with industry standard practices for rate setting as laid out in the American Water Works Association (AWWA) M1 Manual, and all applicable laws, including California Constitution Article XIII D, Section 6(b), commonly known as Proposition 218.

The Study began with a review of the West Marin Water enterprise's current financial dynamics and latest available data for the utility's operations. A multi-year financial management plan was then developed to determine the level of annual rate revenue required to cover projected annual operating expenses, debt service (including coverage targets), and capital cost requirements while maintaining adequate reserves. This portion of the Study was conducted using an MS Excel©-based financial planning model which was customized to reflect the enterprise's financial dynamics and latest available data for the utility's operations in order to develop a long-term financial management plan, inclusive of projected annual revenue requirements and corresponding annual rate adjustments.

Revenue requirements calculated for fiscal year ending June 2022 (FY 2021/22) were then used to perform a detailed cost-of-service (COS) analysis. The COS analysis and rate structure design were conducted based upon principles outlined by AWWA, legal requirements (Proposition 218) and other generally accepted industry practices to develop rates that reflect the cost of providing service.

## Section 2. FINANCIAL PLAN

This section presents the 10-year financial plan, including a description of the source data, assumptions, and the District’s financial policies. The District provided historical and budgeted financial information associated with operation of the West Marin Water System, including historical and budgeted operating costs, a multi-year capital improvement program (CIP), and outstanding debt service obligations. District staff also assisted in providing other assumptions and policies, such as reserve targets and escalation rates for operating costs (all of which are described in the following subsections).

The 10-year financial plan was developed through several interactive work sessions with both District staff and the District Board’s Ad Hoc Water Rate Study Subcommittee. As a result of this process, the Study has produced a robust financial plan that will allow the District to meet revenue requirements and achieve financial performance objectives throughout the projection period while striving to minimize rate increases.

The analysis identifies a revenue shortfall in upcoming years which leads to a conclusion that revenue adjustments are required for the West Marin Water service area. The schedules attached to this report include detailed data supporting the financial plan discussed herein.

### 2.1 BEGINNING FUND BALANCES

The ending cash balances for FY 2019/20 were used to establish the FY 2020/21 beginning balances, as outlined in **Table 1**.



**Table 1: West Marin Enterprise FY 2020/21 Beginning Cash Balance**

Liability Contingency Fund	\$99,000
Workers Comp Fund	\$16,000
Operating Reserve Fund	\$183,000
Unrestricted/Undesignated Cash	\$655,000
<b>Total Unrestricted:</b>	<b>\$953,000</b>
<b>Restricted:</b>	
Bank of Marin Project Fund	\$194,000
<b>Total Reserves:</b>	<b>\$1,147,000</b>

The “restricted” Bank of Marin Project Fund is part of excess funds from a loan taken out by the Novato enterprise. The cash is earmarked for capital projects which are scheduled to be expended in the current fiscal year (FY 2020/21).

## 2.2 WEST MARIN AREA CUSTOMER GROWTH

Over the past 4 years the Connection Fee<sup>3</sup> revenue collected from new customers connecting to the system has been as much as \$68 thousand and as little as \$0. Growth in this area is expected to be very limited. While the West Marin 2014 Master Plan cites total build out of 44% from the time of the study, it does not specify when that growth will occur. Based on recent trends, this Study assumes that the service area will receive one new connection every two years. This corresponds with a growth rate of approximately 0.11%. This Study assumes that this rate of growth will continue over the next 10-year planning period, while also recognizing that actual growth may turn out to be materially higher.

## 2.3 RATE REVENUES

Rate revenue is the revenue generated from customers for water service. The District collects rate revenue from water customers based on a fixed “Service Charge” (assessed

<sup>3</sup> The District’s “Connection Fees” are known as “Capacity Charges” per Government Code Section 66013.

based on meter sizes) and a water usage “Quantity Rate.” Customers receive a bimonthly bill. The financial plan starts with FY 2020/21 budgeted rate revenues. Future rate revenues include assumed customer growth (see Section 2.2) as well as the annual rate revenue adjustments proposed by this Study. Budgeted and projected rate revenues (including proposed rate adjustments) are detailed in **Schedule 1**.

## 2.4 NON-RATE REVENUES

In addition to rate revenue, the District receives some “non-rate revenue” from sources such as miscellaneous service fees, property tax, Connection Fees revenue, grants, and interest revenue on investments. Projections of all non-rate revenues were based on FY 2020/21 budgeted revenues with the exception of interest income which was calculated annually based upon projected fund balances and assumed interest rate of 0.88% on invested funds, which is consistent with the District’s recent interest earnings. Budgeted non-rate revenues are depicted in Figure 2 below and listed in detail in Schedule 1.

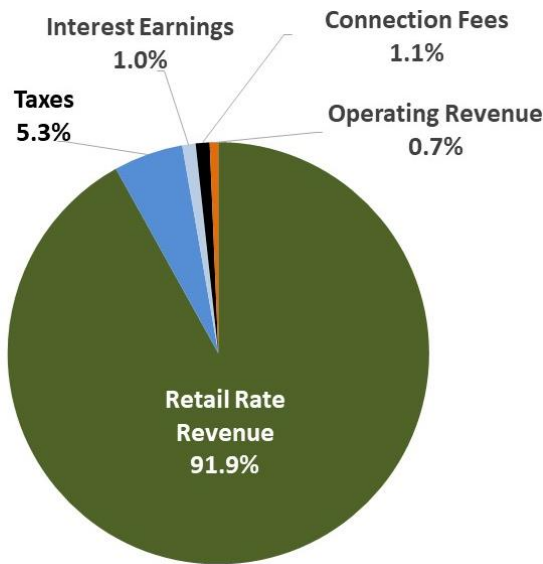


Figure 1: Budgeted Revenue Categories (FY 2020/21)

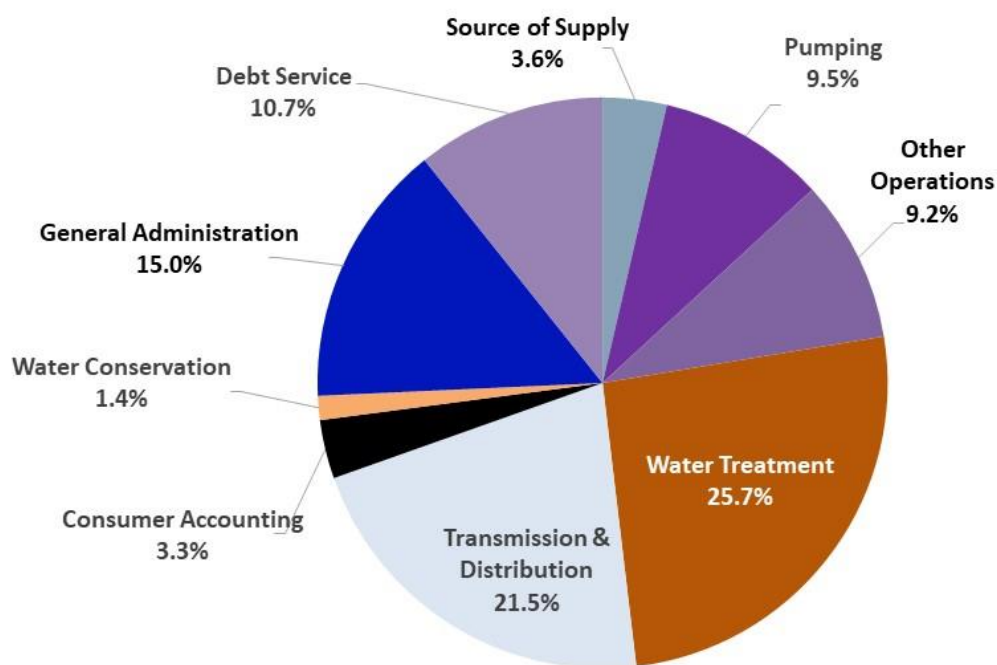
## 2.5 OPERATING AND DEBT EXPENSES

West Marin Water enterprise expenses include operating and maintenance (O&M) expenses and debt service. Capital spending is addressed in Section 2.7. The current

outstanding debt is limited to the West Marin Water enterprise’s portion of the 2008 loan from Bank of Marin (a \$8.0 million loan of which \$1 million was spent on West Marin Water System capital projects). The annual debt service in FY 2020/21 is \$71 thousand. The debt will be paid off in FY 2031/32.

Future operating expenses were projected based upon the budgeted expenditures from FY 2020/21 and adjusted for inflation (see Section 2.6).

Budgeted expense categories for FY 2020/21 are depicted in **Figure 2**. Budgeted and projected operating and debt expenses are listed in detail in **Schedule 2**.



**Figure 2: Budgeted Expense Categories (FY 2020/21)**

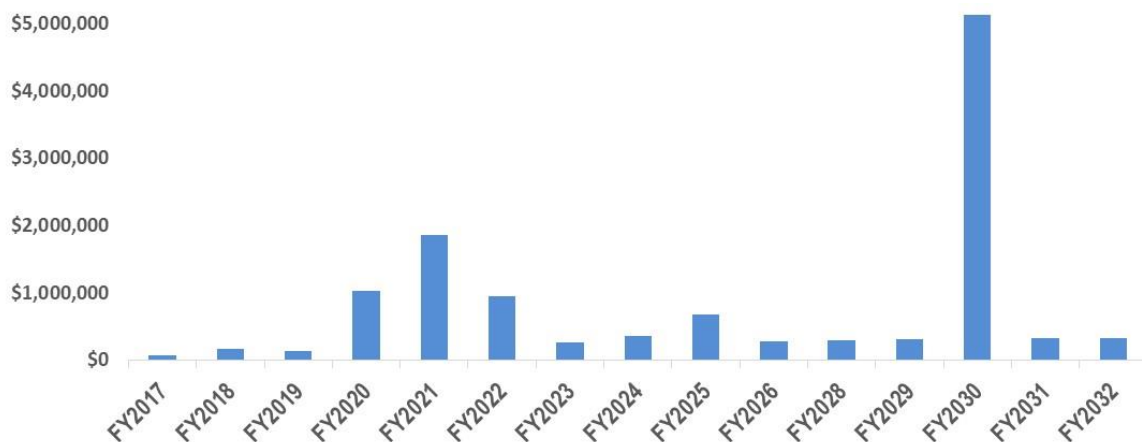
## 2.6 COST ESCALATION

Annual cost escalation factors for expenses were developed based upon a review of historical inflation trends, published inflation forecasts, industry experience, and

discussions with District staff. During the projection period, all expenses are projected to increase at 3.0% per year.

## 2.7 CAPITAL IMPROVEMENT PROGRAM

Figure 3 shows that total capital spending from FY 2016/17 to FY 2018/19 averaged \$127 thousand per year. In the immediate term, from FY 2019/20 through FY 2021/22, the District is experiencing a spike in capital spending as detailed in **Schedule 3**. In approximately 10 years (assumed to be FY 2029/30 for the purpose of this Study) the District expects that a major (\$3.8 million in current dollars) rehabilitation project will be required at the Pt. Reyes water treatment plant (PRTP). When excluding the anomalous project at PRTP, the average annual capital spending over the coming 10-year period will be about \$250 thousand (in current dollars). This increase in capital spending is necessary in order to increase water supply (new Gallagher Well #2), bolster the service area water storage and fire protection capacity (replacement and upsizing of Paradise Ranch Estate’s Tank #4A), and pro-actively address aging infrastructure (series of replacement projects). In addition, the District is required to temporarily relocate pipes on two separate bridges that are being rehabilitated by Caltrans and the County.



**Figure 3: Historic and projected capital spending (after projected inflation)**

The District’s capital spending forecasts were provided in current dollars and therefore are expected to inflate at a rate of 3% per year.

## 2.8 RESERVE TARGETS

Target reserves for utilities are cash balances retained for specific cash flow needs. The target for reserves is an important component when developing a multi-year financial plan. Utilities rely on reserves for financial stability; credit rating agencies evaluate utilities in part on their adherence to formally adopted reserve targets; and lending agencies require utilities to maintain specific debt reserves for outstanding loans.

The District has formal reserve policies (Policy No. 45, last revised on May 1, 2018) which includes three reserve targets that are relevant to the West Marin Water enterprise, as summarized below. The target levels of the policies below are consistent with 1) the findings of reserve studies conducted by AWWA; 2) a healthy level of reserves for a utility per the evaluation criteria published by rating agencies (e.g., Fitch, Moody's, and Standard & Poor's); and 3) Hildebrand Consulting's industry experience for similar systems.

**Operating Reserve** – The Operating Reserve is comprised of a minimum of four months of budgeted operating expenditures as established by previous financial analyses and consistent with standard industry practices. This reserve serves to ensure adequate working capital for operating, capital, and unanticipated cash flow needs that arise during the year.

Given the forecasted FY 2021/22 O&M budget of \$584 thousand, the Operating Reserve target is currently **\$200 thousand**.

**Liability Contingency Reserve** – This reserve was established when the District first elected to self-insure its general liability risk. Today the total reserve target is \$2 million based on an independent financial assessment of the District's current liabilities. The West Marin Water enterprise's proportionate responsibility for that reserve is **\$98 thousand** based on the relative number of accounts in its service area.

**Maintenance Accrual Fund Reserve** – This reserve provides a source of funds for the replacement of treatment, storage, transmission, and distribution facilities as they wear out. The target for this reserve is proposed to be **\$380 thousand**, based on the

anticipated average annual capital spending (excluding the longer term and anomalous P RTP improvement project (see Section 2.7) which is expected to be debt financed).

This Study proposes that the District distinguish between “**Minimum Reserves**” and “**Reserve Targets**”. The first two reserves targets above (the Operating Reserve target and Liability Contingency Reserve target, which add up to approximately \$300 thousand) are maintained for the purpose of mitigating unexpected expenses or events. For this reason, the District should always plan to have these reserves fully funded in order to protect the District from unexpected events. On the other hand, the Maintenance Accrual Fund Reserve is intended to be more flexible, as it’s designed to give the District some “cushion” in order to smooth out the peaks and valleys in the pay-go capital spending program. It makes sense to draw down on this reserve during years of higher-than-average pay-go spending and replenish the reserve during years with lower-than-average spending. As such, the Maintenance Accrual Fund Reserve is treated as a “target” rather than a “minimum”.

The reserves by year are shown in the 10-Year Cash Flow Proforma (see **Schedule 4**, row 31), which shows that (given the proposed rate revenue increases) the projected cash reserves are not expected to fall below the Minimum Reserves during the planning period but are expected to fall below the Reserve Targets briefly in FY 2024/25.

## **2.9 FUTURE BORROWING ASSUMPTIONS**

This Study assumes that \$1.6 million will be borrowed from the Novato Enterprise to help fund immediate capital spending needs in the West Marin Water enterprise. This Study assumes a repayment period of 10-years and an interest rate of 0.88%, which is consistent with the District’s recent interest earnings on reserves (see Section 2.4). The annual debt service associated with the internal loan is estimated to be \$163 thousand.

In addition, it is assumed that the District will debt finance the \$3.8 million P RTP improvement project in about 10 years. The terms of that future debt are assumed to be 4% interest with a 20-year repayment period. The annual debt service associated with the P RTP loan is estimated to be \$384 thousand.



The District has a policy of maintaining a debt service coverage ratio (DCR) of 1.50. Based on recently published guidance from Fitch Ratings<sup>4</sup>, utility systems with *midrange* financial profiles should maintain a DCR greater than 1.50 times annual debt service. As per the District’s debt management policy (Policy No. 47), a DCR of at least 1.50 was maintained throughout the projection period to enable the District to access favorable borrowing terms in the future.

### 2.9.1 Proposed Rate Revenue Increases

All of the above information was entered into the financial planning model to produce a 10-year projection of the sufficiency of revenues to meet current and projected financial requirements and determine the level of rate revenue increases necessary in each year of the projection period.

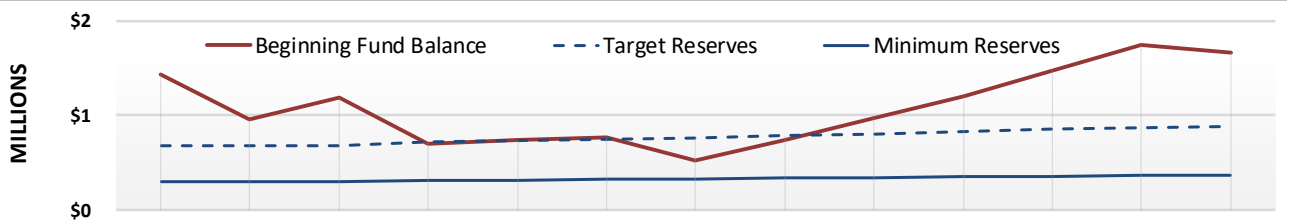
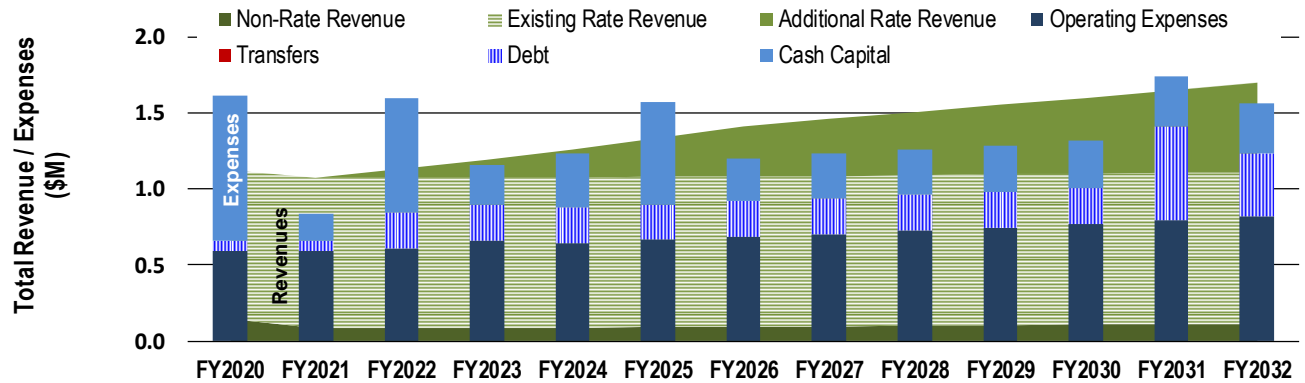
Based upon the previously discussed financial data, assumptions, policies, and debt strategy (a near-term \$1.6 million internal loan and a future bond for the PRTP improvement project), this Study proposes a 5-year schedule of rate adjustments as detailed in **Table 2**.

**Table 2: Recommended West Marin Water System Rate Revenue Increase**

Rate Adjustment Date	Proposed Rate Increase
July 1, 2021	6.0%
July 1, 2022	6.0%
July 1, 2023	6.0%
July 1, 2024	6.0%
July 1, 2025	6.0%

<sup>4</sup> As published on July 31, 2013.

The numbers provided in **Schedule 4** (cash flow proforma) are summarized graphically in **Figure 4**, which shows that cash reserves and DCR targets are maintained over the course of the planning period.



	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032
Proposed Revenue Increases:		6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Debt Coverage Ratio:	7.5	6.75	5.06	5.17	6.38	7.15	7.93	8.28	8.63	9.03	9.38	1.53	2.14
Net Debt Proceeds:	\$0.0M	\$1.4M	\$0.2M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$4.8M	\$0.0M	\$0.0M

**Figure 4: Financial Projection with Recommended Rate Increases**

After the final recommended increase in FY 2025/26, it is projected that minimal (approximately inflationary) increases will be necessary going forward, barring unforeseen emergencies or changes in infrastructure/operational needs.

## Section 3. COST OF SERVICE & RATE STRUCTURE

The Cost-of-Service (COS) analysis evaluates the cost of providing water service and allocates those costs to rate structure components to ensure the proposed rates are aligned with costs to provide service. The COS analysis is done in order to comply with Proposition 218, which requires water rates to be equitably apportioned and proportional to the cost of providing water service.

Upon completion of the COS analysis, a rate structure analysis was performed to evaluate rate structure modifications and calculate specific rate schedules for implementation in FY 2021/22. The complete schedule of proposed rates for FY 2021/22 through FY 2024/25 is detailed in **Schedule 6**.

The rate structure proposed by this Study is designed to:

- ▶ Fairly and equitably recover costs through rates.
- ▶ Conform to accepted industry practice and legal requirements.
- ▶ Provide fiscal stability and recovery of utility fixed costs.

This Study employed a COS methodology that is consistent with the “commodity-demand” COS methodology promulgated in AWWA’s *Manual M1: Principles of Water Rates, Fees, and Charges (M1)*. This is a well-established methodology as recognized by AWWA and other accepted industry standards.

### 3.1 CURRENT RATES

The structure for the District’s current water rates follow a common industry practice with a two-part structure that is comprised of a fixed Service Charge and a consumption-based Quantity Charge. In addition, some water customers pay an additional Hydraulic Zone Charge, which is a consumption-based charge based on the elevation of the property. The Service Customer Charge is scaled based on the

individual account’s meter size and currently recovers approximately 20% of rate revenue.

The Quantity Charge is assessed based on actual water usage (measured in thousand-gallon increments or “TGALs”) and the rate varies by customer class. Residential water customers pay inclining block rates (three tiers) and receive water allocations for each tier as summarized in **Table 3**.

**Table 3: Current Residential Tiered Rates**

Tier	Rate (per TGAL)	Allocation (gallons per day per dwelling unit)	Range of Usage
<b>1</b>	\$9.66	400	0 - 400
<b>2</b>	\$13.38	500	400 - 900
<b>3</b>	\$21.45	na	Greater than 900

Commercial (i.e., all non-residential) water customers currently pay a uniform season rate as shown in **Table 4**.

**Table 4: Current Commercial Seasonal Rates**

Season	Rate (per TGAL)
Summer (June through October)	\$13.51
Winter (November through May)	\$9.77

The Hydraulic Zone Charge is a surcharge added to the water Quantity Rates, as summarized **Table 5**.

**Table 5: Current Hydraulic Zone Charges**

Zone	Rate (per TGAL)	Approximate Elevation
<b>Zone 1</b>	\$0.00	0 - 200 ft.
<b>Zone 3 (Olema):</b>	\$0.95	200 - 250 ft.
<b>Zone 2 (others<sup>1</sup>):</b>	\$0.25	250 ft. to 350 ft.
<b>Zone 4 (Upper PRE):</b>	\$6.46	Above 350 ft.

<sup>1</sup> Includes Inverness Park, Bear Valley, and Lower Paradise Ranch Estates

The District currently assesses a surcharge of \$3.85 per TGAL to customers that are located outside of District boundaries. The outside customer surcharge was not included in the scope of this Study.

The District currently charges a special Service Charge rate to Paradise Ranch Estate (PRE) accounts. This special rate was originally established based on the cost of a revenue bond that was used to fund the cost of connecting the PRE service area to the West Marin Water System.

The District charges a private fire service charge for the cost of maintaining fire service line valve assemblies on private property.

### **3.2 PROPOSED RATE STRUCTURE CHANGES**

This Study has found that the District's current rate structures are consistent with common industry practices and recommends the following modifications and updates.

1. Update the meter equivalency schedule (see Section 3.2.1)
2. Structure the tiered and seasonal rates to reflect the cost of water supply (see Sections 3.2.2 & 3.3)
3. Eliminate the special service charges for PRE (given that the revenue bond has now be fully paid off)
4. Update the hydraulic zone charges (see Section 3.3.5)
5. Update the private fire charge (see Section 3.4)

The above proposed changes are explained in more detail in the following subsections.

#### **3.2.1 Meter Equivalency**

A meter equivalency schedule is an industry-standard factor used to represent the relative capacity associated with various meter sizes based on their hydraulic flow capacity (measured in gallons per minute (gpm)). A meter equivalency schedule allows for indexing of each meter size in terms of multiples of the lowest common denominator (in this case a 5/8" meter). This Study recommends a standard meter

equivalency table as taken from AWWA’s M1 manual as shown in **Table 6**. The application of this meter equivalency schedule is discussed further in Section 3.3.2.

**Table 6: Meter Equivalency Schedule**

Meter Size	Meter Type	Rating (gpm)	Equivalency Schedule
5/8"	Displacement	20	1.00
1"	Displacement	50	2.50
1 1/2"	Displacement	100	5.00
2"	Displacement	160	8.00
3"	Compound Class 1	320	16.00
4"	Compound Class 1	500	25.00

Source: Table B-2 AWWA meter standards, *AWWA M1 Manual*, 7th Ed. (2017)

### 3.2.2 Tier and Seasonal Rate Pricing and Allocation

The design of tiered and seasonal rates in this Study is made up of two components: the rate (i.e., the cost per unit) and the allocation (i.e., the number of allocated units (in gpd)). The rate is based on the cost of specific water supply sources while the allocation is based on the availability of that particular water supply.

The Residential **Tier 1 rate** and the Commercial **Winter rate** are designed to recover all of the District’s operating, maintenance and capital costs that are associated with the West Marin Water System’s “Baseline” water demands. By Baseline water demand, we mean that the water supply from the West Marin Water System’s existing water supply sources (currently from the Coast Guard wells and Gallagher Well #1) would be largely sufficient to meet current water demands if all customers used water more efficiently. However, based on current demands coupled with deteriorating water quality at the Coast Guard wells (which are experiencing intermittent salinity intrusion) the District is constructing a second well at Gallagher Ranch (Gallagher Well #2).

For the purposes of establishing a cost basis for the District’ rate structure, this Study assumes that half of the supply that will come from future Gallagher Well #2 will be



needed to address the District's Baseline water supply needs, while the other half of the supply from Gallagher Well #2 will be needed to meet the demands created by higher volume water users (i.e., Marginal water supply). As such, the rate differential between Tier 1 vs. **Tier 2** rates is based on half of the capital costs associated with Gallagher Well #2.

As an additional component, the costs of the District's Conservation Program are "layered" over the Tier 2 rates to create the **Tier 3** rate. Customers that use Tier 3 water are the primary drivers for the need for the Conservation Program.

The Gallagher Well #2 costs and conservation program costs are also recovered through Commercial **Summer Rates**. The peak demands during summer months drive the need for the full capacity of Gallagher Well #2 as well as the conservation program.

Since the Coast Guard wells, Gallagher Well #1 and half of Gallagher Well #2 are expected to produce about 80% of the West Marin Water System's water supply, the allocation of Tier 1 is proposed to be 250 gallons per day (gpd) per dwelling unit (see Table 7)), which results in a similar percentage of water to be sold at Tier 1 rates to residential accounts. Similarly, the "season" for the Commercial Winter Rate extends from October through June, which also results in approximately the same percentage of commercial water being sold at the Winter Rate.

The sale of water in Tier 2, Tier 3, and the Summer Rate<sup>5</sup> will collectively amount to 20% of the water sales, which corresponds to the proportion of the West Marin Water System's water that comes from half of Gallagher Well #2 supply. The Tier 2 allocation is 350 gpd per dwelling unit (i.e., for water usage between 250 gpd to 600 gpd, see Table 7), which results in about 18% of water sold to residential accounts to be sold at Tier 2 rates. An additional 4% is sold at Tier 3 rates, which is a reasonable percentage for the purpose of isolating those customers that use the most water. The Tier 3 rate applies to

---

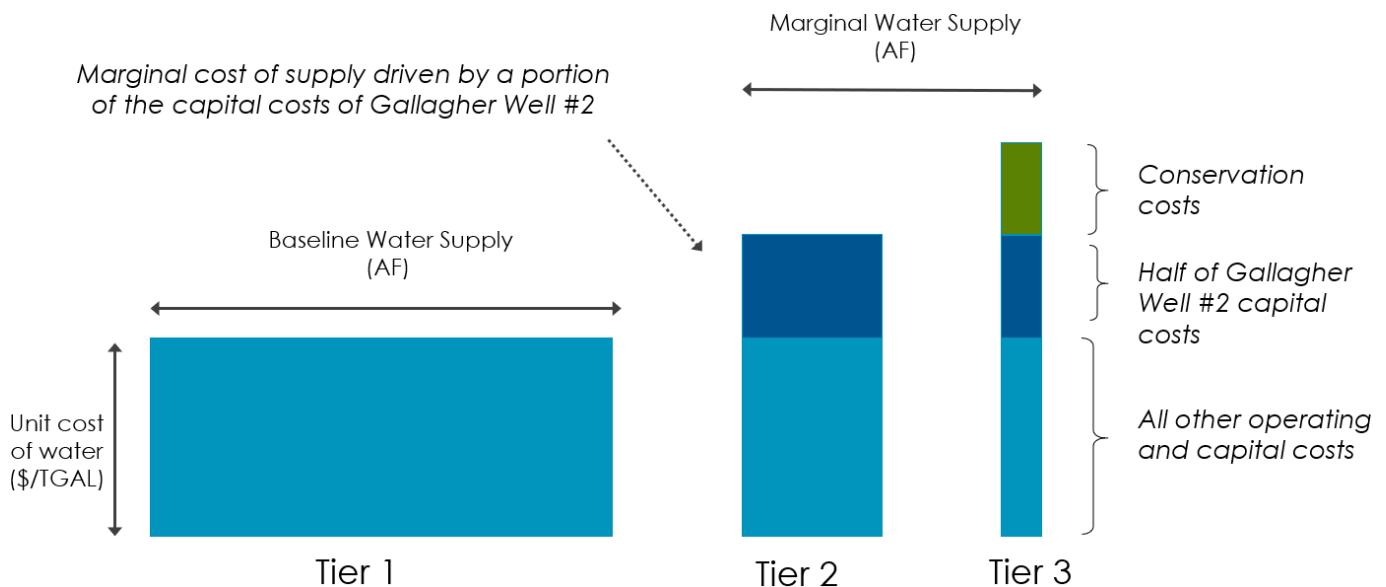
<sup>5</sup> The Summer Rate will apply to the months of July, August and September, as opposed to the current months of June, July, August, September and October.

all water usage above 600 gpd (per dwelling unit). There is no allocation for Tier 3 because there is no upper limit to the water that can be used.

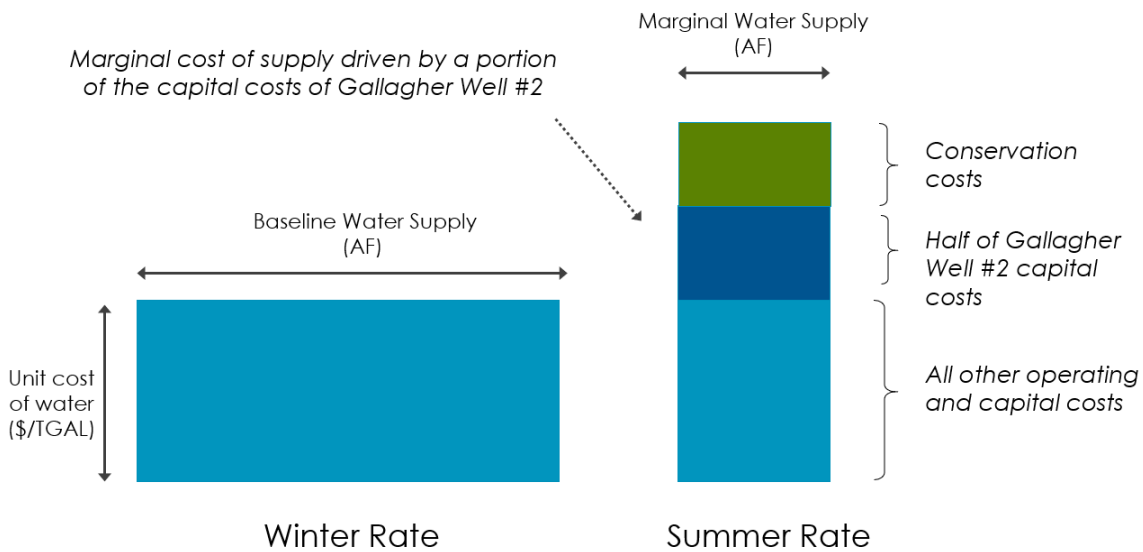
**Table 7: Proposed Residential Tier Water Allocations**

Tier	Allocation (gallons per day per dwelling unit)	Range of Usage
1	250	0 - 250
2	350	250 - 600
3	na	Greater than 600

**Figure 5** and **Figure 6** present graphical summaries of the cost and supply for the tiered rates and seasonal rates, respectively.



**Figure 5: Basis for Tiered Rate Costs and Allocations**



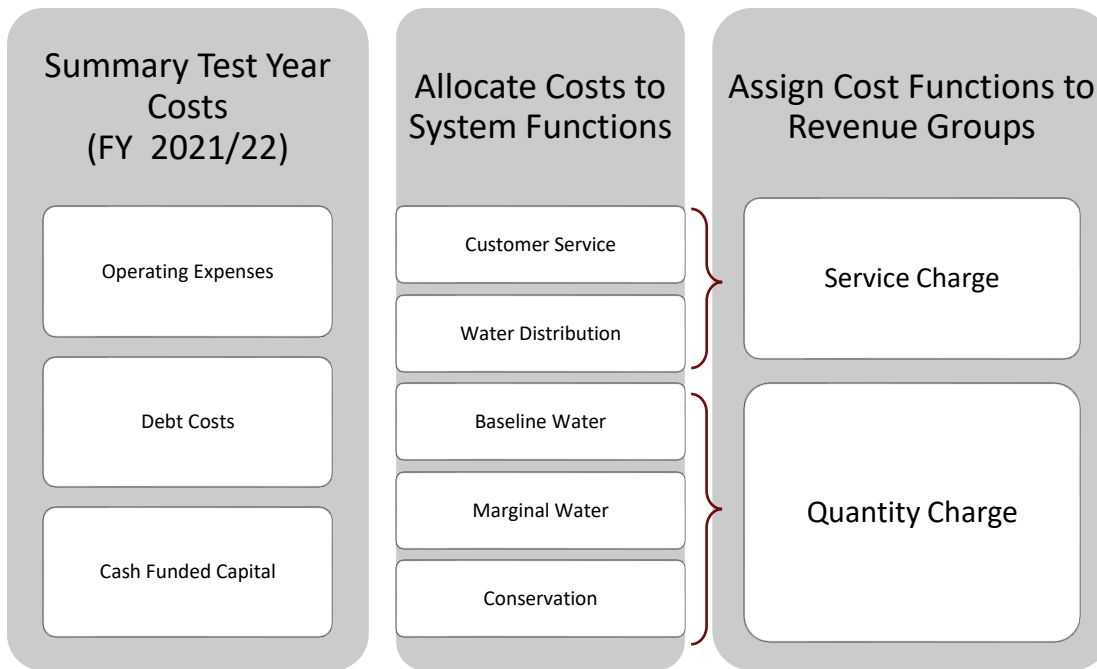
**Figure 6: Basis for Seasonal Rate Costs and Allocations**

### 3.3 RATE STRUCTURE DEVELOPMENT

The following section presents a detailed description of the process for developing the water rate structure for the West Marin Water enterprise using cost of service principles. The following rates are proposed to be adopted for FY 2021/22. A complete schedule of proposed rates for the next 5 years is provided in **Schedule 6**.

#### 3.3.1 Cost Functions

All costs for the West Marin Water enterprise’s FY 2021/22 (“Test Year”) are first allocated to five system functions: Customer Service, Water Distribution, Baseline Water Supply, Marginal Water Supply, and Conservation. These grouped costs will eventually form the basis of the proposed Service Charges and Quantity Charges (as illustrated in **Figure 7**).



**Figure 7: Cost Functions**

Operating and capital line-item expenses are assigned to a specific system function or activity. The following explains the percent allocations that are detailed in **Schedule 5**:

- Direct allocations - Some costs can be allocated directly to a functional component. For example, Transmission and Distribution costs (see Rows 26 through 39 of Schedule 5) allocated 100% to the Water Distribution function.
- Water utilization allocation - Costs associated with water supply are split 80% for the Baseline Water Supply and 20% for the Marginal Water Supply based on the estimated water supply coming from each source. In some cases, a portion (10%) of those costs are broken out for Conservation costs in recognition that conservation efforts are considered a form of water supply. This is exemplified in Rows 1 through 4 (Source of Supply).
- Operations - Some of the District’s operational costs are split between distribution and supply. In those cases (such as Rows 9 through 13), the costs are allocated 39.6% to Water Distribution (consistent with the value calculated for the Novato service area, see the 2020 Novato and Recycled Water Rate Study)

and the rest is split between Baseline and Marginal water supply based on the 80/20 split previously described.

- Indirect cost allocation – Beginning with Row 46 in Schedule 5, a number of costs are allocated using the indirect cost allocation method, which is based on the proportionate allocation of all costs that were previously allocated to the respective system functions (see Row 45 of Schedule 5). The indirect method also applies to the allocating credits from drawing down on reserves (see Row 52).
- Capital Spending –Capital expenses (including debt service) are split between distribution and supply. The costs are allocated 30% to Water Distribution (similar to the value calculated based on asset value in the Novato service area, see the 2020 Novato and Recycled Water Rate Study) and the rest is split between Baseline and Marginal water supply based on the 80/20 split previously described.
- Credits – In order to balance the revenue requirements, other revenue sources are accounted for in Rows 53 through 57. In some cases, these miscellaneous revenue sources are used to offset fixed charges (by allocating the revenues to the Water Distribution category) and in other cases the revenue is used to offset variable charge (by allocating to the water supply categories).

### 3.3.2 Units of Service

As explained in Section 3.3.1, the revenue requirements established for each system function (see bottom row of Schedule 5) are recovered through the Service Charges and Quantity Charges. The unit cost of those charges are calculated by dividing the rate revenue requirement of each system function by an appropriate metric. For example, the Customer Service revenue requirement is divided by the number of accounts in the West Marin Water service area to calculate a cost per account.

The following describe units of service that were quantified for this Study.

**Accounts** – There are 767<sup>6</sup> water accounts within the West Marin Water System.

**Equivalent Meters** –The concept of meter equivalency is explained in Section 3.2.1. **Table 8** shows the calculation of the total equivalent meters for water accounts in the West Marin Water service area.

**Table 8: Water Meter Equivalencies**

<b>Meter Size:</b>	<b>5/8"</b>	<b>1"</b>	<b>1.5"</b>	<b>2"</b>	<b>3"</b>	<b>4"</b>	<b>Total</b>
Residential:	668	9	10	1			<b>688</b>
Commercial:	55	17	3	2	1	1	<b>79</b>
<b>Total:</b>	<b>723</b>	<b>26</b>	<b>13</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>767</b>
Meter Equivalency:	1.0	2.5	5.0	8.0	16.0	25.0	
<b>Equivalent Meters:</b>	<b>723</b>	<b>65</b>	<b>65</b>	<b>24</b>	<b>16</b>	<b>25</b>	<b>918</b>

**Baseline Water Supply** –It is estimated that the water supply from the Coast Guard wells and Gallagher Well #1, and half of Gallagher Well #2 is approximately 80% of the West Marin Water System’s water supply (or approximately 53 million gallons per year). As previously explained, the costs associated with this water establishes the Tier 1 and Winter Rates.

**Marginal Water Supply** – The remaining water, about 20% or 14 million gallons, will come from the other half of production from Gallagher Well #2. The costs associated with this water establishes Tier 2 rates and a portion of Tier 3 and Summer Rates.

**Conservation** – The costs for the District’s conservation program are recovered through Tier 3 and Summer rates. The tier allocations described in Section 3.2.2 will result in about 4% of residential water sales to be Tier 3 Rates.

---

<sup>6</sup> Does not include private fire services or temporary hydrant meters

### 3.3.3 Unit Costs

The revenue requirements for each system function (from the last row in Schedule 5) are divided by the appropriate units of service in order to calculate the unit costs that will build the rate structure. These calculations are shown in **Table 9**.

**Table 9: Calculation of Unit Costs**

<b>System Function:</b>	<b>Customer Costs</b>	<b>Distribution System</b>	<b>Baseline Water Supply</b>	<b>Marginal Water Supply</b>	<b>Conservation</b>
<b>Units of Service:</b>	767 Accounts	918 Equivalent Meters	53,200 TGALs	13,900 TGALs	5,400 TGALs
<b>Revenue Requirement:</b>	\$5,200	\$228,400	\$472,700	\$179,400	\$29,300
<b>Unit Costs:</b>	<b>\$6.72</b> per account per year or <b>\$1.12</b> per account per bi-month	<b>\$248.79</b> Per equivalent meter per year or <b>\$41.47</b> per equivalent meter per bi-month	<b>\$8.88</b> Per TGAL for Tier 1 & Summer Water	<b>\$12.91</b> Per TGAL for Tier 2, Tier 3 & Summer Water	<b>\$5.42</b> (additional) per TGAL for Tier 3 & Summer Water

### 3.3.4 Service Charges

The fixed Service Charge is made up of an account charge (\$1.12 per bi-month) and a meter charge (\$41.47 per equivalent meter per bi-month). **Table 10** provides a complete schedule for all meter sizes.

**Table 10: Proposed Service Charges**

<b>Meter Size</b>	<b>Account Charge</b>	<b>Meter Charge</b>	<b>Bi-Monthly Service Charge</b>
5/8"	\$1.12	\$41.47	\$42.59
1" Fire*	\$1.12	\$41.47	\$42.59
1"	\$1.12	\$103.68	\$104.80
1 1/2"	\$1.12	\$207.35	\$208.47
2"	\$1.12	\$331.76	\$332.88
3"	\$1.12	\$663.52	\$664.64
4"	\$1.12	\$1,036.75	\$1,037.87

*\* This Study recommends that residential accounts with a 1" meter that would otherwise have a 5/8" but-for fire requirements be charged at the 5/8" meter rate.*

### 3.3.5 Hydraulic Zone Charge

All water in the West Marin Water service area is pressurized when delivered to customers. The District must provide additional pressurization to deliver water to customers located at higher elevations.

The cost of lifting water to higher elevations includes capital costs and energy (electricity). First the replacement cost new less depreciation (RCNLD) of the pumping assets at each zone is quantified based on asset records (see column b in Table 11). The annual depreciation expense is then calculated based on the expected useful life for different types of assets (see footnotes to table below). From this value a replacement charge is calculated by dividing column c by the annual water usage at the pump station (see column a). The electricity charge is calculated by dividing the annual cost of electricity (column e) by the annual water usage (column a). Together these two charges yield the proposed charge by hydraulic zone.

**Table 11: Hydraulic Zone Charge Calculation**

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Annual Water Usage (TGAL)	Asset Value (RCNLD)	Annual Depreciation Expense <sup>1</sup>	Replacement Charge (\$/TGAL)	Annual Electricity Costs	Electricity Charge (\$/TGAL)	Proposed Hydraulic Zone Charge (\$/TGAL)
<b>Zone 3<sup>2</sup> (Olema):</b>	9,800	\$370,000	\$8,220	\$0.84	\$2,500	\$0.26	\$1.10
<b>Zone 2 (others<sup>3</sup>):</b>	17,600	\$1,137,000	\$27,780	\$1.58	\$10,700	\$0.61	\$2.19
<b>Zone 4<sup>4</sup> (Upper PRE):</b>	6,700	\$986,000	\$19,720	\$2.94	\$6,900	\$1.03	\$6.16
	<b>34,100</b>		<b>\$49,300</b>		<b>\$20,100</b>		

<sup>1</sup> Assumes a 25 year expected useful life for Pump Station infrastructure and 50-year expected useful life for storage infrastructure (tanks).

<sup>2</sup> The historical naming convention for the zone is not consistent with the actual elevation differences. Zone 2 is in fact a higher

<sup>3</sup> Includes Inverness Park, Bear Valley, and Lower Paradise Ranch Estates

<sup>4</sup> Zone 4 water is first pumped through the Zone 2 pump station, therefore the hydraulic charge includes the Zone 2 charge.

### 3.3.6 Total Quantity Charge

The residential and commercial Quantity Charges are calculated by combining the unit costs shown in Table 9 and Table 11. For example, the Tier 1 unit cost from Table 9 (\$8.88 per TGAL) is combined with the Zone 3 Hydraulic Zone Charge (\$1.10) for a total



of \$9.98 for Tier 1 Zone 3. The various components of the Quantity Charges are summarized below in Table 12.

Table 12 also shows that Temporary Meters will be charged \$15.10 per TGAL (which is the Tier 2, Zone 2 Quantity Charge). It is reasonable to charge Temporary Meter customers for the District’s more costly source of water (reflected in Tier 2 rates) and for the “middle” elevation zone (Zone 2) since the meters may be installed in various zones and tracking actual locations is not administratively feasible. Temporary Meters are also assessed a fixed Service Charge based on the size of the construction meter.

**Table 12: Proposed Quantity Charges**

<b>Residential Quantity Charges (\$/TGAL)</b>	
Tier 1*	\$8.88
Tier 2*	\$12.91
Tier 3*	\$18.33
<b>Commercial Quantity Charges (\$/TGAL)</b>	
Winter (Oct. to June)	\$8.88
Summer (July to Sept.)	\$18.33
<b>Hydraulic Zone Charge (\$/TGAL)</b>	
Zone 3	\$1.10
Zone 2	\$2.19
Zone 4	\$6.16
<b>Other Quantity Charges (\$/TGAL)</b>	
Temporary Meter	\$15.10

\* See Table 7 for water allocations per tier

### 3.4 PRIVATE FIRE SERVICE CHARGE

The District provides maintenance services for private fire service valve assemblies, which is a service that is not provided to other customers. Calculating the cost of providing maintenance services for private fire services in the West Marin Water System is challenged by the inherently limited maintenance cost data due to the small size of the service area. A complete analysis for the cost of providing private fire maintenance services was completed as part of the 2020 Novato and Recycled Water Rate Study.

Based on District staff's estimation, the cost of providing private fire service in the West Marin Water System is similar to the cost of providing the same services in the Novato service area. As such, it is recommended that the West Marin Water service area adopted the same fire service charges as assessed by the Novato service area.

### **3.5 ADOPTION OF PROPOSED RATES**

This Study has calculated, and is proposing, a 5-year schedule of water rates (see Schedule 6). All rates are proposed to be effective as of July 1.

The water rates will need to be adopted in accordance with Proposition 218, which will require a detailed notice describing the proposed charges to be mailed to each affected property owner or customer at least 45 days prior to conducting a public hearing to adopt the rates.

## **Section 4. CONCLUSION**

This Study used methodologies that are aligned with industry standard practices for rate setting as promulgated by AWWA and all applicable laws, including California's Proposition 218. The proposed annual adjustments to the rates will allow the District to continue to provide reliable service to customers while meeting operational and infrastructure needs of the service area. The modifications to the rate structure will provide revenue stability, improve the defensibility of the water rates, and continue to equitably and proportionately recover costs from the customers. A complete schedule of rates over the 5-year planning period are summarized in Schedule 6.

It is important to note that this study proposes changes to both the total amount of rate revenue being collected by the West Marin Water enterprise as well as the structure of the rates. As a result, the results of the rate changes will vary among different customers in Year 1 due to the proposed rate structure adjustments. To be clear, some customers' bills will increase by more than rate revenue increase of 6% in Year 1, while other customer's bills will increase by less than that amount. Starting in Year 2 (FY 2022/23), all customers will experience the same uniform percentage change to their bill.

## **SCHEDULES**

---

Schedule 1 – Budgeted and Projected Cash Inflows

Schedule 2 - Budgeted and Projected Cash Outflows

Schedule 3 - Capital Spending Plan

Schedule 4 - Cash Flow Pro Forma

Schedule 5 – Allocation of Costs to System Functions

Schedule 6 – Schedule of Proposed Rates

Schedule 1 – Budgeted and Projected Cash Inflows

	FY2020/21	FY2021/22	FY2022/23	FY2023/24	FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30
1 Growth in Water Accounts		0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%
2 Proposed Water Rate Increase		6.0%	6.0%	6.0%	6.0%	6.0%	3.0%	3.0%	3.0%	3.0%
<b>Rate Revenue</b>										
3 Water Rate Revenue	\$983,000	\$983,000	\$1,043,000	\$1,107,000	\$1,174,000	\$1,245,000	\$1,321,000	\$1,362,000	\$1,404,000	\$1,448,000
4 Increase due to growth	0	1,000	1,000	1,000	1,000	1,000	1,000	1,000	2,000	2,000
5 Increase due to new rate adjustments	0	59,000	63,000	66,000	70,000	75,000	40,000	41,000	42,000	43,000
6 <b>Total Rate Revenue</b>	<b>\$983,000</b>	<b>\$1,043,000</b>	<b>\$1,107,000</b>	<b>\$1,174,000</b>	<b>\$1,245,000</b>	<b>\$1,321,000</b>	<b>\$1,362,000</b>	<b>\$1,404,000</b>	<b>\$1,448,000</b>	<b>\$1,493,000</b>
<b>Other Revenue:</b>										
7 Account Turn-on Charges	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
8 New Account Charges	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
10 Backflow Service Charges	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
11 Interest Earnings	11,000	10,000	6,000	7,000	7,000	5,000	7,000	9,000	11,000	13,000
14 Tax Proceeds - PR-2 Tax Allocation	\$57,000	\$59,000	\$60,000	\$62,000	\$64,000	\$66,000	\$68,000	\$70,000	\$72,000	\$74,000
16 Connection Fees	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000
16 Transfer In (Workers Comp Fund)	\$0	\$16,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
19 <b>Total Other Revenue</b>	<b>\$86,000</b>	<b>\$103,000</b>	<b>\$84,000</b>	<b>\$87,000</b>	<b>\$89,000</b>	<b>\$90,000</b>	<b>\$94,000</b>	<b>\$98,000</b>	<b>\$102,000</b>	<b>\$106,000</b>
20 <b>TOTAL REVENUE</b>	<b>\$1,069,000</b>	<b>\$1,146,000</b>	<b>\$1,191,000</b>	<b>\$1,261,000</b>	<b>\$1,334,000</b>	<b>\$1,411,000</b>	<b>\$1,456,000</b>	<b>\$1,502,000</b>	<b>\$1,550,000</b>	<b>\$1,599,000</b>

Schedule 2 - Budgeted and Projected Cash Outflows (1 of 2)

	Actual FY2019/20	Budget FY2020/21	Forecast FY2021/22	Forecast FY2022/23	Forecast FY2023/24	Forecast FY2024/25	Forecast FY2025/26	Forecast FY2026/27	Forecast FY2027/28	Forecast FY2028/29	Forecast FY2029/30	Forecast FY2030/31
<b>SOURCE OF SUPPLY</b>												
1 Supervision & Engineering	\$2,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2 Operating Expense	\$1,500	\$7,000	\$7,200	\$7,400	\$7,600	\$7,900	\$8,100	\$8,400	\$8,600	\$8,900	\$9,100	\$9,400
3 Maint of Structures	\$18,100	\$15,000	\$15,500	\$15,900	\$16,400	\$16,900	\$17,400	\$17,900	\$18,400	\$19,000	\$19,600	\$20,200
4 Water Quality Surveillance	\$0	\$1,000	\$1,000	\$1,100	\$1,100	\$1,100	\$1,200	\$1,200	\$1,200	\$1,300	\$1,300	\$1,300
5 Purchased Water - MMWD	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6 GASB68 Adjustment	\$500	\$1,000	\$1,000	\$1,100	\$1,100	\$1,100	\$1,200	\$1,200	\$1,200	\$1,300	\$1,300	\$1,300
7 West Marin Water Master Plan (every 10	\$0	\$0	\$0	\$35,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>PUMPING</b>												
8 Maint of Structures and Grounds	9,000	10,000	10,300	10,600	10,900	11,300	11,600	11,900	12,300	12,700	13,000	13,400
9 Maint of Pumping Equip	37,300	23,000	23,700	24,400	25,100	25,900	26,700	27,500	28,300	29,100	30,000	30,900
10 Electric Power	40,000	28,000	28,800	29,700	30,600	31,500	32,500	33,400	34,400	35,500	36,500	37,600
11 GASB68 Adjustment (Pension)	5,300	2,000	2,100	2,100	2,200	2,300	2,300	2,400	2,500	2,500	2,600	2,700
12 GASB75 Adjustment (OPEB)	400	0	0	0	0	0	0	0	0	0	0	0
<b>OPERATIONS</b>												
13 Supervision & Engineering	13,900	15,000	15,500	15,900	16,400	16,900	17,400	17,900	18,400	19,000	19,600	20,200
14 Operating Expense	17,700	18,000	18,500	19,100	19,700	20,300	20,900	21,500	22,100	22,800	23,500	24,200
15 Maintenance Expense	1,100	0	0	0	0	0	0	0	0	0	0	0
16 Maint of Telemetry Equipment	16,300	15,000	15,500	15,900	16,400	16,900	17,400	17,900	18,400	19,000	19,600	20,200
17 Leased Lines	4,100	5,000	5,200	5,300	5,500	5,600	5,800	6,000	6,100	6,300	6,500	6,700
18 GASB68 Adjustment (Pension)	6,500	8,000	8,200	8,500	8,700	9,000	9,300	9,600	9,800	10,100	10,400	10,800
19 GASB75 Adjustment (OPEB)	500	0	0	0	0	0	0	0	0	0	0	0
<b>WATER TREATMENT</b>												
20 Supervision & Engineering	14,100	11,000	11,300	11,700	12,000	12,400	12,800	13,100	13,500	13,900	14,400	14,800
21 Operating Expense	22,900	25,000	25,800	26,500	27,300	28,100	29,000	29,900	30,700	31,700	32,600	33,600
22 Purification Chemicals	3,300	5,000	5,200	5,300	5,500	5,600	5,800	6,000	6,100	6,300	6,500	6,700
23 Maint of Structures & Grounds	700	1,000	1,000	1,100	1,100	1,100	1,200	1,200	1,200	1,300	1,300	1,300
24 Maint of Purification Equipment	7,600	10,000	10,300	10,600	10,900	11,300	11,600	11,900	12,300	12,700	13,000	13,400
25 Electric Power	19,800	24,000	24,700	25,500	26,200	27,000	27,800	28,700	29,500	30,400	31,300	32,300
26 Laboratory Direct Labor	42,300	36,000	37,100	38,200	39,300	40,500	41,700	43,000	44,300	45,600	47,000	48,400
27 Laboratory Services	5,700	7,000	7,200	7,400	7,600	7,900	8,100	8,400	8,600	8,900	9,100	9,400
28 Water Quality Supervision	3,100	4,000	4,100	4,200	4,400	4,500	4,600	4,800	4,900	5,100	5,200	5,400
29 Customer Water Quality	2,600	5,000	5,200	5,300	5,500	5,600	5,800	6,000	6,100	6,300	6,500	6,700
30 Lab Expense Distributed from Novato	23,000	21,000	21,600	22,300	22,900	23,600	24,300	25,100	25,800	26,600	27,400	28,200
31 GASB68 Adjustment (Pension)	15,000	21,000	21,600	22,300	22,900	23,600	24,300	25,100	25,800	26,600	27,400	28,200
32 GASB75 Adjustment (OPEB)	1,200	0	0	0	0	0	0	0	0	0	0	0
<b>TRANSMISSION &amp; DISTRIBUTION</b>												
33 Supervision & Engineering	5,900	8,000	8,200	8,500	8,700	9,000	9,300	9,600	9,800	10,100	10,400	10,800
34 Maps & Records	0	5,000	5,200	5,300	5,500	5,600	5,800	6,000	6,100	6,300	6,500	6,700
35 Facilities Location - USA	11,600	12,000	12,400	12,700	13,100	13,500	13,900	14,300	14,800	15,200	15,700	16,100
36 Customer Service Expense	9,000	5,000	5,200	5,300	5,500	5,600	5,800	6,000	6,100	6,300	6,500	6,700
37 Flushing	7,100	0	0	0	0	0	0	0	0	0	0	0
38 Storage Facilities Expense	19,900	20,000	20,600	21,200	21,900	22,500	23,200	23,900	24,600	25,300	26,100	26,900
39 Cathodic Protection	0	2,000	2,100	2,100	2,200	2,300	2,300	2,400	2,500	2,500	2,600	2,700
40 Maint of Valves	700	2,000	2,100	2,100	2,200	2,300	2,300	2,400	2,500	2,500	2,600	2,700
41 Valve Operation Program	0	5,000	5,200	5,300	5,500	5,600	5,800	6,000	6,100	6,300	6,500	6,700
42 Maint of Mains	11,900	8,000	8,200	8,500	8,700	9,000	9,300	9,600	9,800	10,100	10,400	10,800
43 Water Quality Maintenance	0	2,000	2,100	2,100	2,200	2,300	2,300	2,400	2,500	2,500	2,600	2,700
44 Maint of Backflow Devices	0	1,000	1,000	1,100	1,100	1,100	1,200	1,200	1,200	1,300	1,300	1,300
45 Backflow Dev Inspection/Survey	1,100	6,000	6,200	6,400	6,600	6,800	7,000	7,200	7,400	7,600	7,800	8,100
46 Maint of Copper Services	900	3,000	3,100	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900	4,000
47 Maint of PB Service Lines	19,800	29,000	29,900	30,800	31,700	32,600	33,600	34,600	35,700	36,700	37,800	39,000
48 Maint of Meters	1,600	2,000	2,100	2,100	2,200	2,300	2,300	2,400	2,500	2,500	2,600	2,700
49 Detector Check Assembly Maint	1,200	1,000	1,000	1,100	1,100	1,100	1,200	1,200	1,200	1,300	1,300	1,300
50 Maint of Hydrants	0	1,000	1,000	1,100	1,100	1,100	1,200	1,200	1,200	1,300	1,300	1,300
51 Hydrant Operation	0	6,000	6,200	6,400	6,600	6,800	7,000	7,200	7,400	7,600	7,800	8,100
52 Single Service Installation	(6,300)	6,000	6,200	6,400	6,600	6,800	7,000	7,200	7,400	7,600	7,800	8,100
53 GASB68 Adjustment (Pension)	12,600	18,000	18,500	19,100	19,700	20,300	20,900	21,500	22,100	22,800	23,500	24,200
54 GASB75 Adjustment (OPEB)	1,000	0	0	0	0	0	0	0	0	0	0	0

Schedule 2 - Budgeted and Projected Cash Outflows (2 of 2)

	Actual FY2019/20	Budget FY2020/21	Forecast FY2021/22	Forecast FY2022/23	Forecast FY2023/24	Forecast FY2024/25	Forecast FY2025/26	Forecast FY2026/27	Forecast FY2027/28	Forecast FY2028/29	Forecast FY2029/30	Forecast FY2030/31
<b>CONSUMER ACCOUNTING</b>												
55 Meter Reading	8,100	8,000	8,200	8,500	8,700	9,000	9,300	9,600	9,800	10,100	10,400	10,800
56 Collection Expense - Labor	0	1,000	1,000	1,100	1,100	1,100	1,200	1,200	1,200	1,300	1,300	1,300
57 Distributed from Novato (3.6%)	14,800	13,000	13,400	13,800	14,200	14,600	15,100	15,500	16,000	16,500	17,000	17,500
58 GASB68 Adjustment (Pension)	1,400	0	0	0	0	0	0	0	0	0	0	0
59 GASB75 Adjustment (OPEB)	100	0	0	0	0	0	0	0	0	0	0	0
<b>WATER CONSERVATION</b>												
60 Water Conservation Program	13,500	9,000	9,300	9,500	9,800	10,100	10,400	10,700	11,100	11,400	11,700	12,100
61 GASB68 Adjustment (Pension)	1,600	0	0	0	0	0	0	0	0	0	0	0
62 GASB75 Adjustment (OPEB)	100	0	0	0	0	0	0	0	0	0	0	0
<b>GENERAL AND ADMINISTRATIVE</b>												
63 Legal Fees	1,700	0	0	0	0	0	0	0	0	0	0	0
64 Consulting Services/Studies	200	35,000	36,100	37,100	38,200	39,400	40,600	41,800	43,000	44,300	45,700	47,000
65 Distributed from Novato (3.6%)	57,200	62,000	63,900	65,800	67,700	69,800	71,900	74,000	76,300	78,500	80,900	83,300
66 GASB68 Adjustment (Pension)	58,200	2,000	2,100	2,100	2,200	2,300	2,300	2,400	2,500	2,500	2,600	2,700
<b>DEBT SERVICE</b>												
67 Existing Debt Service	71,000	71,000	71,000	71,000	71,000	71,000	71,000	71,000	71,000	71,000	71,000	71,000
68 New Internal Loan Repayments	0	0	163,000	163,000	163,000	163,000	163,000	163,000	163,000	163,000	163,000	163,000
69 New Debt Service	-	-	-	-	-	-	-	-	-	-	-	384,000
<b>69 Total Operating &amp; Debt Expenses</b>	<b>\$662,000</b>	<b>\$661,000</b>	<b>\$842,000</b>	<b>\$895,000</b>	<b>\$879,000</b>	<b>\$898,000</b>	<b>\$919,000</b>	<b>\$939,000</b>	<b>\$959,000</b>	<b>\$981,000</b>	<b>\$1,003,000</b>	<b>\$1,411,000</b>

Schedule 3 - Capital Spending Plan (in current dollars)

	Actual FY 2020	Budget FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025	Forecast FY 2026
1 Replace PRE Tank #4A (25K gal w/125K gal)	\$343,309	\$1,057,000	\$0	\$0	\$0	\$0	\$0
2 New Gallagher Well #2	\$73,895	\$335,000	\$506,105	\$0	\$0	\$0	\$0
3 PB Replace in Sync w/ County Paving	\$47,256	\$0	\$50,000	\$0	\$51,500	\$0	\$51,500
4 Gallagher Ranch Streambank Stabilization (Note 3)	\$386,826	\$335,000	\$0	\$0	\$0	\$0	\$0
5 PRE Tank #1 & #2 Replacement	\$0	\$0	\$0	\$0	\$0	\$618,000	\$0
6 Lagunitas Creek Bridge Pipe Replacement (Caltrans)	\$13,615	\$137,000	\$400,000	\$51,500	\$0	\$0	\$0
7 PB Replacement-Drakes View Dr	\$66,264	\$0	\$0	\$0	\$0	\$0	\$0
8 PS/Tank Replacement	\$0	\$0	\$0	\$0	\$0	\$0	\$448,500
9 Olema Creek Bridge Pipe Replacement (County)	\$703	\$0	\$0	\$0	\$255,000	\$0	\$0
10 Olema PS Wireless to Tank	\$8,468	\$0	\$0	\$0	\$0	\$0	\$0
11 PB Replacement-SR 1 Pt Reyes Replacement	\$75,876	\$0	\$0	\$0	\$0	\$0	\$0
12 Olema Pump Station Pump Improvements	\$7,270	\$0	\$0	\$0	\$0	\$0	\$0
13 Miscellaneous Water System Improvements	\$0	\$0	\$0	\$200,000	\$0	\$0	\$0
<b>Capital Spending Totals:</b>	<b>\$1,023,482</b>	<b>\$1,864,000</b>	<b>\$956,105</b>	<b>\$251,500</b>	<b>\$306,500</b>	<b>\$618,000</b>	<b>\$500,000</b>



Schedule 4 – Cash Flow Proforma

	Actual FY 2020	Budget FY 2021	Forecast FY2022	Forecast FY2023	Forecast FY2024	Forecast FY2025	Forecast FY2026	Forecast FY2027	Forecast FY2028	Forecast FY2029	Forecast FY2030	Forecast FY2031	Forecast FY2032	
1	<b>Water Rate Revenue Increase:</b>		<b>6.00%</b>	<b>6.00%</b>	<b>6.00%</b>	<b>6.00%</b>	<b>6.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	
<b>Rate Revenue</b>														
2	<b>Water Rate Revenue</b>	\$983,000	\$983,000	\$983,000	\$1,043,000	\$1,107,000	\$1,174,000	\$1,245,000	\$1,321,000	\$1,362,000	\$1,404,000	\$1,448,000	\$1,493,000	\$1,540,000
3	Change due to growth & use			\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$2,000	\$2,000	\$2,000	\$2,000
4	Increase due to rate adjustments			\$59,000	\$63,000	\$66,000	\$70,000	\$75,000	\$40,000	\$41,000	\$42,000	\$43,000	\$45,000	\$46,000
<b>Non-Rate Revenues</b>														
5	Taxes	\$55,948	\$57,000	\$59,000	\$60,000	\$62,000	\$64,000	\$66,000	\$68,000	\$70,000	\$72,000	\$74,000	\$77,000	\$79,000
6	Interest Earnings	\$72,324	\$11,000	\$10,000	\$6,000	\$7,000	\$7,000	\$5,000	\$7,000	\$9,000	\$11,000	\$13,000	\$15,000	\$15,000
7	Connection Fees	\$0	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000
8	Operating Revenue	\$12,356	\$7,000	\$7,000	\$7,000	\$7,000	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000	\$9,000	\$9,000
9	<b>Total Revenue</b>	<b>\$1,123,629</b>	<b>\$1,069,000</b>	<b>\$1,130,000</b>	<b>\$1,191,000</b>	<b>\$1,261,000</b>	<b>\$1,335,000</b>	<b>\$1,411,000</b>	<b>\$1,456,000</b>	<b>\$1,502,000</b>	<b>\$1,550,000</b>	<b>\$1,599,000</b>	<b>\$1,652,000</b>	<b>\$1,702,000</b>
<b>O&amp;M Costs</b>														
10	Source of Supply	\$22,935	\$24,000	\$25,000	\$60,000	\$26,000	\$27,000	\$28,000	\$29,000	\$30,000	\$30,000	\$31,000	\$32,000	\$33,000
11	Pumping	\$91,995	\$63,000	\$65,000	\$67,000	\$69,000	\$71,000	\$73,000	\$75,000	\$77,000	\$80,000	\$82,000	\$85,000	\$87,000
12	Other Operations	\$60,044	\$61,000	\$63,000	\$65,000	\$67,000	\$69,000	\$71,000	\$73,000	\$75,000	\$77,000	\$80,000	\$82,000	\$84,000
13	Water Treatment	\$161,169	\$170,000	\$175,000	\$180,000	\$186,000	\$191,000	\$197,000	\$203,000	\$209,000	\$215,000	\$222,000	\$228,000	\$235,000
14	Transmission & Distribution	\$97,879	\$142,000	\$146,000	\$151,000	\$155,000	\$160,000	\$165,000	\$170,000	\$175,000	\$180,000	\$185,000	\$191,000	\$197,000
15	Consumer Accounting	\$24,374	\$22,000	\$23,000	\$23,000	\$24,000	\$25,000	\$26,000	\$26,000	\$27,000	\$28,000	\$29,000	\$30,000	\$30,000
16	Water Conservation	\$15,246	\$9,000	\$9,000	\$10,000	\$10,000	\$10,000	\$10,000	\$11,000	\$11,000	\$11,000	\$12,000	\$12,000	\$12,000
17	General Administration	\$117,324	\$99,000	\$102,000	\$105,000	\$108,000	\$111,000	\$115,000	\$118,000	\$122,000	\$125,000	\$129,000	\$133,000	\$137,000
18	<b>Total Operating Expenses</b>	<b>\$590,968</b>	<b>\$590,000</b>	<b>\$608,000</b>	<b>\$661,000</b>	<b>\$645,000</b>	<b>\$664,000</b>	<b>\$685,000</b>	<b>\$705,000</b>	<b>\$726,000</b>	<b>\$746,000</b>	<b>\$770,000</b>	<b>\$793,000</b>	<b>\$815,000</b>
<b>Capital Costs</b>														
19	<b>Total Capital Spending</b>	<b>\$1,023,482</b>	<b>\$1,864,000</b>	<b>\$956,000</b>	<b>\$259,000</b>	<b>\$357,000</b>	<b>\$675,000</b>	<b>\$281,000</b>	<b>\$290,000</b>	<b>\$299,000</b>	<b>\$307,000</b>	<b>\$5,130,000</b>	<b>\$326,000</b>	<b>\$336,000</b>
20	Debt Funded Capital	\$0	\$1,357,000	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	SRF	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,814,000	\$0	\$0
22	Cash Funded Capital Projects	\$947,482	\$172,000	\$756,000	\$259,000	\$357,000	\$675,000	\$281,000	\$290,000	\$299,000	\$307,000	\$317,000	\$326,000	\$336,000
23	Grant Funded Capital Projects	\$76,000	\$335,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
24	Existing Debt Service	\$71,000	\$71,000	\$71,000	\$71,000	\$71,000	\$71,000	\$71,000	\$71,000	\$71,000	\$71,000	\$71,000	\$71,000	\$30,000
25	Internal Loan	\$0	\$0	\$163,000	\$163,000	\$163,000	\$163,000	\$163,000	\$163,000	\$163,000	\$163,000	\$163,000	\$163,000	\$0
26	New Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$384,000	\$384,000
27	<b>Total Capital Expenses</b>	<b>\$1,018,482</b>	<b>\$243,000</b>	<b>\$990,000</b>	<b>\$493,000</b>	<b>\$591,000</b>	<b>\$909,000</b>	<b>\$515,000</b>	<b>\$524,000</b>	<b>\$533,000</b>	<b>\$541,000</b>	<b>\$551,000</b>	<b>\$944,000</b>	<b>\$750,000</b>
Transfer In - Workers Comp Fund														
28	<b>Total Revenue Requirement</b>	<b>\$1,609,450</b>	<b>\$833,000</b>	<b>\$1,614,000</b>	<b>\$1,154,000</b>	<b>\$1,236,000</b>	<b>\$1,573,000</b>	<b>\$1,200,000</b>	<b>\$1,229,000</b>	<b>\$1,259,000</b>	<b>\$1,287,000</b>	<b>\$1,321,000</b>	<b>\$1,737,000</b>	<b>\$1,565,000</b>
29	<b>Beginning Year Balance</b>	<b>\$1,438,886</b>	<b>\$953,065</b>	<b>\$1,189,000</b>	<b>\$705,000</b>	<b>\$742,000</b>	<b>\$767,000</b>	<b>\$529,000</b>	<b>\$740,000</b>	<b>\$967,000</b>	<b>\$1,210,000</b>	<b>\$1,473,000</b>	<b>\$1,751,000</b>	<b>\$1,666,000</b>
30	<b>Surplus/(Shortfall)</b>	<b>(\$485,821)</b>	<b>\$236,000</b>	<b>(\$484,000)</b>	<b>\$37,000</b>	<b>\$25,000</b>	<b>(\$238,000)</b>	<b>\$211,000</b>	<b>\$227,000</b>	<b>\$243,000</b>	<b>\$263,000</b>	<b>\$278,000</b>	<b>(\$85,000)</b>	<b>\$137,000</b>
31	<b>End of Year Balance</b>	<b>\$953,065</b>	<b>\$1,189,065</b>	<b>\$705,000</b>	<b>\$742,000</b>	<b>\$767,000</b>	<b>\$529,000</b>	<b>\$740,000</b>	<b>\$967,000</b>	<b>\$1,210,000</b>	<b>\$1,473,000</b>	<b>\$1,751,000</b>	<b>\$1,666,000</b>	<b>\$1,803,000</b>
32	Minimum Reserve Target	\$298,355	\$298,355	\$301,552	\$319,218	\$313,885	\$320,218	\$327,218	\$333,885	\$340,885	\$347,552	\$355,552	\$363,218	\$370,552
33	Total Reserve Target	\$680,674	\$680,674	\$680,674	\$721,430	\$728,163	\$746,924	\$766,726	\$786,577	\$807,158	\$827,813	\$850,221	\$872,728	\$880,061
34	<b>Debt Coverage Ratio</b>	<b>7.50</b>	<b>6.75</b>	<b>5.06</b>	<b>5.17</b>	<b>6.38</b>	<b>7.15</b>	<b>7.93</b>	<b>8.28</b>	<b>8.63</b>	<b>9.03</b>	<b>9.38</b>	<b>1.53</b>	<b>2.14</b>

Schedule 5 – Allocation of Costs to System Functions (1 of 2)

Budget Line Items	Test Year Budget	Percent Allocation to System Functions				Cost Allocation to System Functions					
		Customer Service	Water Distribution	Baseline Water Supply <sup>1</sup>	Marginal Water Supply <sup>2</sup>	Conservation	Customer Service	Water Distribution	Baseline Water Supply <sup>1</sup>	Marginal Water Supply <sup>2</sup>	Conservation
<b>SOURCE OF SUPPLY</b>											
1 Operating Expense	\$7,200			72.0%	18.0%	10.0%			\$5,184	\$1,296	\$720
2 Maint of Structures	\$15,500			72.0%	18.0%	10.0%			\$11,160	\$2,790	\$1,550
3 Water Quality Surveillance	\$1,000			72.0%	18.0%	10.0%			\$720	\$180	\$100
4 GASB68 Adjustment	\$1,000			72.0%	18.0%	10.0%			\$720	\$180	\$100
<b>PUMPING</b>											
5 Maint of Structures and Grounds	\$10,300		100%					\$10,300			
6 Maint of Pumping Equip	\$23,700		100%					\$23,700			
7 Electric Power	\$28,800		100%					\$28,800			
8 GASB68 Adjustment (Pension)	\$2,100		100%					\$2,100			
<b>OPERATIONS</b>											
9 Supervision & Engineering	\$15,500		39.6%	48.3%	12.1%			\$6,138	\$7,490	\$1,872	
10 Operating Expense	\$18,500		39.6%	48.3%	12.1%			\$7,326	\$8,939	\$2,235	
11 Maint of Telemetry Equipment	\$15,500		39.6%	48.3%	12.1%			\$6,138	\$7,490	\$1,872	
12 Leased Lines	\$5,200		39.6%	48.3%	12.1%			\$2,059	\$2,513	\$628	
13 GASB68 Adjustment (Pension)	\$8,200		39.6%	48.3%	12.1%			\$3,247	\$3,962	\$991	
<b>WATER TREATMENT</b>											
14 Supervision & Engineering	\$11,300			72.0%	18.0%	10.0%			\$8,136	\$2,034	\$1,130
15 Operating Expense	\$25,800			72.0%	18.0%	10.0%			\$18,576	\$4,644	\$2,580
16 Purification Chemicals	\$5,200			72.0%	18.0%	10.0%			\$3,744	\$936	\$520
17 Maint of Structures & Grounds	\$1,000			72.0%	18.0%	10.0%			\$720	\$180	\$100
18 Maint of Purification Equipment	\$10,300			72.0%	18.0%	10.0%			\$7,416	\$1,854	\$1,030
19 Electric Power	\$24,700			72.0%	18.0%	10.0%			\$17,784	\$4,446	\$2,470
20 Laboratory Direct Labor	\$37,100			72.0%	18.0%	10.0%			\$26,712	\$6,678	\$3,710
21 Laboratory Services	\$7,200			72.0%	18.0%	10.0%			\$5,184	\$1,296	\$720
22 Water Quality Supervision	\$4,100			72.0%	18.0%	10.0%			\$2,952	\$738	\$410
23 Customer Water Quality	\$5,200			72.0%	18.0%	10.0%			\$3,744	\$936	\$520
24 Lab Expense Distributed from Novato	\$21,600			72.0%	18.0%	10.0%			\$15,552	\$3,888	\$2,160
25 GASB68 Adjustment (Pension)	\$21,600			72.0%	18.0%	10.0%			\$15,552	\$3,888	\$2,160

<sup>1</sup> Water supply associated with the Coast Guard wells, Gallagher Well #1 and half of Gallagher Well #2

<sup>2</sup> Water supply associated with the other half of Gallagher Well #2

Schedule 5 – Allocation of Costs to System Functions (2 of 2)

Budget Line Items	Test Year Budget	Percent Allocation to System Functions					Cost Allocation to System Functions					
		Customer Service	Water Distribution	Baseline Water Supply <sup>1</sup>	Marginal Water Supply <sup>2</sup>	Conservation	Customer Service	Water Distribution	Baseline Water Supply <sup>1</sup>	Marginal Water Supply <sup>2</sup>	Conservation	
<b>TRANSMISSION &amp; DISTRIBUTION</b>												
26 Supervision & Engineering	\$8,200		100%					\$8,200				
27 Maps & Records	\$5,200		100%					\$5,200				
28 Facilities Location - USA	\$12,400		100%					\$12,400				
29 Customer Service Expense	\$5,200		100%					\$5,200				
30 Storage Facilities Expense	\$20,600		100%					\$20,600				
31 Cathodic Protection	\$2,100		100%					\$2,100				
32 Miscellaneous Maintenance	\$47,400		100%					\$47,400				
33 Valve Operation Program	\$5,200		100%					\$5,200				
34 Water Quality Maintenance	\$2,100		100%					\$2,100				
35 Backflow Dev Inspection/Survey	\$6,200		100%					\$6,200				
36 Detector Check Assembly Maint	\$1,000		100%					\$1,000				
37 Hydrant Operation	\$6,200		100%					\$6,200				
38 Single Service Installation	\$6,200		100%					\$6,200				
39 GASB68 Adjustment (Pension)	\$18,500		100%					\$18,500				
<b>CONSUMER ACCOUNTING</b>												
40 Meter Reading	\$8,200	100.0%					\$8,200					
41 Collection Expense - Labor	\$1,000	100.0%					\$1,000					
42 Distributed from Novato (3.6%)	\$13,400	100.0%					\$13,400					
<b>WATER CONSERVATION</b>												
43 Water Conservation Program	\$9,300				100%						\$9,300	
44 Total Operating Costs	\$506,000						\$22,600	\$236,308	\$174,249	\$43,562	\$29,280	
45							4.7%	49.6%	36.6%	9.1%		
<b>GENERAL AND ADMINISTRATIVE</b>												
46 Consulting Services/Studies	\$36,100	4.7%	49.6%	36.6%	9.1%		\$1,711	\$17,895	\$13,195	\$3,299		
47 Distributed from Novato (3.6%)	\$63,900	4.7%	49.6%	36.6%	9.1%		\$3,029	\$31,675	\$23,357	\$5,839		
48 Transfer In - Workers Comp Fund	\$16,000	4.7%	49.6%	36.6%	9.1%		\$759	\$7,931	\$5,848	\$1,462		
49 Total O&M Budget	\$622,000						\$28,099	\$293,809	\$216,649	\$54,162	\$29,280	
<b>NON-OPERATING CATEGORIES</b>												
50 Debt Service	\$234,000		30.0%	51.1%	18.9%			\$70,200	\$119,464	\$44,336		
51 Capital Spending	\$756,000		30.0%	51.1%	18.9%			\$226,800	\$385,960	\$143,240		
52 Change in Fund Balance & Transfers	(\$484,000)	4.7%	49.6%	36.6%	9.1%		(\$22,945)	(\$239,917)	(\$176,910)	(\$44,228)		
53 Non-Rate Revenue	(\$87,000)		100.0%					(\$87,000)				
54 Temporary Meters	(\$13,500)		100.0%					(\$13,500)				
55 Hydraulic Zone Charge	(\$90,600)			80.0%	20.0%				(\$72,500)	(\$18,100)		
56 Outside Surcharge	(\$19,600)		100.0%					(\$19,600)				
57 Private Fire Service Charge	(\$2,400)		100.0%					(\$2,400)				
58 Totals:	\$914,900						Totals (rounded):	\$5,200	\$228,400	\$472,700	\$179,400	\$29,300

<sup>1</sup> Water supply associated with the Coast Guard wells, Gallagher Well #1 and half of Gallagher Well #2

<sup>2</sup> Water supply associated with the other half of Gallagher Well #2

## Schedule 6 – Proposed Rates for FY 2021/22 through FY 2025/26

	Effective Date				
	July 1, 2021	July 1, 2022	July 1, 2023	July 1, 2024	July 1, 2025
<b>Residential Quantity Charges (\$/TGAL)</b>					
Tier 1 <sup>1</sup>	\$8.88	\$9.41	\$9.97	\$10.57	\$11.20
Tier 2 <sup>2</sup>	\$12.91	\$13.68	\$14.50	\$15.37	\$16.29
Tier 3	\$18.33	\$19.43	\$20.60	\$21.84	\$23.15
<b>Commercial Quantity Charges (\$/TGAL)</b>					
Winter (Oct. to June)	\$8.88	\$9.41	\$9.97	\$10.57	\$11.20
Summer (July to Sept.)	\$18.33	\$19.43	\$20.60	\$21.84	\$23.15
<b>Hydraulic Zone Charge (\$/TGAL)</b>					
Zone 3	\$1.10	\$1.17	\$1.24	\$1.31	\$1.39
Zone 2	\$2.19	\$2.32	\$2.46	\$2.61	\$2.77
Zone 4	\$6.16	\$6.53	\$6.92	\$7.34	\$7.78
<b>Other Quantity Charges (\$/TGAL)</b>					
Temporary Meter	\$15.10	\$16.01	\$16.97	\$17.99	\$19.07
<b>Service Charges (bi-monthly fixed charge based on meter size)</b>					
5/8"	\$42.59	\$45.15	\$47.86	\$50.73	\$53.77
1" Fire <sup>3</sup>	\$42.59	\$45.15	\$47.86	\$50.73	\$53.77
PRE 5/8" & 1"	\$42.59	\$45.15	\$47.86	\$50.73	\$53.77
1"	\$104.80	\$111.09	\$117.76	\$124.83	\$132.32
1 1/2"	\$208.47	\$220.98	\$234.24	\$248.29	\$263.19
2"	\$332.88	\$352.85	\$374.02	\$396.46	\$420.25
3"	\$664.64	\$704.52	\$746.79	\$791.60	\$839.10
4"	\$1,037.87	\$1,100.14	\$1,166.15	\$1,236.12	\$1,310.29

<sup>1</sup> Allocation is 250 gpd per dwelling unit

<sup>2</sup> Allocation is 350 gpd per dwelling unit

<sup>3</sup> Only for 1" residential meters that are upsized due to fire code requirements