2022 Water and Wastewater Rate Study

Final

March 31, 2022

HILDEBRAND CONSULTING

March 31, 2022

Terry Crowley, PE., Utility Director
City of Healdsburg
401 Grove St.
Healdsburg, CA 95448

Re: 2021 Water and Wastewater Rate Study

Dear Mr. Crowley,

Hildebrand Consulting is pleased to present this 2022 Water and Wastewater Rate Study (Study) for the City of Healdsburg (City). We appreciate the assistance provided by you and all of the members of the City staff who participated in the Study, as well as the input and guidance provided by the City Council.

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

mhildebrand@hildco.com
(510) 316-0621

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

Sincerely,

Mark Hildebrand
Hildebrand Consulting, LLC

Enclosure

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ADU	accessory dwelling unit
AF	acre-feet (measure of water volume)
AWWA	American Water Works Association
BOD	biochemical oxygen demand (BOD)
HCF	hundreds (centum) of cubic feet (measure of water volume)
CIP	capital improvement program
COS	cost of service
CSA	County Service Area
DCR	debt service coverage ratio
DU	dwelling unit
ESFD	equivalent single-family dwellings
FY	fiscal year (which ends on June 30 for the City)
HOA	homeowner association
O&M	operations and maintenance
PayGo	“pay as you go” (i.e., cash financing for capital projects)
SWRCB	California State Water Resources Control Board
SSA	seasonal sewer average
TSS	total suspended solids
UWMP	Urban Water Management Plan
WWTF	Wastewater Treatment, Reclamation and Disposal Facility

Section 1. INTRODUCTION

Hildebrand Consulting, LLC has been retained by City of Healdsburg (City) to develop five-year financial plans and to update user rates for the City's water and sewer utilities. The purpose of this Study is to ensure that each utility is meeting financial obligations for ongoing operation and maintenance, debt service, and capital improvements while maintaining prudent financial reserves. The last comprehensive rate study was completed in 2016 (*Water and Wastewater Financial Plans and Rate Study, March 9, 2016, The Reed Group, Inc.*), and the most recent adjustments to the level of water rates occurred in July 2020 (a 3% increase), while the wastewater rates have not been adjusted since July 2016 (a 2% decrease).

This report describes in detail the assumptions, procedures, and results of the Study, including conclusions and recommendations.

1.1 UTILITY BACKGROUND

The City of Healdsburg is located in the County of Sonoma (County), approximately 12 miles north of the City of Santa Rosa. Healdsburg is within the nine-county San Francisco Bay Region. The location of Healdsburg in California is shown in Figure 3-1. The City of Healdsburg is located in an inland valley between Highway 101 and the Russian River, which flows southward to the east of the City and crosses through the southern portion of the City in a westerly direction. The City's water service area is approximately four square miles, roughly equivalent to the City Limit. The potable water distribution system contains three pressure zones that are served by six storage reservoirs. Figure 1, taken from the City's 2015 Urban Water Management Plan (UWMP) shows the City Limit, sphere of influence, and water distribution areas, which includes County Service Area #41 (previously #24). Since the mid-1990s, the City has sold wholesale water to Sonoma County under the County's operation of the Fitch Mountain CSA #41, which is a small water system located outside of the City's limits.

The wastewater collection system consists of a network of underground pipelines that collect and convey raw wastewater from individual user connections to the City's tertiary level wastewater treatment plant, known as the City of Healdsburg's Wastewater Treatment, Reclamation and Disposal Facility (WWTF). The WWTF treats all of the City's wastewater to Title 22 recycled water standards. The WWTF discharges the treated effluent year-round to a former gravel extraction pit (Basalt Pond) for percolation into the underlying groundwater basin, which is hydrologically connected to the Russian River.

The Healdsburg City Council is the governing entity of the City. The Council consists of five council members that serve four-year terms and appoint a Mayor once per year. The Council sets policy and adopts a budget for the City bi-annually.

Historically, the City's economy was supported by agriculture and logging. In more recent years, the City has experienced an increase in urban development and a diversification of the local economy with tourism as a growing element of the economy.

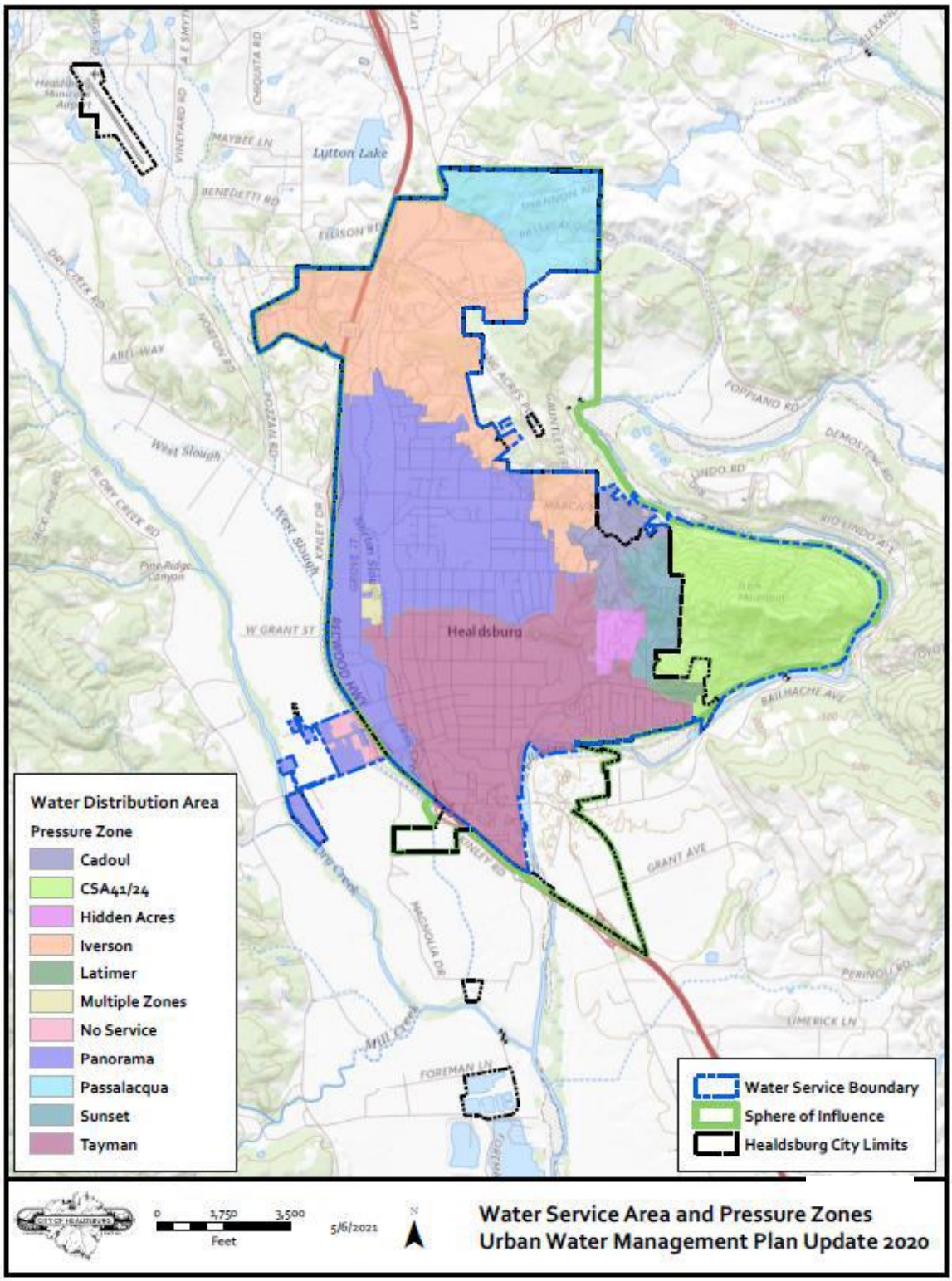


Figure 1: City Service Area as shown in 2020 UWMP Update

1.2 SCOPE & OBJECTIVES OF STUDY

The scope of this Study is to prepare multi-year financial plans for the water and wastewater enterprises, review and update the water and wastewater rate structures, propose 5-year rate schedules, and recommend financial strategies for addressing water shortage events.

The primary objectives of this Study are to:

i. Develop multi-year water and wastewater financial plans that integrate operational and capital project funding needs with a funding strategy.

ii. Identify future annual adjustments to water and wastewater rates to help ensure adequate revenues to meet each utility's ongoing financial obligations.

iii. Update the cost of providing water and wastewater services using industry-accepted methodologies.

iv. Recommend specific updates to the City's existing rate structures in order to ensure that the City is equitably recovering the cost of service and comporting with industry standards[1] and California's legal requirements.

v. Recommend water shortage financial strategy, including Water Shortage Surcharges to be overlaid on then-current water usage rates during water shortage events, as declared by the City.

1.3 STUDY METHODOLOGY

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

[1] As promulgated the American Water Work Association (AWWA) M1 Manual: Principles of Water Rates, Fees and Charges: Manual of Water Supply Practices M1, (7th edition), which documents many of the standards used by professionals in the utility rate-setting industry.

The Study began with a review of both utility enterprises' current financial dynamics and latest available data for the utilities' operations. Multi-year financial management plans were 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 MS Excel©-based financial planning models which were customized to reflect financial dynamics and latest available data for the City'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 2023 (FY 2022/23[2]) 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 the AWWA, legal requirements (i.e., Proposition 218) and other generally accepted industry practices to develop rates that reflect the cost of providing service.

1.4 PROCESS

Over the course of numerous meetings, Hildebrand Consulting collaborated with City Staff to develop the recommendations in this Study. The project team also met with City Council to review the proposed financial plans and proposed updates to the rate structures. The Study was first developed and presented to City Council in early 2021 but no action was proposed. The Study was then updated in 2022 and presentations were made to the Healdsburg City Council on March 21st and April 18th, 2022, in advance of the Public Hearing which is scheduled to take place June 21st, 2022.

The rate setting process was further guided by three primary considerations:

[2] Fiscal years are sometimes indicated by their ending years. For example, FY 2022/23, starts on July 1, 2022 and ends on June 30, 2023, can also be expressed as FY 2023.

Legal Requirements – California Constitution and relevant case law requires that water rates not exceed the cost of providing service and rates must reflect the proportionate share of costs attributable to each parcel.

Rate Setting Objectives – The following objectives guided the financial plan and rate structure updates:

- **Financial sufficiency and sustainability** – Water and wastewater rates should generate sufficient revenues to meet each utility's service and financial obligations including covering operating and maintenance costs, meeting debt service obligations, and rehabilitating and upgrading the respective systems to provide high quality utility services to customers.
- **Legal compliance** - Utility rates should meet legal requirements to not exceed the cost of service and proportionately allocate costs to customers.
- **Fiduciary Responsibility** – The City seeks to minimize rate increases and avoid debt when possible.
- **Rate Structure** - Utility rates should strike an appropriate balance between fixed and usage-based charges, with consideration of:
    - Revenue stability
    - Cost-based affordability for basic usage
    - Customer bill impacts of rate structure changes
    - Simplicity

1.5 REPORT ORGANIZATION

This report contains two major sections: Section 2 is the water rate study and Section 3 is the wastewater rate study. By design there is considerable redundancy in the language between these Sections 2 and Section 3; they are meant to stand-alone so as to avoid the need to cross-reference between them.

Section 2. WATER RATE STUDY

The following subsections include the Water Utility's financial plan, cost of service, rate design, proposed rates schedule, and water shortage strategy (including rate surcharges). This section also contains an update to the special charges for the Passalacqua development.

2.1 WATER UTILITY FINANCIAL PLAN

This section presents the Water Utility's 10-year Financial Plan, including a description of the source data, assumptions, and the City's financial policies. The City provided historical and budgeted financial information, including historical and budgeted operating costs, a multi-year capital improvement program (CIP), and outstanding debt service obligations. City 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 Water Utility 10-year Financial Plan was developed through several interactive work sessions with City staff. As a result of this process, the Study has produced a Water Utility Financial Plan that will enable the City to meet its future revenue requirements and achieve financial performance objectives throughout the projection period while striving to limit rate increases.

The analysis identifies a revenue shortfall in upcoming years as a result of an increase in capital spending and expense inflation, which leads to a conclusion that rate revenue adjustments are required for the Water Utility**.** The schedules attached to this report include detailed data supporting the Water Utility Financial Plan discussed herein.

The Water Utility Financial Plan reflects assumptions and estimates believed reasonable at the present time. However, conditions change. It is recommended that the City review the financial condition of the Water Utility and reaffirm annual rate adjustments

as part of the annual budget process, as well as perform a more comprehensive financial plan and water rate update every 5 years or as conditions dictate.

2.2 WATER UTILITY BEGINNING FUND BALANCES

The ending cash balance for FY 2020/21 was used to establish the FY 2021/22 beginning balance, as outlined in **Table 1**. It should be noted that the amount of cash that the Water Utility keeps in reserves is a product of its reserve policies (see Section 2.10).

Table 1: Water Utility FY 2021/22 Beginning Cash Balance (rounded)

Fund 520 (Water Operations)	$2,196,000
Fund 522 (Water Capital Reserve)	$979,000
Total Unrestricted:	$3,175,000
Fund 920 (Restricted Water Capacity Charges)	$1,400,000
Total Reserves:	**$4,575,000**

2.3 CUSTOMER GROWTH

In recent years, the City has collected an average of approximately $176 thousand per year in Development Capacity Charges[3] revenue from new customers connecting to the system, which equates to a growth rate of approximately 0.59% per year. This Study assumes that this growth trend, and the associated Development Capacity Charges revenue, will continue for the duration of the next 10 years.

2.4 WATER UTILITY RATE REVENUE

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

[3] Development Capacity Charges are one-time charges to new development to pay for capacity in the utility systems.

based on dwelling units or meter sizes) and a water "Usage Rate" (applied to each hundred cubic feet[4] ("HCF") of water use). Customers receive a monthly bill.

The Water Utility Financial Plan projects that FY 2021/22 rate revenue will be approximately $1.0 million less than the budgeted $6.237 million due to significant reductions in water usage during calendar year 2021 (encouraged largely by City programs). FY 2022/23 water usage is projected to be greater than FY 2020/21 levels, but still 10 percent less than FY 2020/21 water usage (which is characterized as a "normal" year of water usage for purposes of this Study). Per capita water demand is projected to further recover by another 5 percent in FY 2023/24 while water demand driven by customer growth is projected to continue as described in Section 2.3. Budgeted and projected rate revenues (including proposed rate adjustments) are listed in the first table in **Schedule W-3**.

2.5 WATER UTILITY NON-RATE REVENUES

In addition to rate revenue, the City receives additional "non-rate revenue" from sources such as miscellaneous service fees (operating revenue), Development Capacity Charges, grants, and interest revenue on investments. Projections of all non-rate revenues were based on FY 2021/22 budgeted revenues with the exception of interest income which was calculated annually based upon projected fund balances and assumed interest rate of 2.01%, which is consistent with the City's historical interest earnings relative to its total reserve levels. Budgeted water rate and non-rate revenues are depicted in Figure 2 below and listed in detail in the first table in **Schedule W-3**.

[4] One HCF is equal to 748 gallons

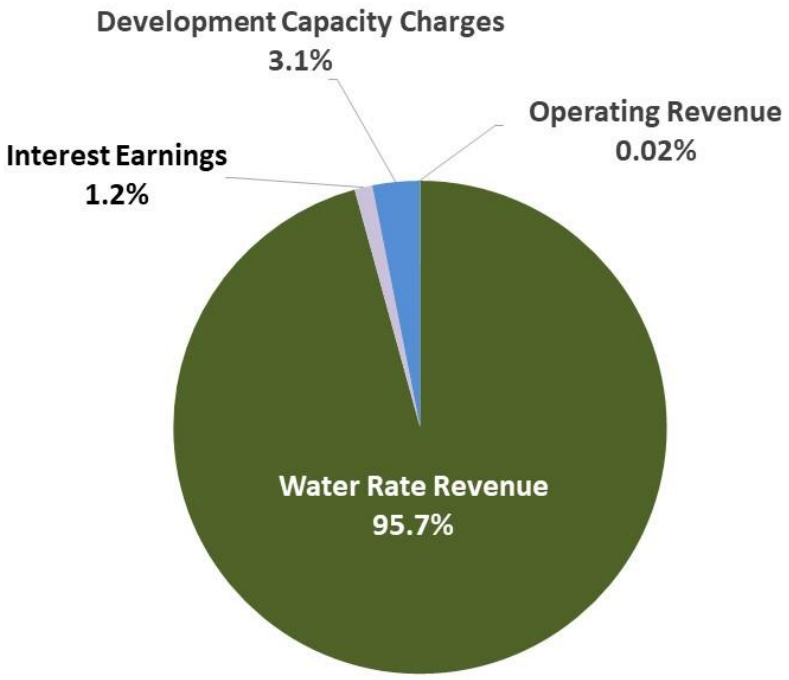


Figure 2: Budgeted Water Utility Revenue Categories (FY 2021/22)

2.6 WATER UTILITY OPERATING AND DEBT EXPENSES

The Water Utility's expenses include operating and maintenance expenses, debt service, and capital spending. Capital spending is addressed separately in Section 2.9. Future operating and maintenance expenses were projected based upon the budgeted expenditures from FY 2021/22 and adjusted for inflation (see Section 2.8).

Major budgeted expense categories for FY 2020/21 are depicted in **Figure 3**. Budgeted and projected operating and maintenance costs as well as debt service expenses are listed in detail in **Schedule W-1**.

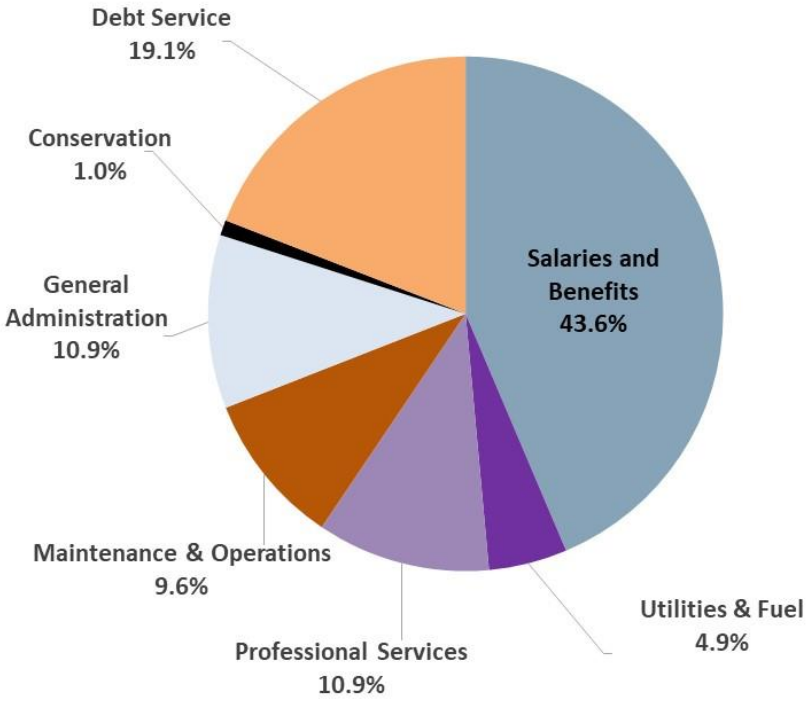


Figure 3: Water Utility Operating & Debt Expenses (FY 2021/22)

The water utility currently pays about $1,057,000 annually on debt service related to a CSCDA 2005D Refunding of 2000B Revenue Bonds (water portion of annual payments of approximately $205,000 and will be retired in FY 2030/31), a 2014 Water Revenue Refunding Bond (annual payments of approximately $740,000 and will be retired in FY 2032/33), and a 2012 Taxable Pension Obligation Bond (annual payments of approximately $112,000 and will be retired in FY 2022/23).

While a general increase in capital spending is forecasted, this Water Utility Financial Plan does not propose any new debt issues during the planning period (see Section 2.9).

2.7 DEBT SERVICE COVERAGE

One of the requirements associated with bond financing is to maintain rates and other water system revenues at levels sufficient to meet debt service coverage requirements. At present, the City is required to maintain water system revenues at a level that covers

all ongoing operating and maintenance costs, as well as 1.20 times annual debt service. Based on recently published guidance from Fitch Ratings[5], utility systems with *midrange* financial profiles should maintain a debt coverage ratio (DCR) greater than 1.50 times annual debt service. The Water Utility currently has a DCR of approximately 1.6 (see Schedule W-3, Row 29) and, with the proposed rate adjustments, is expected to maintain a healthy DCR through-out the planning period. Having a high DCR value does not indicate excessive revenue but is rather an indication that the Water Utility is not overly-reliant on debt.

2.8 COST ESCALATION

Annual cost escalation factors for the various types of expenses were developed based upon a review of historical inflation trends, published inflation forecasts, industry experience, and discussions with City staff. During the projection period, all expenses are projected to increase at 4.0 percent per year through FY 2023/24 and 3.0 percent thereafter.

2.9 WATER UTILITY CAPITAL IMPROVEMENT PROGRAM

Figure 4 shows that from FY 2016/17 to FY 2019/20 the City invested modestly in capital projects to rehabilitate or improve the water system. More recently the City has increased its annual capital spending in order to pro-actively address the water system's rehabilitation needs associated with aging wells, treatment facilities, pipes, pump stations, water tanks, and other system facilities. The proposed capital expenditures from FY 2022/23 through FY 2024/25 is significantly lower than first planned by the City's engineering department. The capital expenditures were reduced as part of this Study to include only critical projects in order to avoid a spike in near-term water rates. A detailed list of the planned capital projects through FY 2024/25, as well as a list of some deferred projects, is provided in **Schedule W-2**. The actual projects

[5] As published on July 31, 2013.

that are built during those years may change based on system priorities. A certain number of projects from the City's original capital program will need to be deferred which will create a backlog of capital spending needs. In order to address the backlog of capital projects, the capital spending levels beyond FY 2026/27 is assumed to be $2.16 million (in 2022 dollars).

This financial plan is proposing that all capital spending be funded on a "pay as you go" (PayGo) basis as opposed to using a debt strategy. This decision is based on the fact that debt is typically used to address anomalous spikes in capital spending. There is not sufficient time to issue debt for the immediate spike in capital spending, and the long-term increase in capital spending isn't a "spike" in spending but rather a sustained increase to a "new normal" level of annual re-investment in the water system's aging infrastructure.

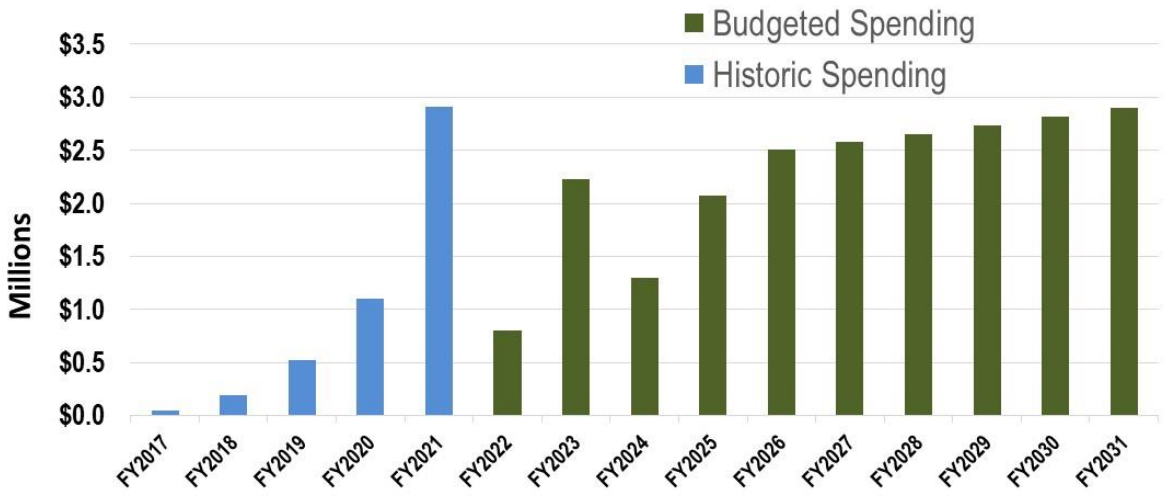


Figure 4: Water Utility Historic and projected capital spending

2.10 WATER UTILITY FUNDS

The financial plan model is based on the fund, reserve, and account structures currently used by the City. These structures include recent modifications to improve efficient

funding of the capital improvement program. Figure 5 is a schematic diagram of the funds/reserves and major cash flows associated with the financial plan model.

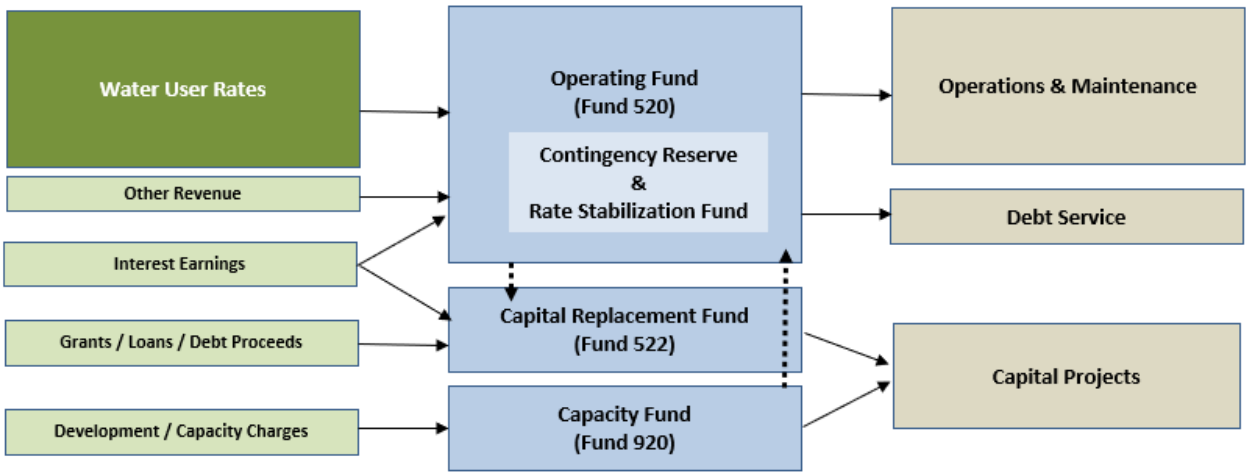


Figure 5: Water Utility Cash Flow Schematic Diagram

The fund / reserve structure is comprised of:

Operating Fund – The Water Operating Fund (Fund 520) is the primary fund within the Water Utility. Most revenue, including rate revenues, flow into the Operating Fund and all operating and maintenance costs, including debt service payments, are paid out of this fund. Funds are also transferred from the Operating Fund to the Capital Replacement Reserve to provide funds for capital projects intended to rehabilitate and upgrade facilities. While not necessarily a roadmap for future City decisions on transfers, this financial plan shows annual transfers from the Operating Fund to the Capital Replacement Reserve sufficient to meet the capital improvement for each year in the planning period.

Capital Replacement Fund – The Capital Replacement Fund (Fund 522) is intended to serve as a mechanism for funding rehabilitation, replacement, and upgrade projects contained in the capital improvement program. The reserve is funded with annual transfers of rate revenue from the Operating Fund (see the second table in Schedule W-

3). Funds are then used for capital project expenditures. By establishing regular transfers from the Operating Fund, the City is able to fund capital projects in a manner that facilitates rate stability and/or modest annual rate adjustments. This reserve also helps to establish and maintain steady funding of the ongoing replacement and rehabilitation efforts of the utility system, which many utilities neglect as part of the financial obligations of long-term sustainability of service.

Water Capacity Fund – The Water Capacity Fund (Fund 920) is used to account for revenues from water system Development Capacity Charges. The City's Development Capacity Charges are based on a system buy-in methodology. As such, capacity fee revenues reimburse the utilities for prior investment in water system capacity including debt service payments in order to help the City meet its DCR obligations. The financial plan model use available Development Capacity Charge revenues to help pay for capacity-related, planned capital improvement projects but does not foresee the need to supplement debt service payments.

2.11 CASH RESERVE POLICIES

Cash reserve policies are cash balances targets that are retained for specific cash flow needs. The target for reserves is an important component when developing a multi-year Water Utility Financial Plan and maintaining prudent reserves is an essential component of any sound financial management strategy. 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 target levels of the policies below are consistent with: 1) the City's established policies and practices; 2) the findings of reserve studies conducted by the AWWA; 3) 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, 4) Hildebrand Consulting and The Reed Group's industry experience for similar systems.

The following recommended reserve policies are based on the policies that were recommended in the 2016 rate study with some minor modifications. The policy recommendations are intended to help the City mitigate and manage financial risk while meeting service and financial obligations.

Contingency Reserve – The City currently has a policy goal (Resolution No. 139-2000) to maintain Contingency Reserves within the Operating Fund equal to 25 percent of annual rate revenue (or about $1.56 million). The purpose of the Contingency Reserve is to provide working capital and funds for unplanned operating and maintenance expenditures or revenue shortfalls resulting from reduced water sales. The balance in the Operating Fund is currently meeting the target Contingency Reserve.

Debt Service Reserve (restricted) – The Water utility also includes a Debt Service Reserve within the Water Operating Fund. The Debt Service Reserve is a restricted reserve required by some debt agreements as security against debt repayment obligations and is not available for general operating purposes. The Water Utility's only outstanding debt that requires a debt service reserve is the CSCDA 2005D bond (for a reserve level of about $205,000).

Capital Replacement Reserve – A capital replacement reserve serves the dual purpose of (1) supporting the City's PayGo strategy by absorbing some of the inherent fluctuations in annual capital spending and (2) serves as safety net in the event of the catastrophic failure of a major system asset (such as a pump station or a major water main). While the City does not currently maintain a targeted reserve in the Capital Replacement Fund, this financial plan proposes to establish the practice of working towards a target balance of $1.0 million during the planning period. In the future the City may wish to formalize the practice with a more detailed analysis of the appropriate target levels.

2.12 PROPOSED RATE REVENUE INCREASES

All of the above information was entered into a financial planning model to produce a 10-year projection of the sufficiency of current rate revenues to meet projected financial

requirements and determine the level of rate revenue increases necessary in each year of the projection period.

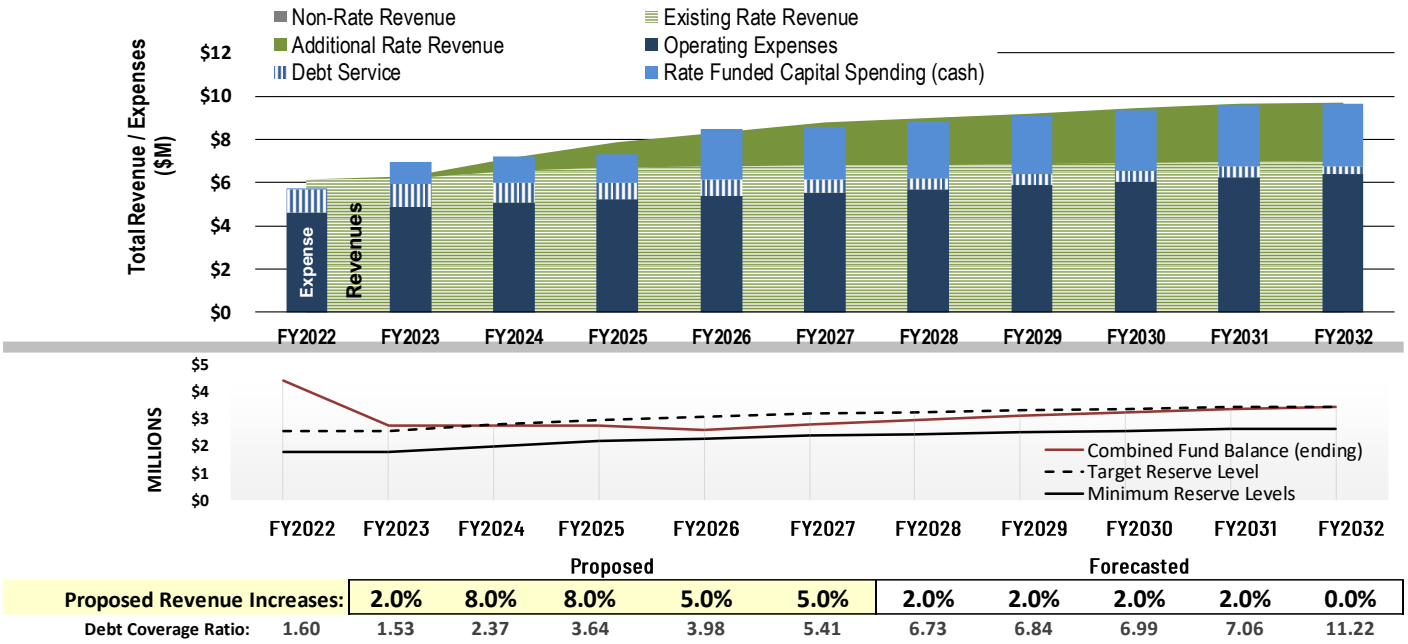
Based upon the previously discussed financial data, assumptions, policies, and PayGo strategy, this Study proposes a 5-year schedule of annual rate adjustments as shown in Table 2.

Table 2: Recommended Water Rate Revenue Increase

Rate Adjustment Date	Proposed Rate Revenue Increase
July 1, 2022	2.0%
July 1, 2023	8.0%
July 1, 2024	8.0%
July 1, 2025	5.0%
July 1, 2026	5.0%

It is important to note that water rates in the first year (FY 2022/23) will be modified based on the findings of the cost-of-service analysis (see Section 2.13), meaning that the percent change to individual customer bills may differ significantly from the percent change in rate revenue received by the City. This dynamic is principally driven by the recent reduction in water usage by customers, which requires rates to be increased to compensate.

The numbers provided in the first table in **Schedule W-3** (cash flow proforma for the operating fund) are summarized graphically in Figure 6, which shows the Operating Fund target reserves and DCR target levels being met at all times.



		Proposed					Forecasted				
Proposed Revenue Increases:		2.0%	8.0%	8.0%	5.0%	5.0%	2.0%	2.0%	2.0%	2.0%	0.0%
Debt Coverage Ratio:	1.60	1.53	2.37	3.64	3.98	5.41	6.73	6.84	6.99	7.06	11.22

Figure 6: Water Utility Financial Projection with Recommended Rate Increases

Schedule W-3 shows the cash flow with each of the Water Utility's fund and the projected transfers between the Operating Fund, the Capital Replacement Fund and the Capacity Fund.

The forecasted rate increases after FY 2026/27 in Figure 6 are estimates based on long-term projections. The City will need to renew the rate analysis for those years once the time period comes closer.

2.13 WATER COST OF SERVICE & RATE STRUCTURE

The cost-of-service (COS) analysis evaluates the cost of providing water and allocates those costs to rate structure components to ensure the proposed rates are aligned with the costs to provide service. The COS analysis is performed 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 2022/23. The complete schedule of proposed rates for FY 2022/23 through FY 2026/27 is detailed in **Schedule W-4**.

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 water system costs
- Meet other rate setting objectives, as described in Section 1.4

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

2.13.1 Current Water Rates

The structure for the City's current water rates follow a common industry practice with a two-part structure that is comprised of a fixed Service Charge and consumption-based Usage Charge. The Service Charge is scaled for residential accounts based on the number of dwelling units (DU) and for non-residential accounts based on the size of the meter. The current Service Charge schedule (which is assessed monthly) is summarized in Table 3.

Table 3: Current Fixed Monthly Service Charges

Water Usage Rates ($/HCF)	
All Potable Water Use	$5.51
Riverview HOA (non-potable)	$1.44
Fixed Monthly Service Charges	
Single Family	$23.19
Single Family + ADU (per DU)	$23.19
Multi-Family (per DU)	$16.13
Non-Residential	
Up to 1" Meter	$37.09
1 1/2" Meter	$71.54
2" Meter	$113.07
3" Meter	$210.02
4" Meter	$348.47
10" Meter	$1,593.91

The Usage Charge is assessed based on actual water usage (measured in hundreds of cubic feet or "HCF," which is equal to 748 gallons). The Usage Charge is a flat (or "uniform") rate as shown in Table 3.

- *Riverview Homeowners Association (HOA)* - As an exception to the standard rates, the City has an agreement with the Riverview HOA based on an Order of Condemnation (1997). The agreement gives the City a land easement to access water supply wells while providing the Riverview HOA with treated water at a rate (at the time) of $0.33 per HCF, which can only be increased by general rate revenue increases imposed by the City (in this case, 2 percent in FY 2022/23). The current water usage rate for Riverview HOA is $1.44 per HCF.
- *Hydrant Water Sales* – The City provides water through fire hydrants for construction, dust control, or other purposes. The current rate is $11.02 / HCF. It is recommended that the City continue to maintain a rate for hydrant water sales equal to two times the uniform water rate for water service. This would be a rate of $12.00 / HCF for FY 2022/23. Deposits and connection fees may also apply, as determined by the City. The higher rate is intended to reflect the extra administrative cost associated with this type of service.

- *County Service Area (CSA) 41* - The City also has a 1992 agreement with Sonoma County (CSA 41, previously CSA 24) which obliges the City "*To sell COUNTY water at a mutually agreed rate for other utilities. Such rate may be adjusted from time to time in a nondiscriminatory manner. Rates shall be based upon a periodic proportion division of costs isolating such activities not provided to the County, including but not limited to storage, local distribution, and service maintenance including associated depreciation and debt service.*" City staff is currently working to update the water rates applicable to CSA 41, and these rates were not addressed by this report.

2.13.2 Customer Statistics

Water rate calculations are based on a number of factors related to the City's customer base. Factors include the number of customers, customer classes, meter size, and actual water usage. In FY 2020/21 the City provided water service through 4,556 water service connections (customer accounts). Single-family customers comprise about 83 percent of the customer accounts and about 59 percent of annual water usage. Multi-family customer accounts make up about 2 percent of the customer accounts and 7 percent of annual water usage. Commercial customer accounts make up about 11 percent of the customers and 19 percent of annual water usage. Irrigation customer accounts make up about 4 percent of the customers and about 14 percent of the water usage.

While there are extremes on both the low and high ends, average monthly single-family water usage is about 10 HCF (about 251 gallons per day). Water usage for condominium units and multi-family dwellings is lower than for single-family residences for a variety of reasons including fewer people per household and limited landscape irrigation (or irrigation that is separately metered). Non-residential water usage can vary dramatically, and non-residential customers are served by meters of varying sizes to accommodate the differences in water demands.

2.13.3 Meter Equivalencies

Service connections with different meter sizes can place different demands on the water system. For example, much more water can be delivered through a 4" water meter than through a 1" meter. The current rate structure is based on hydraulic capacity factors which relate to the potential demands on the water system from customers with different sized water meters. These factors are used to determine the number of equivalent meters represented by the total customer base with variable meter sizes. Table 4 presents the rated flow capacity of various meter sizes and how these are used to develop hydraulic capacity factors. For purposes of rate analysis, a 1" meter is assigned a hydraulic capacity factor of 1.0. The ratios of rated flow capacities of the various meter sizes compared to the capacity of a ¾" meter are used to determine the capacity factors for other meter sizes. This capacity relationship across meter sizes is used to allocate capacity-related fixed costs to various customers. This is also a common rate-setting practice used in the water industry.

The same concept is used for allocating costs among residential accounts. The water demands of single-family residential accounts are established as the baseline with hydraulic capacity factor of 1.0, which makes each single family home dwelling unit equivalent to a ¾" meter. The hydraulic capacity factor for a multifamily dwelling unit (DU) is inferred based on the City's historical water usage data which shows that the average multifamily dwelling unit uses about 54% as much water as the average single family dwelling unit. As such, the hydraulic capacity factor for a multifamily DU is set at 0.536 (see Table 4). Similarly, the hydraulic capacity factor for single-family accounts with accessory dwelling units (ADUs) was measured to be 0.729 per DU.

Table 4: Rated Flow Capacity by Meter Size

Meter Size	Rate Flow Capacity (gpm)[1]	Hydraulic Capacity Factor
Single Family	30.0	1.00
Single Family with ADU (per DU)	(na)	0.729
Multi-family (per DU)	(na)	0.536
1"	50	1.667
1 1/2"	100	3.333
2"	160	5.333
3"	300	10.00
4"	500	16.667
6"	1350	45.00
8"	1800	60.00
10"	2400	80.00
12"	3375	112.50

[1] AWWA M1 Manual 7th Edition, Table B-2

Table 5 summarizes customer account and water usage data used in water rate calculations for FY 2022/23. Account information is based on the utility billing data from FY 2019/20; however water usage was reduced by 10% to account for recent water usage trends.

Table 5: Summary of Water Service Connections and Water Usage

	Residential Dwelling Units	Non-Residential Meter Size					Total Accounts	Annual Water Use (HCF)
		1"	1.5"	2"	3"	4"		
Single Family Residential	3,794						3,794	394,000
Single Family with ADU	280						140	21,200
Multi-Family Residential	938						87	52,200
Non-Residential		368	33	77	10	5	493	139,500
Irrigation		109	30	44	3	3	189	96,900
Riverview HOA				4			4	8,500
Totals:	**5,012**	**477**	**63**	**125**	**13**	**8**	**4,707**	**712,300**
No. of 1" Equiv. Meters:	4,501	795	210	667	130	133	**6,436**	
Operating Capacity (gpm) [1]:	30	50	100	160	300	500		
Hydraulic Capacity Factor:	1.0 [2]	1.67	3.33	5.33	10.00	16.67		

[1] Source: C701-12 Singlejet Type for meters 1" to 4" and C704-15 Propeller Type for meters 6" and larger, M1, Table B-2, Seventh Edition

[2] All single family homes are given a factor of 1.0 while multifamily DU are assigned a value of 0.54 based on the relationship of average single family demand to multi-family demand per DU. Single family accounts with ADUs are given a factor of 0.73 per dwelling unit.

2.13.4 Water Rate Calculations

There were two primary steps in calculating the proposed water rates. These are:

- Determine annual water rate revenue requirements
- Analyze the cost of providing service and proportionately allocate costs to be recovered from customers either through the Service Charge or the Usage Charge.

2.13.4.1 WATER RATE REVENUE REQUIREMENTS

The ten-year Water Utility Financial Plan was used to identify the water rate revenue required to meet financial obligations for each fiscal year of the planning period. The water rate calculations presented herein are based on the revenue to be generated in FY 2023 and reflects the proposed 2 percent overall rate revenue increase to be incorporated in the Water Utility's Financial Plan.

2.13.4.2 WATER COST-OF-SERVICE ANALYSIS

Once the annual water rate revenue requirement was determined using the financial planning model, the next step in the rate-setting process was to allocate costs to be recovered through the various rate elements. Water rate calculations contained herein are intended to generate water rate revenue equal to the revenue requirement from the water customers. The manner in which each customer is responsible for the water utility's costs is the determining factor in the cost-of-service analysis.

The cost allocation approach presented by this Study is consistent with the methodology that was used in the 2016 rate study. Used herein the methodology is commensurate with the available data and the requirement to fairly and reasonably reflect the cost difference to provide services to different types of customers.

The cost allocation methodology begins by assigning all costs to one of three revenue recovery categories (see Table 6). The cost allocation process is performed with data available in the City's detailed budget and other documents. The three revenue recovery categories include:

- Customer charges are a fixed revenue that are used to recover fixed costs such as meter reading and billing that tend to vary as a function of the number of customers being served. Customer charges are assessed to each customer account equally (regardless of size). Table 6 shows that a portion of employee salaries and general administration costs are designated to be recovered through this charge.

- Meter charges are also a fixed revenue and are used to recover some of the fixed costs associated with the capacity of the water system and the ability to serve the demands of active customers. These fixed costs include some of the costs associated with the capital program, debt service, maintenance, and certain fixed operating costs (see Table 6).

  The sizing of the water system is based on the potential demand that each customer could place on the water system. Customers that have the potential to place a greater burden on the capacity of the water system (based on the size of their meter or number of dwelling units) should bear a greater share of these costs. Meter sizes and number of dwelling units reflect the potential demand that customers could place on the water system at any given time and are general indicators of each customer's capacity requirement. A customer with a large meter size (or numerous dwelling units) will be assigned a larger share of fixed capacity-related costs compared to a customer with a smaller meter (or fewer dwelling units) based on the ratios summarized in Table 4.

- Usage charges are intended to recover all variable costs that vary in response to the amount of actual water use and some fixed costs that are reasonably allocated on the basis of water use. Utilities and fuel is an example of variable costs that are recovered through the usage charges (see Table 6). Even though some of the costs that are allocated to the usage category are fixed, rather than variable, the costs are tied to the utility's long-term water demands. As such, it is reasonable to allocate a portion of fixed costs to customers on the basis of usage, rather than the capacity relationship expressed by meter size and hydraulic.

Table 6 summarizes how the FY 2023 revenue requirement of $6,253,000 is comprised of operating and maintenance costs, debt service obligations, and cash-funded capital spending (as derived from the FY 2021/22 operating budget, current debt repayment schedules, and the 10-year capital spending budget, respectively), along with (offsetting) budgeted non-rate revenues and the application of available reserves. It also illustrates how the budget categories that make up the revenue requirement are each assigned to one or more of the three (previously described) revenue recovery categories. The variable costs are assigned entirely to the usage charge category, while variable costs are generally recovered 30:70 from the meter charge and usage charge, respectively (with some exceptions). These are reasonable allocations to the different revenue recovery categories and ensure that water ratepayers will pay for the cost of service, both through their fixed charges and their usage charges.

Row 12 represents the use of reserves (treated as a source of funds and therefore a credit in this table) and the allocation percentages are calculated based on the indirect allocation method (the overall allocation of costs from Row 1 through Row 8).

Once all costs have been allocated, the total for each revenue recovery category is divided by the respective number of service units to arrive at a unit cost for each charge. For example, the costs to be recovered through the customer charges are divided by the total number of dwelling units / non-residential accounts. As shown in Table 6, those costs amount to $190,000, which are divided by the 4,708 accounts, for a unit cost of $3.36 per account. Similarly, the total cost allocated to the meter charge category is divided by the total equivalent meters in the system (6,436). The total cost allocated to the usage charge category is divided by the estimated annual units of water sales (712,300 HCF).

The allocations result in 3.0 percent of costs assigned to the customer charge component, 28.6 percent to the meter charge component, and 68.4 percent to the usage charge component. These percentages are similar but not identical to those developed in the 2016 water rate study. Changes to the results are a natural by-product of changes to the Water Utility's cost profile (such as the increase in capital spending).

Table 6: FY 2022/23 Calculation of Unit Costs

	Budget Expense	Test Year Budget	Revenue Recovery Categories					
			Customer	Meter	Usage	Customer	Meter	Usage
	Operating Expenses							
1	Salaries and Benefits	$2,626,000	5%	30%	65%	$131,300	$787,800	$1,706,900
2	Utilities & Fuel	$291,000			100%			$291,000
3	Professional Services	$383,000		30%	70%		$114,900	$268,100
4	Maintenance & Operations	$820,000		30%	70%		$246,000	$574,000
5	General Administration	$718,000	15%	15%	70%	$107,700	$107,700	$502,600
6	Conservation	$31,000			100%			$31,000
	Capital							
7	Existing Debt	$1,063,000		30%	70%		$318,900	$744,100
8	Cash Capital	$2,230,000		30%	70%		$669,000	$1,561,000
	Credits & Other							
9	Non Rate Revenue & Credits	($245,000)			100.0%			($245,000)
10	Use of Reserves	($1,664,000)	2.9%	27.5%	69.6%	($49,000)	($458,000)	($1,158,000)
11	**Rate Revenue Requirement:**	**$6,253,000**			**Totals:**	**$190,000**	**$1,786,300**	**$4,275,700**
12					Units of Service:	4,707 Accounts	6,436 Equivalent Meters	712,300 HCF
13					**Unit Rate:**	**$3.36** per account per month	**$23.13** per eq. meter per month	**$6.00** per HCF

2.13.5 Service Charges

Service Charges are a combination of the customer charge and meter charge identified through the cost-of-service analysis. Service Charges apply to all customer water bills, regardless of the amount of water actually used. Customers with active accounts that use no water during a month should still be required to pay the service charge, as service is immediately available to them. In calculating Service Charges, customer charges are assessed equally to all customers and meter charges are allocated based on dwelling units or meter size in relation to the hydraulic capacity associated with the various account types and meter sizes.

The proposed monthly Service Charge in FY 2023 for a single-family dwelling unit is $26.49, as shown in Table 7. This value was calculated by adding the monthly customer charge of $3.36 to the monthly meter charge of $23.13 (also found at the bottom of Table 6).

For larger meters, the meter charge portion of the Service Charge increases in proportion to the meter equivalency, while the customer charge remains the same for all meter sizes. The variation of Service Charges through meter sizes reflects the fact that a small portion of water system costs are directly related to the number of customers served. A majority of fixed costs are allocated on a capacity basis as reflected by the meter size. The changes to the Service Charges across the range of meter sizes more objectively reflect a consistent proportioning of the cost of providing service to customers of varying meter sizes.

Table 7: Proposed Monthly Service Charges

Account Type / Meter Size	Monthly Customer Charge (A)	Hydraulic Capacity Factor	Monthly Capacity Charge (B)	Monthly Service Charge (A + B)
Single Family	$3.36	1.0	$23.13	$26.49
Single Family with ADU (per DU)	$3.36	0.73	$16.86	$20.22
Multi-family (per DU)	$3.36	0.54	$12.39	$15.75
1"	$3.36	1.67	$38.55	$41.91
1 1/2"	$3.36	3.3	$77.10	$80.46
2"	$3.36	5.3	$123.36	$126.72
3"	$3.36	10.0	$231.30	$234.66
4"	$3.36	16.7	$385.50	$388.86
6"	$3.36	45.0	$1,040.85	$1,044.21
8"	$3.36	60.0	$1,387.80	$1,391.16
10"	$3.36	80.0	$1,850.40	$1,853.76
12"	$3.36	112.5	$2,602.13	$2,605.49

2.13.6 Water Usage Rates

Under the proposed water rates for FY 2022/23, the uniform water rate would be $6.00 per HCF (see the bottom of Table 6).

2.13.7 Proposed Water Rate Schedules

Schedule W-4 summarizes the proposed water rate schedule for the next 5 years. The first rate increase will be effective on July 1, 2022. The proposed water rates are designed to generate the rate revenue requirements as identified by this Water Utility Financial Plan.

2.14 PASSALACQUA PUMP-STATION PUMPING SURCHARGE

A 2018 report by The Reed Group ("Passalacqua Pump-Station Pumping Surcharge", December 14, 2018) calculated a surcharge to recover the Passalacqua Pump-Station's operation, maintenance, repair, and replacement costs, which applies to applicable water usage within the development. That surcharge is being updated with this Study.

The Saggio Hills Area Plan (Montage Resort and related residential development) encompasses 258.5 acres located east of Healdsburg Avenue just north of Parkland Farms. It provides for the development of a 130-unit resort hotel and associated amenities (e.g., spa, restaurant, wedding pavilion, etc.), 70 resort residences, a community park, public and private open space and trails, a pump station, and a City fire substation). As a requirement for development, a new water pump station (the Passalacqua Pump-Station) was built to provide water for normal use and fire flows. The Passalacqua Pump Station Zone of Benefit encompasses of portion of the Saggio Hills Area Plan that includes the Montage Resort, the low-density residential area, and associated landscaping. Areas that are within the Saggio Hills Area Plan but are located below the Pump Station are not served by the pump therefore not subject to the Pumping Surcharge. These include the "Affordable Housing" area, the Fire Station, the Community Park, and certain landscaped areas.

The pump station is dedicated to the City's water utility. Under the terms of the development agreement, the cost to operate and maintain these facilities is allocated to the water customers that will benefit from the facilities, as indicated in the agreement's language below:

> "*Developer shall be aware of and agree to the development and establishment of a surcharge for the additional costs (including but not limited to cost of energy, fuel, labor and materials for maintenance and replacement of motor controls, pumping equipment, building maintenance, etc.) associated with the operation and maintenance (O&M) of a new water pumping station. The new pumping station is necessary, and only benefits the Saggio Hills development,*

in order to provide peak domestic flow, fire flow and landscape irrigation at acceptable pressures. The monthly surcharge will be billed to all future Saggio Hills Development water users as a component of the monthly water bill based on actual usage."[6]

The cost of these facilities is allocated based on volume of water usage, as indicated in the agreement's language below:

"*Because the Pump Station will serve only the Resort and the Residences, the City requires that the costs and expenses that the City incurs in the ownership, operation, maintenance, repair and replacement of the Pump Station be paid by and allocated to the owners of the Resort and the Residences as part of a "Zone of Benefit" under the City's water billing policies and practices. The City therefore shall have the right to from time-to-time impose on each water bill for the Resort and each of the Residences a surcharge (based on a charge assessed against each cubic foot of water consumed, which charge shall be the same for the Resort and each of the Residences) sufficient to reimburse the City for such costs and expenses and to provide a reserve for replacement of the Pump Station and/or components thereof. The Developer shall disclose in writing to each purchaser of a Residence the intent and right of the City to impose such surcharge."*[7]

The methodology for calculating the Pumping Surcharge follows the same methodology as the 2018 study but replaces the cost estimates from that study with actuals cost data that is now available. The methodology consists of the following steps:

[6] From TM Conditions of Approval (Resolution 18-2011), C. "Public Works", Condition 4.

[7] From the Development Agreement, Exhibit B, Section 16 "Infrastructure", subsection (f) "Pump Station.

1) Calculate the annual operating and maintenance costs for the pump station, including labor hours and direct expenses (parts, services, electricity, etc.).

2) Calculate the annual depreciation expense of the pump station infrastructure based on actual construction costs and expected useful life of each component.

3) Estimate the total build-out water demands within the Zone of Benefit.

4) Estimate the trajectory of the growth in annual water demands that may occur as the Zone of Benefit develops towards build-out.

5) Establish a financial plan (cash flow model) based on projected water demands that calculates the annual unit rates (in dollars per hundred cubic feet (HCF)) that will be sufficient to meet each year's revenue requirements of the pump station (including the building of a sinking fund for the repair and replacement of the facility).

6) Establish a Pumping Surcharge Schedule that defines the unit rate of the Pumping Surcharges based on varying levels of annual water demand.

7) Adopt a policy to adjust the Pumping Surcharge schedule based on annual inflation and to periodically update surcharge calculations based on actual costs, water demands, and experience.

2.14.1 Source Data

The following data was used for calculating the proposed surcharge:

- Water System Estimated Water Demand Saggio Hills, Carlile Macy, April 2007 **(Carlile, 2007)**
- Montage PS Surcharge and Meter Maintenance Charge update 2021 v1 (Microsoft Excel file), as updated by City staff
- Landscape Irrigation Calculations, Sheet No. LI-6.01-0, The Robert Green Company, July 28, 2017 **(Green, 2017)**
- Data provided by City staff regarding water usage projections through buildout.

2.14.2 Calculations

This section introduces a series of tables which summarize the data and calculations that were used to calculate the Pumping Surcharge. The sequencing of the exhibits follows the steps in the methodology described in Section 2.14.

Table 8 summarizes the annual operating and maintenance costs for the pump station, including labor hours, direct expenses (parts, services, electricity, etc.), and depreciation expense. While the depreciation expense is not an actual cash expense, it represents the amount that should be set aside in a capital replacement sinking fund reserve for future repair and replacement costs. Most cost information came from updates provided by City staff based on actual costs and time spent on maintenance. The exhibit footnotes to Table 8 provide additional explanation. The estimated total annual operation, maintenance, and replacement expenses (in 2021 dollars) is $152,000.

Table 9 provides a summary of the estimated water demands within the Zone of Benefit. These numbers are taken from the 2018 report, which began with the demand estimates from the 2007 study (Carlile, 2007). There is insufficient actual flow data to provide a meaningful update to these estimates. Average flow rates expressed in gallons per day were converted to 100 cubic feet (HCF) per year. Adjustments were then made for the resort and associated uses (e.g., guest/employee uses and commercial uses) to account for the expected variations in the demands due to seasonality. In the interest of documentation, this exhibit shows the forecasted water demands for both “above” the Pump Station (i.e., the Zone of Benefit”) and “below” the Pump Station (not included in the Pumping Surcharge calculation). Total annual water usage above the pump station at buildout is estimated at 29,729 HCF.

Table 10 provides a 10-year cash flow projection based on estimated annual water demands, the total annual costs and resultant Pumping Surcharge rate ($/HCF). The exhibit shows the capital replacement sinking fund set aside as a “Transfer In” and demonstrates how the sinking fund will accumulate over the 10-year period with the

purpose of periodically replacing components as they reach the end of their useful life (for example the Booster Pumps in Year 10).

Table 8: Annual Costs for the Passalacqua Pump Station

	Annual Hours	Hourly Rate[2]	Annual O&M Cost[1]
Annual Operation & Maintenance Costs			
Water Distribution Operator[3]	142	$115.00	$16,300
Landscape Maintenance Worker[4]	na	na	$7,200
Outside Labor (Generator Checks/Testing/Service)			$2,200
Total Annual Labor Costs			**$25,700**
Equipment O&M Part[5]			$14,300
Electrical Charges[6]			
Customer Charges			$1,000
Demand Charges			$11,900
Usage Charges			$4,000
Internet (SCADA)/Phone (Fire Alarm)			$3,600
Total Annual Materials & Services			**$34,800**
Total Annual Operation & Maintenance Costs			**$60,500**
	Estimated Capital Costs[7]	**Expected Useful Life**	**Annual Replac. Cost**
Annual Replacement Costs			
Site Hardscape	$65,000	15	$4,300
Retaining Wall	$124,000	30	$4,100
Buried Piping	$72,000	50	$1,400
Building	$185,000	50	$3,700
Roof	$13,000	20	$700
Paint	$24,000	10	$2,400
Pumps, High	$229,000	15	$15,300
Pumps, Booster	$149,000	10	$14,900
Above Ground Piping	$322,000	50	$6,400
HVAC	$52,000	25	$2,100
Controls[8]	$203,000	12	$8,500
Generator	$193,000	15	$12,900
Electrical[8]	$607,000	25	$12,100
Wiring and Grounding	$112,000	50	$2,200
Pumping Surcharge Update[9]	$2,500	5	$500
Total Annual Replacement Cost			**$91,500**
Total Annual O&M and Replacement Costs			**$152,000**

[1] Cost information source: Updated by City staff in January 2021
[2] Hourly rates taken from the City's Master Fee Schedule effective July 1, 2020 & include salaries, benefits, and overhead costs.
[3] Operator hours based on actual hours from FY 2019/20 as provided by City staff
[4] Includes pump station landscape maintenance, based on actual costs from FY 2019/20
[5] Annual O&M parts based on 1 percent of cost of pumps, HVAC, controls, generator, and electrical equipment.
[6] Demand charge based on monthly exercise of high lift pumps. Usage charge based on 42 gallons per minute at 320 feet of lift.
[7] Based on actual capital costs
[8] Only 50% of controls/electrical costs are included in the depreciation expense calculation because equipment will be re-used.
[9] Pumping surcharge updated every 5 years at $2,500 per update in conjunction with general water rate study.

Table 9: Above Pump Station Estimated Build-Out Water Demand

	Total Potential Demand (gpd) [1]	Total Potential Demand (HCF/Yr) [1]	Total Expected Demand (HCF/Yr) [2]
"Above" Pump Station			
Low-Desnity Residential	28,400	13,858	13,858
Resort			
Guest & Employee Use	20,500	10,003	6,502
Commercial Use			
Entry Building	7,700	3,757	2,442
Spa Building	8,300	4,050	2,633
Conference Center	1,500	732	476
Function Areas & Pool	900	439	285
Landscape Use[3]	45,800	22,349	3,533
Vineyard Irrigation Use[4]	2,500	1,220	n/a
Total "Above" Pump Station	**115,600**	**56,409**	**29,729**

[1] Data source: Carlile, 2007.

[2] Annual demand totals for resort elements reflects seasonal capacity (occupancy/utilization) estimates from water demand study, as shown below.

	% Capacity
Summer	90%
Fall	75%
Winter	35%
Spring	60%
Annual Average	**65%**

[3] From Sub-Meters A - D, as follows: Source: Green, 2017

	Gals. Per Year	HCF Per Year	
Sub-Meter A / Controller A	610,889	817	
Sub-Meter B / Controller B	878,269	1,174	
Sub-Meter C / Controller C	758,394	1,014	
Sub-Meter D / Controller D	394,913	528	
Sub-Meter E / Controller E	n/a	n/a	Recycled Water [4]
Sub-Meter F / Controller F	n/a	n/a	Vineyard / GW [4]
	2,642,465	**3,533**	

[4] Areas to be irrigated with recycled water or groundwater (GW) have been excluded from annual water demand calculations for pumping surcharge purposes.

Table 10: Estimated Annual Cash Flows for the Passalacqua Pump Station

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Estimated Water Demands (HCF)	15,871	21,414	22,454	23,493	24,532	25,572	26,611	27,651	28,690	29,729
Hypothetical Pumping Surcharge ($/HCF) [1]	**$9.20**	**$7.52**	**$6.49**	**$6.14**	**$6.14**	**$5.80**	**$5.80**	**$5.45**	**$5.45**	**$5.11**
Pumping Surcharge Revenue [2]	**$145,981**	**$161,131**	**$145,718**	**$144,359**	**$150,746**	**$148,312**	**$154,341**	**$150,832**	**$156,501**	**$151,917**
Annual Pump Station Costs [3,4]										
Labor Costs	$ (25,700)	$ (25,700)	$ (25,700)	$ (25,700)	$ (25,700)	$ (25,700)	$ (25,700)	$ (25,700)	$ (25,700)	$ (25,700)
Materals & Services (Excluding Electrical Usage)	$ (30,800)	$ (30,800)	$ (30,800)	$ (30,800)	$ (30,800)	$ (30,800)	$ (30,800)	$ (30,800)	$ (30,800)	$ (30,800)
Electrical Usage	$ (2,135)	$ (2,881)	$ (3,021)	$ (3,161)	$ (3,301)	$ (3,441)	$ (3,580)	$ (3,720)	$ (3,860)	$ (4,000)
Replacement Cost (to Sinking Fund)	$ (91,500)	$ (91,500)	$ (91,500)	$ (91,500)	$ (91,500)	$ (91,500)	$ (91,500)	$ (91,500)	$ (91,500)	$ (91,500)
Total Annual Costs	**$ (150,135)**	**$ (150,881)**	**$ (151,021)**	**$ (151,161)**	**$ (151,301)**	**$ (151,441)**	**$ (151,580)**	**$ (151,720)**	**$ (151,860)**	**$ (152,000)**
Annual Surplus/(Deficit) [5]	**$ (4,154)**	**$ 10,250**	**$ (5,304)**	**$ (6,802)**	**$ (555)**	**$ (3,128)**	**$ 2,760**	**$ (889)**	**$ 4,641**	**$ (83)**
Cumulative Surplus/(Deficit)	$ (4,154)	$ 6,096	$ 792	$ (6,009)	$ (6,564)	$ (9,692)	$ (6,932)	$ (7,821)	$ (3,179)	$ (3,263)
Pump Station Sinking Fund [6]										
Beginning Balance	$ -	$ 91,500	$ 180,500	$ 272,000	$ 363,500	$ 455,000	$ 546,500	$ 635,500	$ 727,000	$ 818,500
Transfer In	$ 91,500	$ 91,500	$ 91,500	$ 91,500	$ 91,500	$ 91,500	$ 91,500	$ 91,500	$ 91,500	$ 91,500
New Paint [7]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (24,000)
Replace Booster Pumps [7]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (149,000)
Pumping Surcharge Update [7]	$ -	$ (2,500)	$ -	$ -	$ -	$ -	$ (2,500)	$ -	$ -	$ -
Ending Balance	$ 91,500	$ 180,500	$ 272,000	$ 363,500	$ 455,000	$ 546,500	$ 635,500	$ 727,000	$ 818,500	$ 737,000

[1] Actual Pumping Surcharge for any given year will be based on the actual water demands from the previous year.

[2] Calculated based on estimated annual water demand times pumping surcharge.

[3] Electrical usage costs vary with annual water demand. All other costs assumed to be fixed.

[4] All costs presented in current dollars.

[5] Schedule of pumping surcharges adjusted to minimize annual surplus/(deficit).

[6] Pump station sinking fund should be established to help ensure funds are available for scheduled replacements.

[7] Pumping surcharge updates, new paint, and replacement of booster pumps are the first replacement items based on estimated useful live of pump station components.

Table 11 provides the proposed Passalacqua Pump-Station Pumping Surcharge schedule given a range of annual water demands. As development proceeds and water demand increases the amount of the Pumping Surcharge will decline. Annual revenues, however, are intended to approximately match annual costs, including contributions to the capital replacement sinking fund.

Table 11: Passalacqua Pump Station Pumping Surcharge Schedule

	Pumping Surcharge ($/HCF)[1]	
Previous Fiscal Year's Aggregate Water Demand [2]		
Up to 10,000 HCF	$8.56	
10,001 to 12,000 HCF	$8.21	
12,001 to 14,000 HCF	$7.87	
14,001 to 16,000 HCF	$7.52	
16,001 to 18,000 HCF	$7.18	
18,001 to 20,000 HCF	$6.83	
20,001 to 22,000 HCF	$6.49	
22,001 to 24,000 HCF	$6.14	
24,001 to 26,000 HCF	$5.80	
26,001 to 28,000 HCF	$5.45	
28,001 to 30,000 HCF	**$5.11**	**<-- Est. Buildout**
30,001 to 32,000 HCF	$4.77	
32,001 to 34,000 HCF	$4.42	
34,001 to 36,000 HCF	$4.08	
36,001 to 38,000 HCF	$3.73	
38,001 to 40,000 HCF	$3.39	
Over 40,000 HCF	$3.04	

Footnotes:

[1] Proposed pumping surcharge schedule for FY 2022/23. This entire schedule should be adjusted for inflation at the beginning of each fiscal year, as described in the report.

[2] Each subsequent fiscal year the pumping surcharge is adjusted based on the water demand from the previous fiscal year, in accordance with the schedule.

The proposed Pumping Surcharge schedule shown in Table 11 should be formally adopted by the City in accordance with the requirements of California Constitution Article XIIID (Proposition 218). Because general inflation will affect both operation and

maintenance costs and capital replacement costs it is recommended that the City adjust the entire Pumping Surcharge schedule annually, at the beginning of each fiscal year, based on changes in the San Francisco-Oakland-Hayward Consumer Price Index (SF-CPI). Annual inflationary adjustments for up to five years can be approved as part of the Proposition 218 rate approval process in accordance with Government Code Section 53756. Any additional adjustments after five years (i.e., after FY 2026/27) would require a new Proposition 218 process and City Council approval.

2.15 SPECIAL METER MAINTENANCE CHARGE

The City serves a single meter assembly for the Montage resort which is much larger than any other water service connection within the City, and the dual-purpose (fire and domestic flows) is atypical relative to other meters maintained by the City. Because of the unique circumstances for this particular situation, it is appropriate to impose a separate monthly charge for meter maintenance and replacement. This charge is in addition to the monthly service charge and the uniform water usage rate imposed by the City associated with this water service.

Table 12 summarizes the calculation of a monthly meter maintenance and replacement charge for the dual-purpose compound water meter at the Montage resort development. All costs are expressed in current dollars. A 15-year service life for the meter assembly has been assumed and is believed to be reasonable for this type of application. The cost analysis results in a monthly meter maintenance and replacement charge of **$284.83**. This amount includes a credit for the estimated meter maintenance and replacement charge implicitly embedded in the monthly service charge for a standard 3" meter. The credit is based on the installation cost for a 3" meter, as contained in the City's Master Fee Schedule for FY 2019/20.

The proposed monthly maintenance and replacement charge should be formally adopted by the City in accordance with the requirements of California Constitution Article XIIID (Proposition 218). The calculations presented herein are in current dollars. Because general inflation will affect both maintenance and capital replacement costs it is recommended that the City adjust the monthly charge annually, at the beginning of each fiscal year, based on changes in the San Francisco-Oakland-Hayward Consumer Price Index (SF-CPI). Annual inflationary adjustments for up to five years can be approved as part of the Proposition 218 rate approval process in accordance with Government Code Section 53756. Any additional adjustments after five years (i.e., for fiscal year 2023 - 2024) would require a new Proposition 218 process and City Council approval.

Table 12: Meter Maintenance Charge Calculation

	Annual Hours	Hourly Rate[1]	Annual O&M Cost[2]
Annual Maintenance Costs			
Water Distribution Operator[3]	12	$115.00	$1,380
Maintenance Parts[4]			$282
Credit for 3" Meter Maint. & Replac.[5]			$ (217.67)
Total Maintenance Costs			**$1,444**

	Estimated Meter Cost	Expected Useful Life	Annual Replac. Cost
Annualized Life Cycle Replacement Cost			
10" Meter w/ 2" Bypass[6]	$28,166	15	$1,878
Labor and Misc. Parts[7]	$1,444	15	$96
Total Annualized Replacement Cost			**$1,974**
Total Annual Maintenance & Replacement Costs			**$3,418**
MONTHLY MAINTENANCE AND REPLACEMENT CHARGE[8]			**$284.83**

Footnotes:

[1] Hourly rate, from the City's Master Fee Schedule effective July 1, 2020, includes salaries, benefits, and overhead costs.

[2] Minor discrepencies due to rounding.

[3] Based on actual hours spent during FY 2019/20 as provided by City staff

[4] Miscelleneous maintenance parts estimated at 1% of original cost of the meter assembly.

[5] Credit for the estimated meter maintenance and replacement costs for a 3" meter, which is embedded in the standard monthly service charge to be imposed for this installation.

[6] Based on a 2018 quote for meter assembly from Pace Supply Corp. and 20 year service life and escalated by the CPI to 2021.

[7] Assumes labor and miscellaneous parts for replacement is the same as annual maintenance effort.

[8] To be imposed for this installation in addition to the monthly service charge for a standard 3" water meter.

2.16 WATER SHORTAGE RATE SURCHARGE

This section presents recommended financial strategies in the event of drought, including Water Shortage Rate Surcharges, which are to be overlaid on then-current water rates during the time that a water shortage is declared by the City. Water shortage surcharges would be temporary.

The Water Shortage Rate Surcharge is a tool the City would use to reduce the (potentially severe) financial impacts associated with reduced water sales and increases in operating costs during a drought event. The multi-pronged approach includes implementing the temporary surcharge (see Row 24 of Table 13), reducing capital spending (see Rows 25 & 26 of Table 13), and relying (modestly) on reserves to help bridge the financial deficit (see Row 27 of Table 13).

The proposed updates to the City's Water Shortage Surcharges addresses the requirements of California Senate Bill (SB) 606[8], which has directed (some) water utilities to establish water shortage contingency plans that include 6 stages of shortage for its water shortage contingency planning. In the future, the State will issue directives to public water utilities within the construct of this 6-stage system, therefore the proposed updates to the City's water shortage strategy are consistent with the framework being used by state regulators.

Table 13 presents:

1) The water usage reduction goals (by stage) as dictated by SB 606 (Row 1)
2) The assumed actual water use reduction during each respective stage (Row 2)
3) The proposed Water Shortage Rate Surcharge, expressed as a percent increase to all water rates (Rows 5 & 6)
4) The changes in revenue for each respective stage (total revenue in Row 7)

[8] Codified as Water Code Section 10632

5) The changes in expenditures for each respective stage (Rows 10 through 16) including the proposed reduction in capital spending (Rows 25 & 26)

6) The financial deficit that will occur even with the mitigating measures (Row 27)

It should be noted that the temporary Water Shortage Rate Surcharges would only partially assist in covering the costs of providing water service during shortage conditions. Revenue from the surcharges would help bridge the financial deficit and would not exceed the cost of providing service. The Water Shortage Rate Surcharges and reduction in capital spending have been calibrated to yield an overall deficit in the general range of $200 thousand, regardless of the stage. Given the City's reserve policies, this size of a deficit was deemed sustainable for the duration of an extended drought.

Under normal water supply conditions and in shortage Stages 1 (with voluntary measures), the then-current water rate structure remains in place. Beginning in Stage 2, a Water Shortage Rate Surcharge of 6 percent will be added to the then-current Water Usage Rates and fixed Service Charges. The surcharge will increase to 10 percent in Stage 3, 15 percent in Stage 4, 20 percent in Stage 5, and 24 percent in Stage 6.

Under normal water supply conditions and in shortage Stages 1, the planned levels of capital spending remain in place. The planned level of capital spending won't be changed until Stage 2 at which time it will be reduced by 5 percent, followed by 15 percent in Stage 3, 25 percent decrease in Stage 4, a 40 percent decrease in Stage 5, and a 60 percent decrease in Stage 6.

The Water Shortage Rate Surcharge implemented in Stages 2 through 6 helps recover a portion of the revenue from the shortfall. The proposed Water Shortage Rate Surcharge policy shown in Table 13 (Row 23) should be formally adopted by the City following the requirements of California Constitution Article XIIID (Proposition 218).

Table 13: Proposed Water Shortage Surcharges and Capital Spending Reductions

		Normal Supply Conditions[1]	Stage 1 Minor Shortage	Stage 2 Moderate Shortage	Stage 3 Significant Shortage	Stage 4 Urgent Shortage	Stage 5 Critical Shortage	Stage 6 Severe Shortage
1	Use Reduction Goal -->	n/a	0% to 10%	10% to 20%	20% to 30%	30% to 40%	40% to 50%	> 50%
2	Modeled Use Reduction -->		5%	15%	25%	35%	45%	55%
	Revenues							
3	Service Charge Revenues	$2,016,000	$2,016,000	$2,016,000	$2,016,000	$2,016,000	$2,016,000	$2,016,000
4	Water Usage Charge Revenues [2]	$4,273,000	$4,059,000	$3,632,000	$3,205,000	$2,777,000	$2,350,000	$1,923,000
5	Other Revenue and Transfers In	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000
6	Use of Reserves[4]	$566,000	$566,000	$566,000	$566,000	$566,000	$566,000	$566,000
7	**Total Sources**	**$6,916,000**	**$6,702,000**	**$6,275,000**	**$5,848,000**	**$5,420,000**	**$4,993,000**	**$4,566,000**
8	(% of Normal)		97%	91%	85%	78%	72%	66%
9	Revenue Deficit due to Drought	(na)	(214,000)	(641,000)	(1,068,000)	(1,496,000)	(1,923,000)	(2,350,000)
	Expenditures and Transfers							
10	Employee Costs	$2,525,000	$2,525,000	$2,525,000	$2,525,000	$2,525,000	$2,525,000	$2,525,000
11	Utilities & Fuel	$280,000	$273,000	$259,000	$245,000	$231,000	$217,000	$203,000
12	Professional Services	$368,000	$368,000	$368,000	$368,000	$368,000	$368,000	$368,000
13	Maintenance & Operations	$788,000	$788,000	$788,000	$788,000	$788,000	$788,000	$788,000
14	General Administration	$623,000	$623,000	$623,000	$623,000	$623,000	$623,000	$623,000
15	Conservation [5]	$30,000	$32,000	$39,000	$54,000	$82,000	$137,000	$250,000
16	Typical Capital Spending	$2,302,000	$2,302,000	$2,302,000	$2,302,000	$2,302,000	$2,302,000	$2,302,000
19	**Total Expenditures**	**$6,916,000**	**$6,911,000**	**$6,904,000**	**$6,905,000**	**$6,919,000**	**$6,960,000**	**$7,059,000**
20	(% of Normal)		100%	100%	100%	100%	101%	102%
21	Change in Expenses due to Drought	(na)	-$5,000	-$12,000	-$11,000	$3,000	$44,000	$143,000
22	**Total Deficit Due to Drought**	-	**(209,000)**	**(629,000)**	**(1,057,000)**	**(1,499,000)**	**(1,967,000)**	**(2,493,000)**
23	Rate Surcharge Revenue[3]	**Percentage:**	0%	6%	10%	15%	20%	24%
24		**Revenue:**	$0	$339,000	$522,000	$719,000	$873,000	$945,000
25	Capital Spending Reduction	0%	0%	5%	15%	25%	40%	60%
26		$0	$0	-$115,000	-$345,000	-$576,000	-$921,000	-$1,381,000
27	***Surplus/(Deficit) in after Remedial Measures*** [6]		**-$209,000**	**-$175,000**	**-$190,000**	**-$204,000**	**-$173,000**	**-$167,000**

[1] Analysis based on FY 2021/22 budget and assumed that current usage reflects normal water supply conditions.

[2] Assumes that water usage revenue would decline in proportion to water sales.

[3] Water shortage charges are an incremental increase to both the Water Usage Rates and the fixed monthly Service Charge.

[4] Represents the planned change in fund balance during the Test Year.

[5] Estimated water conservation program costs assumed to increase in inverse proportion to water use reductions.

[6] Deficits to be absorbed by Water Fund reserves.

Section 3. WASTEWATER RATE STUDY

The following subsections include the wastewater utility's financial plan, cost of service, rate design, and proposed wastewater rates schedule. The information has some redundancies with Section 2 (by design to allow the section to stand alone).

3.1 WASTEWATER UTILITY FINANCIAL PLAN

This section presents the Wastewater Utility's 10-year Financial Plan, including a description of the source data, assumptions, and the City's financial policies. The City provided historical and budgeted financial information, including historical and budgeted operating costs, a multi-year capital improvement program (CIP), and outstanding debt service obligations. City 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 Wastewater Utility 10-year Financial Plan was developed through several interactive work sessions with City staff. As a result of this process, the Study has produced a robust Wastewater Utility Financial Plan that will enable the City to meet its future revenue requirements and achieve financial performance objectives throughout the projection period while striving to limit rate increases.

The financial plan indicates that the Wastewater Utility currently has a revenue shortfall, which is primarily due to the fact that the City hasn't raised wastewater rates since 2016. Operating costs have increased significantly since 2016 due to inflation. The Study concludes that rate revenue increases will be required in order to afford operating and capital expenses**.** The schedules attached to this report include detailed data supporting the Wastewater Utility Financial Plan discussed herein.

The Wastewater Utility Financial Plan reflects assumptions and estimates believed reasonable at the present time. However, conditions change. It is recommended that

the City review the financial condition of the Wastewater Utility and reaffirm annual rate adjustments as part of the annual budget process, as well as perform a more comprehensive financial plan and wastewater rate update every 5 years or as conditions dictate.

3.2 WASTEWATER UTILITY BEGINNING FUND BALANCES

The ending cash balance for FY 2020/21 was used to establish the FY 2021/22 beginning balance, as outlined in **Table 14**. It should be noted that the amount of cash that the Wastewater Utility keeps in reserves is a product of its reserve policies (see Section 3.10).

Table 14: Wastewater Utility FY 2021/22 Beginning Cash Balance (rounded)

Fund 530 (Wastewater Operations)	$3,002,000
Fund 532 (Wastewater Capital Reserve)	$736,000
Total Unrestricted:	$3,738,000
Fund 930 (Restricted Wastewater Capacity Fees)	$1,428,000
Total Reserves:	**$5,166,000**

3.3 CUSTOMER GROWTH

In recent years, the City has collected and average of approximately $263 thousand per year in Development Capacity Charges revenue from new customers connecting to the system, which equates to a growth rate of approximately 0.59% per year. This Study assumes that this growth trend, and the associated Development Capacity Charges revenue, will continue for the duration of the next 10 years.

3.4 WASTEWATER UTILITY RATE REVENUE

Rate revenue is the revenue generated from customers for wastewater service. The City collects rate revenue from wastewater customers based on a fixed "Service Charge" (assessed based on meter sizes) and a wastewater "Usage Rate" (applied to

each hundred cubic feet[9] ("HCF") of winter water use[10] for residential customers and all water use for non-residential customers). Customers receive a monthly bill. The Wastewater Utility Financial Plan starts with FY 2021/22 budgeted rate revenues. Estimated future wastewater demand and rate revenues include the small amount of customer growth (see Section 3.3) as well as the annual rate revenue adjustments proposed by this Study. Other than demand increases associated with customer growth, wastewater demand is anticipated to remain constant. Budgeted and projected rate revenues (including proposed rate adjustments) are listed in the first table in **Schedule WW-3**.

3.5 WASTEWATER UTILITY NON-RATE REVENUES

In addition to rate revenue, the City receives additional "non-rate revenue" from sources such as miscellaneous service fees (operating revenue), Development Capacity Charges, grants, and interest revenue on investments. Projections of all non-rate revenues were based on FY 2021/22 budgeted revenues with the exception of interest income which was calculated annually based upon projected fund balances and assumed interest rate of 2.01%, which is consistent with the City's historical interest earnings relative to its total reserve levels. Budgeted wastewater rate and non-rate revenues are depicted in **Figure 7** below and listed in detail in the first table in **Schedule WW-3**.

[9] One HCF is equal to 748 gallons

[10] Winter water usage refers to the average water usage during the prior period of January through April, with the highest month omitted.

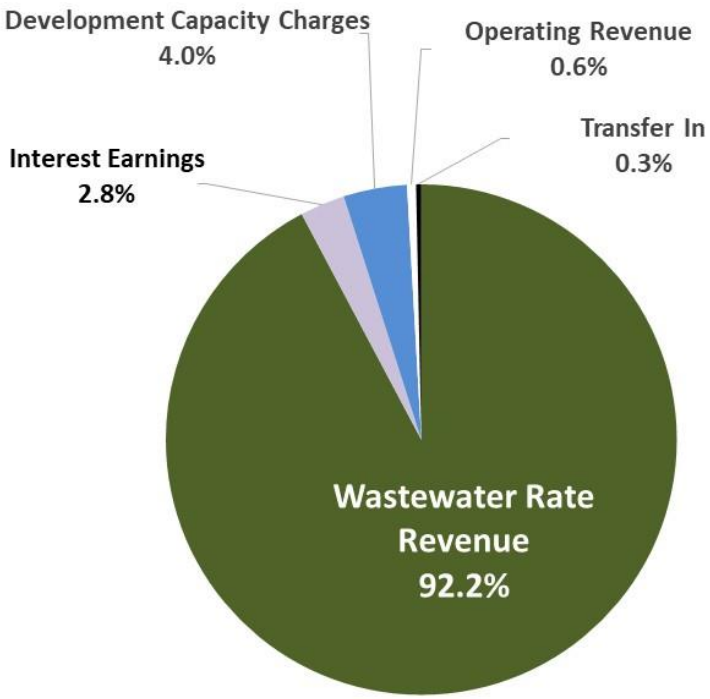


Figure 7: Budgeted Wastewater Utility Revenue Categories (FY 2021/22)

3.6 WASTEWATER UTILITY OPERATING AND DEBT EXPENSES

The Wastewater Utility's expenses include operating and maintenance expenses, debt service, and capital spending. Capital spending is addressed separately in Section 3.9. Future operating and maintenance expenses were projected based upon the budgeted expenditures from FY 2021/22 and adjusted for inflation (see Section 3.8).

Major budgeted expense categories for FY 2021/22 are depicted in **Figure 8**. Budgeted and projected operating and maintenance costs as well as debt service expenses are listed in detail in **Schedule WW-1**.

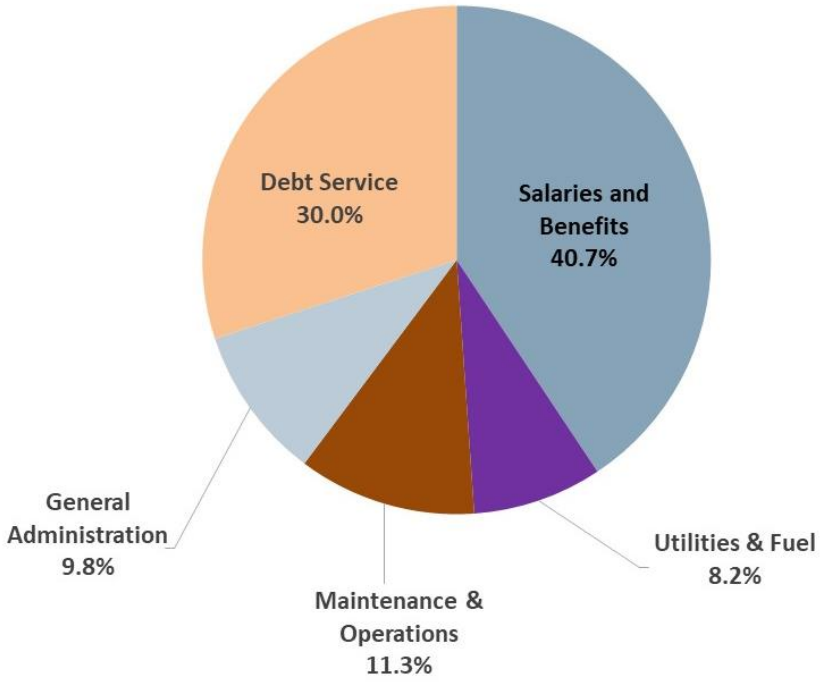


Figure 8: Wastewater Utility Operating & Debt Expenses (FY 2021/22)

The Wastewater Utility currently pays about $1,954,000 annually on debt service related to a 2015 Refunding Bond and a 2012 Taxable Pension Obligation Bond (annual payments of approximately $160,000 and will be retired in FY 2022/23).

While a general increase in capital spending is forecasted, this Wastewater Utility financial plan does not propose any new debt issues during the planning period (see Section 3.9).

3.7 DEBT SERVICE COVERAGE

One of the requirements associated with bond financing is to maintain rates and other wastewater system revenues at levels sufficient to meet debt service coverage requirements. At present, the City is required to maintain wastewater system revenues at a level that covers all ongoing operating and maintenance costs, as well as 1.20 times annual debt service. Based on recently published guidance from Fitch Ratings, utility systems with *midrange* financial profiles should maintain a DCR greater

than 1.50 times annual debt service. The Wastewater Utility is forecasted to have a DCR of approximately 1.24 in FY 2022/23 (after proposed rate increases, see Schedule WW-3, Row 27) and, with the proposed rate adjustments, is expected to rebuild the DCR to healthier levels by FY 2023/24.

3.8 COST ESCALATION

Annual cost escalation factors for the various types of expenses were developed based upon a review of historical inflation trends, published inflation forecasts, and discussions with City staff. During the projection period, all expenses are projected to increase at 4.0 percent per year through FY 2023/24 and 3.0 percent thereafter.

3.9 WASTEWATER UTILITY CAPITAL IMPROVEMENT PROGRAM

Figure 9 shows capital expenditures from FY 2021/22 through FY 2030/31 that are needed to pro-actively address the wastewater system's rehabilitation needs associated with aging conveyance, treatment facilities, pump stations, and other system facilities. The average annual spending of about $2.6 million is significantly lower than first planned by the City's engineering department in order to avoid a spike in near-term wastewater rates. **Schedule WW-2** provides a detailed list of the budgeted capital projects through FY 2024/25, the budgeted capital spending from FY 2025/26 through FY 2031/32, and a list of deferred capital projects. The actual projects that are built during those years may change based on system priorities. The level of capital spending is shown to increase after FY 2028/29 as the cumulation of rate increases positions the Wastewater Utility to afford more capital spending.

This financial plan is proposing that all capital spend be funded on a PayGo basis as opposed to using a debt strategy. This decision is based on the fact that debt is typically used to address anomalous spikes in capital spending. There is not sufficient time to issue debt for the immediate spike in capital spending, and the long-term increase in capital spending is not a "spike" in spending but rather a sustained increase to a "new normal" level of annual re-investment in the wastewater system's aging infrastructure.

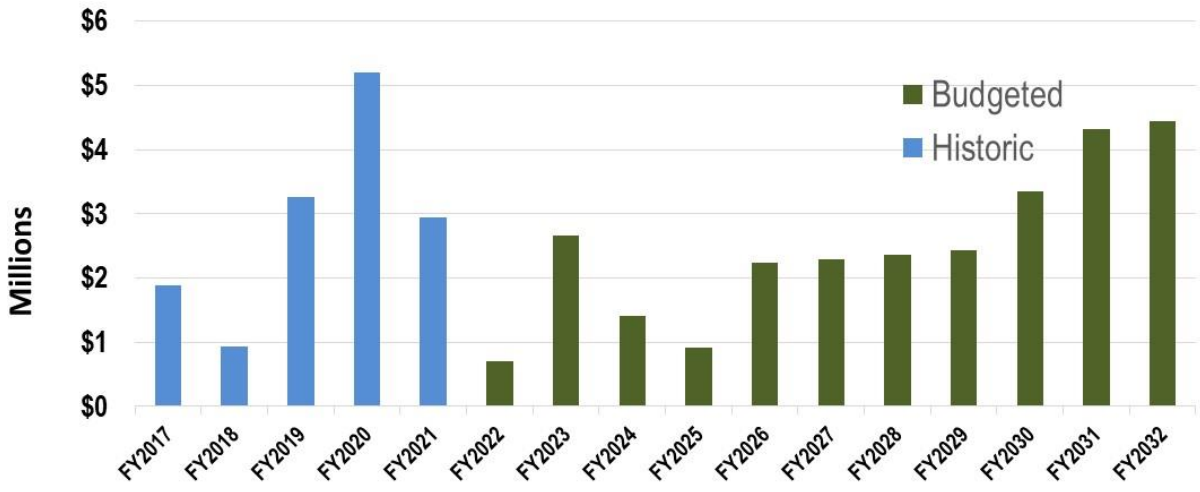


Figure 9: Wastewater Utility Historic and Projected Capital Spending

3.10 WASTEWATER UTILITY FUNDS

The financial plan model is based on the fund, reserve, and account structures currently used by the City. These structures include recent modifications to improve efficient funding of the capital improvement program. **Figure 10** is a schematic diagram of the funds/reserves and major cash flows associated with the financial plan model.

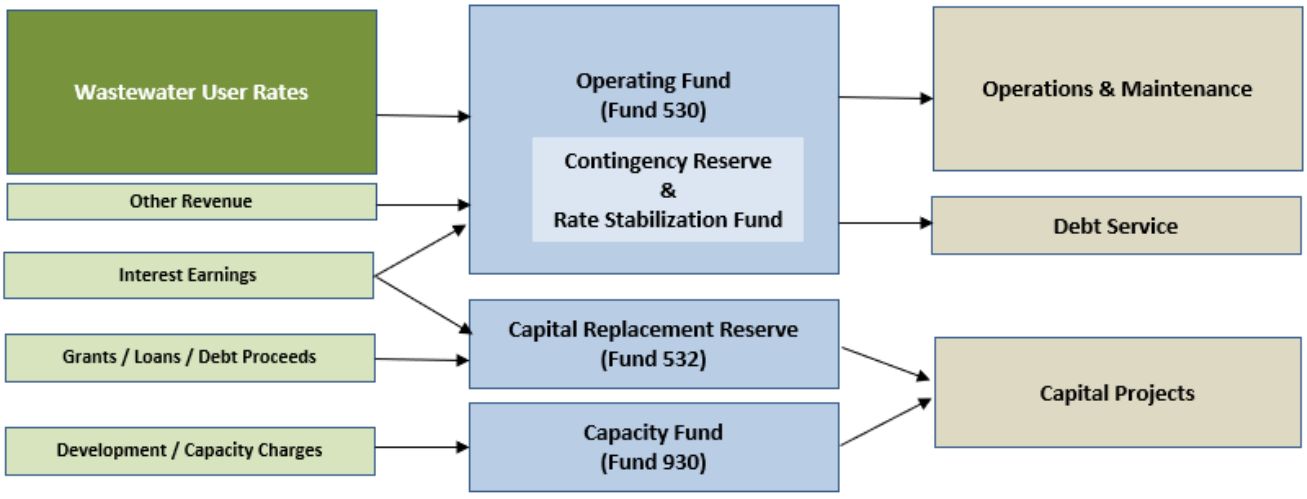


Figure 10: Wastewater Utility Cash Flow Schematic Diagram

The fund / reserve structure is comprised of:

Operating Fund – The Wastewater Operating Fund (Fund 530) is the primary fund within the Wastewater Utility. Most revenue, including rate revenues, flow into the Operating Fund and all operating and maintenance costs, including debt service payments, are paid out of this fund. Funds are also transferred from the Operating Fund to the Capital Replacement Reserve to provide funds for capital projects intended to rehabilitate and upgrade facilities. While not necessarily a roadmap for future City decisions on transfers, this financial plan shows annual transfers from the Operating Fund to the Capital Replacement Reserve sufficient to meet the capital improvement for each year in the planning period.

Capital Replacement Fund – The Capital Replacement Fund (Fund 532) is intended to serve as a mechanism for funding rehabilitation, replacement, and upgrade projects contained in the capital improvement program. The reserve is funded with annual transfers of rate revenue from the Operating Fund (see the second table in Schedule WW-3). Funds are then used for capital project expenditures. By establishing regular transfers from the Operating Fund, the City is able to fund capital projects in a manner that facilitates rate stability and/or modest annual rate adjustments. This reserve also helps to establish and maintain steady funding of the ongoing replacement and rehabilitation efforts of the utility system, which many utilities neglect as part of the financial obligations of long-term sustainability of service.

Wastewater Capacity Fund – The Wastewater Capacity Fund (Fund 930) is used to account for revenues from wastewater system Development Capacity Charges. The City's Development Capacity Charges are based on a system buy-in methodology. As such, capacity fee revenues reimburse the utilities for prior investment in wastewater system capacity including debt service payments in order to help the City meet its DCR obligations. The financial plan model use available Development Capacity Charge revenues to help pay for planned capital improvement projects but does not foresee the need to supplement debt service payments.

3.11 CASH RESERVE POLICIES

Cash reserve policies are cash balances targets that are retained for specific cash flow needs. The target for reserves is an important component when developing a multi-year Wastewater Utility Financial Plan and maintaining prudent reserves is an essential component of any sound financial management strategy. 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 target levels of the policies below are consistent with: 1) the City's established policies and practices; 2) the findings of reserve studies conducted by the AWWA; 3) 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 4) Hildebrand Consulting and The Reed Group's industry experience for similar systems.

The following recommended reserve policies are based on the policies that were recommended in the 2016 rate study with some minor modifications. The policy recommendations are intended to help the City mitigate and manage financial risk while meeting service and financial obligations.

Contingency Reserve – The City currently has a policy goal (Resolution No. 139-2000) to maintain Contingency Reserves within the Operating Fund equal to 25 percent of annual rate revenue (or currently about $1.75 million). The purpose of the Contingency Reserve is to provide working capital and funds for unplanned operating and maintenance expenditures or revenue shortfalls resulting from reduced wastewater rate revenue. The balance in the Operating Fund is current meeting the target Contingency Reserve.

Debt Service Reserve – While a Debt Service Reserve is required by some debt agreements as security against debt repayment obligations, none of the Wastewater Utility's current debt contract have such a requirement.

Capital Replacement Reserve – A capital replacement reserve serves the dual purpose of (1) supporting the City's PayGo strategy by absorbing some of the inherent

fluctuations in annual capital spending and (2) serves as safety net in the event of the catastrophic failure of a major system asset (such as a pump station or a major wastewater trunkline). While the City does not currently maintain a targeted reserve in the Capital Replacement Fund, this financial plan proposes to establish the practice of working towards a target balance of $1.0 million during the planning period. In the future the City may wish to formalize the practice with a more detailed analysis of the appropriate target levels.

3.12 PROPOSED RATE REVENUE INCREASES

All of the above information was entered into a financial planning model to produce a 10-year projection of the sufficiency of current rate revenues to meet 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 PayGo strategy, this Study proposes a 5-year schedule of annual rate adjustments as shown in **Table 15**.

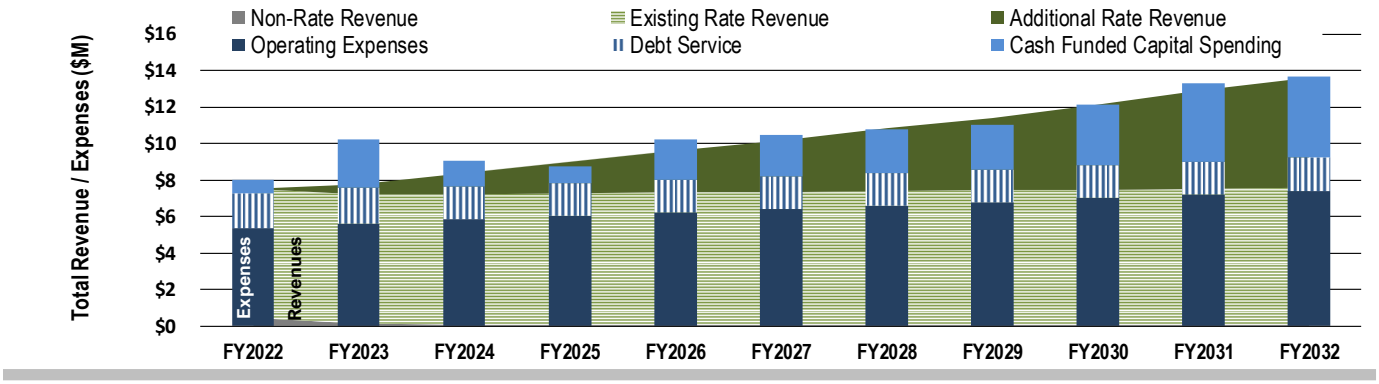
Table 15: Recommended Wastewater Rate Revenue Increase

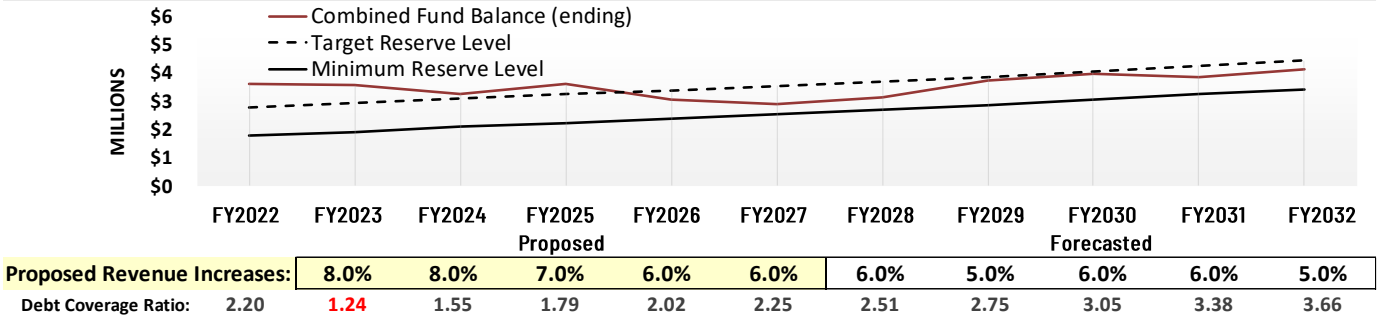
Rate Adjustment Date	Proposed Rate Increase
July 1, 2021	8.0%
July 1, 2022	8.0%
July 1, 2023	7.0%
July 1, 2024	6.0%
July 1, 2025	6.0%

It is important to note that water rates in the first year (FY 2022/23) will be modified based on the findings of the cost-of-service analysis, which calls for more costs to be recovered through the fixed charges (see Section 3.13). This means that the percent

change to individual customer bills may differ from the percent change in rate revenue received by the City.

The numbers provided in the first table in **Schedule WW-3** (cash flow proforma) are summarized graphically in **Table 14**, which shows that the Operating Fund target reserves are met in FY 2023/24 and the DCR attains a healthy level by FY 2023/24.





Proposed Revenue Increases:	**8.0%**	**8.0%**	**7.0%**	**6.0%**	**6.0%**	**6.0%**	**5.0%**	**6.0%**	**6.0%**	**5.0%**
Debt Coverage Ratio:	2.20	1.24	1.55	1.79	2.02	2.25	2.51	2.75	3.05	3.38	3.66

Figure 11: Wastewater Financial Projection with Recommended Rate Increases

The proposed rate increases are driven by the cost inflation that has occurred since the last rate increase in 2016.

Schedule WW-3 shows the cash flow with each of the Wastewater Utility's fund and the projected transfers between the Operating Fund, the Capital Replacement Fund and the Capacity Fund.

After the final recommended increase in FY 2026/27, it is anticipated (barring unforeseen emergencies or changes in infrastructure/operational needs) that the

increases will need to continue at around 5 to 6 percent per year, which is needed to increase revenues to match the City's increase in annual capital spending on critical infrastructure.

3.13 WASTEWATER COST OF SERVICE & RATE STRUCTURE

The COS analysis evaluates the cost of providing wastewater service and allocates those costs to rate structure components to ensure the proposed rates are aligned with the costs to provide service. The COS analysis is performed in order to comply with Proposition 218, which requires wastewater rates to be equitably apportioned and proportional to the cost of providing wastewater 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 at the beginning of FY 2022/23. The complete schedule of proposed rates for FY 2022/23 through FY 2026/27 is detailed in **Schedule WW-4**.

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 wastewater system costs
- Meet other rate setting objectives, as described in Section 1.4

3.13.1 General Methodology

There are three steps to determining wastewater rates. These are:

- Determine annual wastewater rate revenue requirements
- Analyze the cost of providing service to each customer class
- Design wastewater rates to recover costs from each customer class.

The Wastewater Utility Financial Plan was used to identify the wastewater rate revenue requirements for each fiscal year of the five-year planning period.

Once the annual wastewater rate revenue requirement has been determined, the next step in the rate setting process is to evaluate the cost of providing service. Wastewater rate calculations contained herein are intended to generate the level of revenue commensurate with the revenue requirement from the City's wastewater service customers. The manner in which each customer is responsible for the wastewater utility's costs is the determining factor in the cost-of-service analysis.

3.13.2 Current Wastewater Rates

Single family and multi-family residential customers are subject to fixed monthly Service Charges plus a Usage Charge based on winter water usage. The Service Charges are assessed based on the number of dwelling units and differ between different types of residential accounts due to differences in demand characteristics. Each year, the City monitors water usage during low-use winter months (the average of the three lowest bills rendered between January through April) and then determines the average winter usage for each residential customer (seasonal sewer average or "SSA"). The SSA value is assumed to be primarily indoor water usage. In May of each year, the City calculates a new wastewater bill amount for each residential customer based on the prior winter water use. When the winter average is not available the average for all residential accounts is used. In some cases, adjustments are made to the winter average based on special circumstances.

Non-residential customers are subject to a low, medium, or high strength Usage Rate based on the type of type of business activity. The usage charge is calculated based on actual water usage within each monthly billing cycle since non-residential accounts have minimal outdoor water usage (or a separate meter for irrigation). Non-residential wastewater bills also include a fixed service charge based on the size of the water meter.

The current Service Charge schedule (which is assessed monthly) is summarized in Table 16.

Table 16: Current Wastewater Rates

Monthly Service Charge		
Single Family	$37.33	per dwelling unit
Single Family with ADU (per DU)	$37.33	per dwelling unit
Flat Rate[1]	$99.76	per dwelling unit
Multifamily (per DU)	$34.50	per dwelling unit
Non-Residential		
1" meter	$60.67	per meter
1 1/2" meter	$118.49	per meter
2" meter	$188.16	per meter
3" meter	$350.82	per meter
4" meter	$583.15	per meter
6" meter	$1,163.46	per meter
8" meter	$1,860.11	per meter
10" meter	$2,673.10	per meter
12" meter	$4,995.02	per meter
Wastewater Usage Rates ($/HCF)		
All Residential [2]	$10.41	per HCF
Non-Residential [3]		
Low Strength	$9.37	per HCF
Medium Strength	$13.62	per HCF
High Strength	$19.85	per HCF

[1] Applies to customers not receiving water service and

[2] Applies to the account's measured SSA

[3] Applies to actual monthly water usage.

3.13.3 Customer Account Data and Sewer Flow and Loading Estimates

Wastewater rate calculations are based on a number of factors related to the City's customers. Factors include the number of customers, customer classes, water usage, estimated sewer flows, and sewer strength characteristics as measured by biochemical oxygen demand (BOD) and total suspended solids (TSS).

Residential sewer flows are estimated based on average water usage during winter months. A review of residential water usage data indicated that about 53.3 percent of annual water usage returns to the sewer system (based on average winter water

usage). For multi-family customers, about 80 percent of annual water usage is estimated to return to the sewer system, which is expected since irrigation water usage tends to be either minimal or separately metered. Single-family accounts with ADUs show 45.6 percent of annual water usage returning to the sewer system. Non-residential sewer flows are based on actual water usage, with a 90 percent rate of return to the sewer system to reflect minor irrigation usage.

The sewer utility serves 3,690 single-family homes, 111 single-family accounts with an ADU (therefore 222 DUs), 1,005 multi-family dwelling units, and 488 non-residential customers. On average, single-family sewer flows (based on winter water usage) are about 5.0 HCF per month. For multi-family dwellings, the average sewer flow is about 4.0 HCF per month (based on winter water usage). This average sewer flow value is then used to calculate a conversion factor of 0.80 to convert the number of multifamily dwellings to the equivalent number of single-family dwellings (ESFU). The conversion factor for single-family accounts with ADUs (on a single meter) is 0.662. Non-residential sewer flows vary based on customer characteristics.

Wastewater rate analyses consider the strength (loading) characteristics of sewage entering treatment facilities. Strength factors for BOD and TSS are considered, as these factors play a key role in treatment facility operations. Residential customers are assigned standard residential strength factors of 240 mg/l for BOD and 200 mg/l for TSS. Low, medium, and high non-residential strength categories have been defined with strength factors as indicated in Table 17. Strength factors assigned to each category of customer are based on guidelines published by the California State Water Resources Control Board (SWRCB) and other sources.

Table 17 summarizes customer account and water usage data obtained from the City's utility billing system, as well as estimates of resulting wastewater flow and loading characteristics. Applying residential and non-residential strength factors to estimates of annual sewer flows results in an estimated annual sewage volume and loading that is commensurate to actual WWTF inflows. Account information is based on the utility billing data from FY 2019/20.

Table 17: Wastewater Customer Account Data and Estimated Sewer Flows and Loadings

Customer Class	No. of DUs/ Accounts [1]	No. of ESFDs	Water Usage [1]	Rate of Return	Estimated Annual Wastewater Flow [2]	Estimated Annual Wastewater Flow	BOD Strength [3]	Annual BOD Loading	TSS Strength [3]	Annual TSS Loading
			HCF		HCF	MG	mg/l	lbs	mg/l	lbs
Residential										
Single Family Residential	3,690	3,690	419,200	53.3%	223,500	167.2	240	334,600	200	278,900
Single Family + ADU	222	147	19,500	45.6%	8,900	6.7	240	13,300	200	11,100
Multi-Family Residential	1,005	801	60,400	80.3%	48,500	36.3	240	72,600	200	60,500
Non-Residential										
Low Strength	339	841	69,100	90.0%	57,800	43.2	240	86,500	200	72,100
Medium Strength	85	224	30,700	90.0%	25,700	19.2	500	80,200	400	64,100
High Strength	64	163	28,700	90.0%	24,000	18.0	1,000	149,700	600	89,800
Totals	**5,405**	**5,865**	**627,600**		**388,400**	**291**		**736,900**		**576,500**

Notes:

[1] Based on utility billing system data for FY 2019/20. DU = dwelling units.

[2] Based on annualized average winter water usage for residential accounts (based on the lowest three months between January and April) and annual water usage for non-residential accounts.

[3] Based on previous wastewater rate analyses, SWRCB guidelines, and adjustments to better match actual treatment plant flows and loadings.

3.13.4 Wastewater Cost of Service & Rate Design

To develop equitable wastewater rates, the revenue requirement is allocated to various customer classifications according to the services provided and the demands placed on the sewer system. Table 18 summarizes how the wastewater rate revenue requirement is allocated to fixed charges as well as to flow, BOD, and TSS components, which comprise the usage charges. Once total costs are allocated unit costs were determined by dividing the total cost for each component by the number of units identified in Table 17. These unit costs become the basis for then assigning costs to customer classes.

The cost-of-service analysis for wastewater service is more complicated than water rate analysis in that treatment costs are separated from collection system costs. Collection system costs are allocated entirely on the basis of flow, whereas treatment costs are allocated on the basis of flow, BOD, and TSS.

Table 18: Determination of Unit Costs

Cost Category	Category Allocation Percentages	Parameter Allocation Percentages[4]	Annual Cost Allocated to Each Parameter	Total Quantities	Unit Cost for Each Parameter
Fixed Charge Costs[1]	40%		**$3,026,000**		
Customer Accounts		6%	$181,600	5,405	$33.60 per account
Equiv. Single Family Dwellings (ESFDs)		94%	$2,844,400	5,865	$484.98 per ESFD
Usage Charge Costs for Collection [2]	15%		**$1,134,800**		
Flow (MG)			$1,134,800	291	$3,906.06 per MG
Usage Charge Costs for Treatment[3]	45%		**$3,404,300**		
Flow (MG)		34%	$1,157,500	291	$3,984.19 per MG
BOD (lbs)		33%	$1,123,400	736,900	$1.52 per lbs of BOD
TSS (lbs)		33%	$1,123,400	576,500	$1.95 per lbs of TSS
Total FY 2021/22 Wastewater Rate Revenue Requirement			**$7,565,000**		

Notes:

[1] Includes estimated administrative costs, debt service costs, a portion of maintenance costs, and transfer to the capital fund.

[2] Includes estimated collection system and a portion of maintenance costs.

[3] Includes estimated wastewater treatment costs.

[4] Parameter allocations based on previous rate analyses, information provided by City, and rate setting practices.

We have relied on the information that is available for allocating costs to the various categories, as well as relied upon professional judgment and standard estimating practices used in rate setting to allocate costs across flow, BOD, and TSS parameters. The wastewater revenue requirement has been allocated 40 percent to fixed service charges, 15 percent to the collection system, and 45 percent to treatment. Sewer treatment costs have been allocated 34 percent to flow, 33 percent to BOD, and 33 percent to TSS. We believe these allocations are reasonable and are within the ranges found in other wastewater rate analyses.

The unit costs from Table 18 are applied to the annual wastewater flows, as well as BOD and TSS loadings associated with each customer class (see Table 17) to arrive at the allocation of total costs to each customer class. Table 19 presents the allocation of costs to each user class.

Table 19: Allocation of Sewer Costs to Users[1]

No. of DUs/ Accts.	Customer Class	Fixed Charge Costs: Customer Unit Cost = $33.60 per account	Fixed Charge Costs: Capacity Unit Cost = $484.98 per ESFD	Usage Charge Costs: Collection: Flow Unit Cost = $3,906.06 per MG	Usage Charge Costs: Treatment: Flow Unit Cost = $3,984.19 per MG	Usage Charge Costs: Treatment: BOD Unit Cost = $1.52 per lbs BOD	Usage Charge Costs: Treatment: SS Unit Cost = $1.95 per lbs TSS	Allocation of Total Costs
	Residential							
3,690	Single Family Residential	$124,000	$1,789,500	$653,000	$666,100	$510,100	$543,500	$4,286,200
222	Single Family + ADU	$7,500	$71,300	$26,000	$26,600	$20,300	$21,600	$173,300
1,005	Multi-Family	$33,800	$388,300	$141,700	$144,500	$110,700	$117,900	$936,900
	Non-Residential							
339	Low Strength	$11,400	$407,700	$168,800	$172,300	$131,900	$140,500	$1,032,600
85	Medium Strength	$2,800	$108,600	$75,100	$76,600	$122,300	$124,900	$510,300
64	High Strength	$2,100	$78,900	$70,100	$71,500	$228,200	$175,000	$625,800
5,405	**Totals** (rounded)	**$181,600**	**$2,844,300**	**$1,134,700**	**$1,157,600**	**$1,123,500**	**$1,123,400**	**$7,565,000**

Notes:

[1] Unit costs from Table 16 are multiplied by the wastewater flow, the BOD loading, or the SS loading for each customer class from Table 15.

Table 20: Wastewater Rate Determination for FY 2021/22

No. of DUs/ Accts.	Customer Class	Estimated Annual Sewer Flow	BOD Strength	TSS Strength	Monthly Fixed Charge	Usage Rate [1]	Fixed Charges	Usage Charges	Total Annual Revenue
		HCF	mg/l	mg/l	$/DU	$/HCF			
	Residential								
3,690	Single Family Residential	223,500	240	200	$43.21	$10.62	$1,913,300	$2,373,600	$4,287,000
222	Single Family + ADU	8,900	240	200	$29.58	$10.62	$78,800	$94,500	$174,000
1,005	Multi-Family	48,500	240	200	$35.00	$10.61	$422,100	$514,600	$937,000
	Non-Residential								
339	Low Strength	57,800	240	200	**Varies by**	**$9.55**	$419,100	$613,300	$1,032,000
85	Medium Strength	25,700	500	400	**Meter**	**$13.97**	$111,400	$398,900	$510,000
64	High Strength	24,000	1,000	600	**Size** [2]	**$20.44**	$81,000	$545,100	$626,000
5,405	**Totals**	**388,400**					**$3,025,700**	**$4,540,000**	**$7,566,000**

Notes:

[1] Wastewater usage rates apply to average winter water use for residential customers and actual monthly water use for non-residential customers.

[2] Monthly service charges for non-residential customers vary based on the size of the water meter (see Schedule WW-4).

Table 20 presents the final wastewater user rates and charges recommended for each customer class. Rates for residential customers include flat monthly charges for each DU. The logic for the relative pricing between the three residential account types is explained in Section 3.13.3. Non-residential (low, medium, and high strength) customers are subject to a monthly Service Charge based on meter size (see the meter equivalency schedule in Table 4) and wastewater usage rates applied to actual monthly water usage. Usage charges vary for each strength category.

No changes in the wastewater rate structure is proposed at this time, although the proposed rate schedule for July 2022 reflects the updated cost-of-service analysis, as presented herein.

3.13.5 Special Rates

The City currently has a few special rates applicable in certain circumstances. Recommendations related to these special circumstances are as follows:

Residential Flat Rates – Residential customers receiving wastewater service, but not water service, from the City should continue to be charged for service based on a flat monthly service charge. The sewer-only residential wastewater rate for single family customers was determined to be $96.31 per month based on the monthly service charge for single family customers, plus a usage charge based on an average winter water use among single family customers of 5 HCF.

Non-Residential Flat Rates – The City maintains a small number of nonresidential flat rate customers. The City should continue to charge these customers for wastewater service based on customer characteristics and estimated service demands for each account. The non-residential wastewater rate for these customers is determined based on a monthly service charge, plus a usage charge based on estimated flow and strength characteristics.

Wastewater Usage Rate for Special Situations – In limited situations, the City may provide wastewater service to customers with unique and/or significant wastewater discharge characteristics. Examples may include wineries, breweries, or food

processors with non-standard strength characteristics, or with wastewater flow that does not correlate with water usage like other nonresidential accounts.

In these situations, the City may determine it is reasonable and appropriate to calculate a special wastewater usage rate based on the specific wastewater flow characteristics of each special case customer.

The cost-of-service calculations described in the preceding pages resulted in unit costs for the volumetric portion of wastewater collection and treatment in terms of flow volume, pounds of BOD, and pounds of TSS. These unit costs for collection and treatment are the building blocks for wastewater usage rates.

Flow volume	$5.90 per HCF
BOD	$1.52 per pound
TSS	$1.95 per pound

An example calculation for developing a customer-specific wastewater usage rate for a special situation (a large winery) is shown below. The calculation relies on the unit costs identified above. The customized wastewater usage rate would be used in place of a standard (low, medium, or high) wastewater usage rate.

Sample Special Wastewater Usage Rate Calculation

Wastewater strength characteristics are estimated or determined through sampling. For this sample calculation, BOD is assumed to be 2,500 mg/l and TSS is assumed to be 1,000 mg/l.

Wastewater Usage Rate = $5.90 + [BOD x $1.52 + TSS x $1.95] x 8.34 /
1,000,000 x 748

= $5.90 + [2,500 x $1.52 + 1,000 x $1.95] x 8.34 /
1,000,000 x 748

= $5.90 + [$3,800 + $1,950] x 8.34 / 1,000,000 x 748

= $41.77 per HCF of wastewater flow

This customized wastewater usage rate would apply to the wastewater flow volume. To apply the wastewater usage rate to metered water usage a rate of return factor should be applied. For example, if it is determined that 80 percent of the water usage returns to the sewer system as wastewater then the appropriate wastewater usage rate, applied to metered water usage, would be $33.42/HCF of water usage (41.77 x 80%). A fixed service charge, based on meter size, would also be part of the wastewater bill.

The unit costs used in the sample calculation above should be adjusted commensurate with any future wastewater rate changes.

3.13.6 Proposed Wastewater Rate Schedule

Table 21 summarizes the proposed wastewater rate schedule for July 2022, which reflects an overall 8 percent increase from the current wastewater rates. The proposed wastewater rates are designed to generate the rate revenue requirements as identified by this Wastewater Utility Financial Plan.

Schedule WW-4 summarizes the proposed wastewater rate schedule for the next 5 years.

Table 21: Current and Proposed Wastewater Rates for FY 2022/23

Monthly Service Charge	**Current**	**Effective July 1, 2022**	
Single Family	$37.33	$43.21	per dwelling unit
Single Family with ADU (per DU)	$37.33	$29.58	per dwelling unit
Flat Rate[1]	$99.76	$96.31	per dwelling unit
Multifamily (per DU)	$34.50	$35.00	per dwelling unit
Non-Residential			
1" meter	$60.67	$70.14	per meter
1 1/2" meter	$118.49	$137.49	per meter
2" meter	$188.16	$218.31	per meter
3" meter	$350.82	$406.89	per meter
4" meter	$583.15	$676.29	per meter
10" meter	$2,673.10	$3,235.59	per meter
Wastewater Usage Rates ($/HCF)			
All Residential [2]	$10.41	$10.62	per HCF
Non-Residential [3]			
Low Strength	$9.37	$9.55	per HCF
Medium Strength	$13.62	$13.97	per HCF
High Strength	$19.85	$20.44	per HCF

[1] Applies to customers not receiving water service and assumes an average level of water usage (5 HCF).

[2] Applies to average winter water usage during the proceeding January to April period, with the highest month being omitted.

[3] Applies to actual monthly water usage.

Section 4. CONCLUSION

This 2022 Water and Wastewater Rate Study proposes updated utility rates for the City of Healdsburg. While the rate structures themselves required only limited updates, the financial plans for both utilities called for material increases in rate revenue. These rate increases are driven primarily by a change in the City's approach to managing its critical utility infrastructure. The City has developed detailed capital improvement plans that are designed to pro-actively repair and replace critical and aging infrastructure in order to ensure that the City can continue to provide safe and reliable utility services.

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 water rates are expected to enable the City to continue to provide reliable service to customers while meeting the state's mandates.

The water and wastewater rates, including the water shortage surcharges and special rates for Passalacqua, 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.

SCHEDULES

Schedule W-1 – Water Utility Budgeted and Projected Operating and Debt Expense

		FY2021/22	FY2022/23	FY2023/24	FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30	FY2030/31	FY2031/32
1	Wages	$695,900	$723,700	$752,600	$775,200	$798,500	$822,400	$847,100	$872,500	$898,700	$925,600	$953,400
2	Wages-Overtime	$24,000	$25,000	$26,000	$26,700	$27,500	$28,400	$29,200	$30,100	$31,000	$31,900	$32,900
3	Wages-Standby/On Call	$33,500	$34,800	$36,200	$37,300	$38,400	$39,600	$40,800	$42,000	$43,300	$44,600	$45,900
4	Fringe Benefits	$242,300	$252,000	$262,100	$269,900	$278,000	$286,400	$295,000	$303,800	$312,900	$322,300	$332,000
5	Fringe Benefits: PERS Employer Share UAL	$206,300	$214,500	$223,100	$229,800	$236,700	$243,800	$251,100	$258,700	$266,400	$274,400	$282,700
6	Fringe Benefits: REMIF Workers Comp Ins	$32,600	$33,900	$35,200	$36,300	$37,400	$38,500	$39,600	$40,800	$42,000	$43,300	$44,600
7	Personal Protective Equipment	$5,200	$5,400	$5,600	$5,800	$6,000	$6,100	$6,300	$6,500	$6,700	$6,900	$7,100
8	Other Employee Expenses: Employee Physic	$300	$300	$300	$300	$300	$400	$400	$400	$400	$400	$400
9	Other Employee Exp: Overtime Meals	$3,000	$3,100	$3,200	$3,300	$3,400	$3,500	$3,700	$3,800	$3,900	$4,000	$4,100
10	Building Maintenance Service Fee	$25,600	$26,600	$27,700	$28,500	$29,400	$30,300	$31,200	$32,100	$33,100	$34,100	$35,100
11	Vehicle Service Fee	$117,600	$122,300	$127,200	$131,100	$135,000	$139,000	$143,200	$147,500	$151,900	$156,500	$161,200
12	Vehicle Replacement Fee	$100,000	$104,000	$108,200	$111,400	$114,700	$118,200	$121,700	$125,400	$129,100	$133,000	$137,000
13	Insurance	$37,600	$39,100	$40,600	$41,800	$43,100	$44,400	$45,700	$47,100	$48,500	$50,000	$51,500
14	Telecommunication & Data Services	$15,000	$15,600	$16,200	$16,700	$17,200	$17,700	$18,300	$18,800	$19,400	$20,000	$20,600
15	Property Tax	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,300	$1,300	$1,300	$1,400
16	Contracted Services	$28,000	$29,100	$30,300	$31,200	$32,100	$33,100	$34,100	$35,100	$36,200	$37,200	$38,400
17	Meeting, Travel, and Training-Engineering	$1,100	$1,100	$1,200	$1,200	$1,300	$1,300	$1,300	$1,400	$1,400	$1,500	$1,500
18	Meeting, Travel, and Training-Maintenance	$3,500	$3,600	$3,800	$3,900	$4,000	$4,100	$4,300	$4,400	$4,500	$4,700	$4,800
19	Repairs and Maintenance	$120,000	$124,800	$129,800	$133,700	$137,700	$141,800	$146,100	$150,500	$155,000	$159,600	$164,400
20	License, Dues, Certs, Membrshps	$2,000	$2,100	$2,200	$2,200	$2,300	$2,400	$2,400	$2,500	$2,600	$2,700	$2,700
21	Rentals and Leases	$4,300	$4,500	$4,700	$4,800	$4,900	$5,100	$5,200	$5,400	$5,600	$5,700	$5,900
22	Office Supplies	$2,200	$2,300	$2,400	$2,500	$2,500	$2,600	$2,700	$2,800	$2,800	$2,900	$3,000
23	Noticing	$300	$300	$300	$300	$300	$400	$400	$400	$400	$400	$400
24	Government Fees	$700	$700	$800	$800	$800	$800	$900	$900	$900	$900	$1,000
25	Operational Expense	$180,000	$187,200	$194,700	$200,500	$206,500	$212,700	$219,100	$225,700	$232,500	$239,400	$246,600
26	Wages	$842,600	$876,300	$911,400	$938,700	$966,900	$995,900	$1,025,800	$1,056,600	$1,088,300	$1,120,900	$1,154,500
27	Wages-Overtime	$9,600	$10,000	$10,400	$10,700	$11,100	$11,400	$11,700	$12,100	$12,400	$12,800	$13,200
28	Wages-Standby/On Call	$16,100	$16,700	$17,400	$17,900	$18,400	$19,000	$19,600	$20,100	$20,800	$21,400	$22,000
29	Fringe Benefits	$316,800	$329,500	$342,700	$353,000	$363,600	$374,500	$385,700	$397,300	$409,200	$421,500	$434,100
30	Fringe Benefits: PERS Employer Share UAL	$55,800	$58,100	$60,400	$62,200	$64,100	$66,000	$68,000	$70,000	$72,100	$74,300	$76,500
31	Fringe Benefits: REMIF Workers Comp Ins	$49,600	$51,600	$53,700	$55,300	$57,000	$58,700	$60,400	$62,200	$64,100	$66,000	$68,000
32	Personal Protective Equipment	$11,200	$11,600	$12,100	$12,500	$12,900	$13,200	$13,600	$14,000	$14,500	$14,900	$15,300
33	Other Employee Exp: Overtime Meals	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,300	$1,300	$1,300	$1,400
34	Telecommunication & Data Services	$7,500	$7,800	$8,100	$8,300	$8,600	$8,800	$9,100	$9,400	$9,600	$9,900	$10,200
35	Utility Services	$280,000	$291,200	$302,800	$311,900	$321,300	$330,900	$340,900	$351,100	$361,600	$372,500	$383,600
36	Contracted Services	$85,000	$88,400	$91,900	$94,700	$97,500	$100,500	$103,500	$106,600	$109,800	$113,100	$116,500
37	Meeting, Travel, and Training	$7,500	$7,800	$8,100	$8,400	$8,600	$8,900	$9,100	$9,400	$9,700	$10,000	$10,300
38	Printing	$6,500	$6,800	$7,000	$7,200	$7,500	$7,700	$7,900	$8,200	$8,400	$8,600	$8,900
39	Repairs and Maintenance	$10,500	$10,900	$11,300	$11,700	$12,000	$12,400	$12,700	$13,100	$13,500	$13,900	$14,300
40	License, Dues, Certs, Membrshps	$2,800	$2,900	$3,000	$3,100	$3,200	$3,300	$3,300	$3,400	$3,600	$3,700	$3,800
41	Rentals and Leases	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,300	$1,300	$1,300	$1,400
42	Office Supplies	$5,000	$5,200	$5,400	$5,600	$5,700	$5,900	$6,100	$6,300	$6,500	$6,700	$6,900
43	Government Fees	$28,000	$29,100	$30,300	$31,200	$32,100	$33,100	$34,100	$35,100	$36,200	$37,200	$38,400
44	Operational Expense	$192,100	$199,800	$207,800	$214,100	$220,500	$227,100	$233,900	$240,900	$248,100	$255,600	$263,300
45	Conservation & Energy Rebates	$30,000	$31,200	$32,400	$33,400	$34,400	$35,500	$36,500	$37,600	$38,700	$39,900	$41,100
46	Overhead Allocation	$438,400	$526,000	$547,000	$563,500	$580,400	$597,800	$615,700	$634,200	$653,200	$672,800	$693,000
47	Information Services Service Fee	$181,400	$188,600	$196,200	$202,000	$208,100	$214,300	$220,800	$227,400	$234,200	$241,200	$248,500
48	Building Maintenance Service Fee	$25,500	$26,500	$27,500	$28,400	$29,200	$30,100	$31,000	$31,900	$32,900	$33,900	$34,900
49	Insurance	$92,800	$96,500	$100,400	$103,400	$106,500	$109,700	$113,000	$116,400	$119,900	$123,500	$127,200
50	Bank Fees	$35,000	$36,400	$37,900	$39,000	$40,200	$41,400	$42,600	$43,900	$45,200	$46,600	$48,000
51	Debt Service	$1,058,000	$1,063,000	$946,000	$780,000	$785,000	$632,000	$517,000	$518,000	$516,000	$520,000	$316,000
52	**Totals**	**$5,671,700**	**$5,930,900**	**$6,008,900**	**$5,994,700**	**$6,156,100**	**$6,164,700**	**$6,215,400**	**$6,387,700**	**$6,561,600**	**$6,746,800**	**$6,729,900**

Schedule W-2 – Water Utility Capital Spending Request (in 2022 dollars)

	Project	Driver	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	College Street Sewer and Water Main Replacement	fire capacity backbone	$765,900				
2	Scenic Water Main Replacement	condition - low pressure	$292,500				
4	McDonough Water Transmission Main Replacement	fire capacity backbone / condition		$108,000	$1,080,000		
5	Brown Street Sewer and Water Replacement	condition		$79,200	$793,800		
6	University Street Sewer and Water Replacement	fire capacity backbone			$88,200	$793,800	
7	Reed Court and Bianca Lane Sewer and Water Replacement	fire capacity backbone					$92,700
8	Healdsburg North	fire capacity backbone				$81,000	$810,000
9	Fitch Water Treatment Building Modernization	condition				$234,900	
10	Abandonment and Sale of Old Dry Creek Well Field	hazard mitigation			$54,000		
11	Dry Creek Water Treatment Plant Clear Well Leak Repair	condition	$46,800	$316,800			
12	Gauntlett/Iverson Roof Repair & Replacement	condition	$883,800				
13	Well Rehabilitation Program	reliability / resilience	$78,300	$81,000	$83,700	$86,400	$88,200
14	UV treatment for Cryptosporidium at Fitch	regulatory compliance	$135,000				
15	UV treatment for Cryptosporidium at Dry Creek	regulatory compliance	$18,000	$139,500			
16	CMMS Software for Linear Assets	prudent infrastructure stewardsh	$74,700				
17	Replacement Chlorine Generators at Dry Creek and WTP	regulatory compliance	$45,000		$45,000		
18	Filtration for Fitch Well Field	reliability / resilience					$450,000
19	Replacement Membranes for the Gauntlett Water Treatment Plant	regulatory compliance					$405,000
			$2,340,000	**$724,500**	**$2,144,700**	**$1,196,100**	**$1,845,900**

Estimated Annual Spending after FY 2024/25: $2.16M to $2.27M (in 2022 dollars)

Deferred Projects	Driver	Estimated Cost (2022 dollars)
Fitch Filtration Plant	reliability / resilience	$5,000,000
University Street Sewer and Water Replacement (North Street to Mason St)	fire capacity backbone	$935,000
Johnson Street Sewer and Water	fire capacity backbone	$940,500
	Totals:	**$6,875,500**

Schedule W-3 – Water Utility Cash Flow Pro Formas (1 of 2)

WATER OPERATING FUND (520)

		Budget FY2022	Forecast FY2023	Forecast FY2024	Forecast FY2025	Forecast FY2026	Forecast FY2027	Forecast FY2028	Forecast FY2029	Forecast FY2030	Forecast FY2031	Forecast FY2032
1	**Rate Revenue Increase:**		**2.0%**	**8.0%**	**8.0%**	**5.0%**	**5.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**0.0%**
	Revenue											
2	**Water Rate Revenue**	$6,237,000	$6,058,000	$6,215,000	$7,061,000	$7,809,000	$8,245,000	$8,705,000	$8,930,000	$9,161,000	$9,398,000	$9,641,000
3	Change due to growth & use		$36,000	$349,000	$183,000	$46,000	$48,000	$51,000	$52,000	$54,000	$55,000	$57,000
4	Increase due to rate adjustments		$121,000	$497,000	$565,000	$390,000	$412,000	$174,000	$179,000	$183,000	$188,000	$0
5	Sales shortfall due to water usage reduction	($1,000,000)										
	Non-Rate Revenues											
6	Interest Earnings	$44,000	$36,000	$35,000	$40,000	$43,000	$46,000	$48,000	$49,000	$50,000	$51,000	$53,000
7	Operating Revenue	$17,000	$17,000	$17,000	$17,000	$17,000	$17,000	$17,000	$17,000	$17,000	$17,000	$17,000
8	**Total Revenue**	**$5,298,000**	**$6,268,000**	**$7,113,000**	**$7,866,000**	**$8,305,000**	**$8,768,000**	**$8,995,000**	**$9,227,000**	**$9,465,000**	**$9,709,000**	**$9,768,000**
	O&M Costs											
9	Employee Costs	$2,525,000	$2,626,000	$2,731,000	$2,813,000	$2,898,000	$2,984,000	$3,074,000	$3,166,000	$3,261,000	$3,359,000	$3,460,000
10	Utilities & Fuel	$280,000	$291,000	$303,000	$312,000	$321,000	$331,000	$341,000	$351,000	$362,000	$372,000	$384,000
11	Professional Services	$368,000	$383,000	$398,000	$410,000	$422,000	$435,000	$448,000	$461,000	$475,000	$489,000	$504,000
12	Maintenance & Operations	$788,000	$820,000	$852,000	$878,000	$904,000	$931,000	$959,000	$988,000	$1,018,000	$1,048,000	$1,080,000
13	General Administration	$623,000	$718,000	$746,000	$769,000	$792,000	$815,000	$840,000	$865,000	$891,000	$918,000	$945,000
14	Conservation	$30,000	$31,000	$32,000	$33,000	$34,000	$35,000	$37,000	$38,000	$39,000	$40,000	$41,000
15	***Total Operating Expenses***	**$4,614,000**	**$4,869,000**	**$5,062,000**	**$5,215,000**	**$5,371,000**	**$5,531,000**	**$5,699,000**	**$5,869,000**	**$6,046,000**	**$6,226,000**	**$6,414,000**
	Capital Costs											
16	**Total Capital Spending**	**$805,000**	**$2,230,000**	**$1,293,000**	**$2,077,000**	**$2,503,000**	**$2,578,000**	**$2,788,000**	**$2,871,000**	**$2,958,000**	**$3,046,000**	**$3,138,000**
17	Existing Debt Service	$1,058,000	$1,063,000	$946,000	$780,000	$785,000	$632,000	$517,000	$518,000	$516,000	$520,000	$316,000
18	Transfer Out	58,000	341,000	894,000	1,684,000	2,040,000	2,490,000	2,722,000	2,783,000	2,843,000	2,903,000	3,023,000
19	***Total Capital Expenses***	**$1,116,000**	**$1,404,000**	**$1,840,000**	**$2,464,000**	**$2,825,000**	**$3,122,000**	**$3,239,000**	**$3,301,000**	**$3,359,000**	**$3,423,000**	**$3,339,000**
20	**Total Revenue Requirement**	**$5,730,000**	**$6,273,000**	**$6,902,000**	**$7,679,000**	**$8,196,000**	**$8,653,000**	**$8,938,000**	**$9,170,000**	**$9,405,000**	**$9,649,000**	**$9,753,000**
21	**Beginning Year Balance - 520**	**$2,196,000**	**$1,764,000**	**$1,759,000**	**$1,970,000**	**$2,157,000**	**$2,266,000**	**$2,381,000**	**$2,438,000**	**$2,495,000**	**$2,555,000**	**$2,615,000**
22	**Surplus/(Shortfall)**	**($432,000)**	**($5,000)**	**$211,000**	**$187,000**	**$109,000**	**$115,000**	**$57,000**	**$57,000**	**$60,000**	**$60,000**	**$15,000**
23	**End of Year Balance - 520**	**$1,764,000**	**$1,759,000**	**$1,970,000**	**$2,157,000**	**$2,266,000**	**$2,381,000**	**$2,438,000**	**$2,495,000**	**$2,555,000**	**$2,615,000**	**$2,630,000**
24	*Debt Reserve*	$205,000	$205,000	$205,000	$205,000	$205,000	$205,000	$205,000	$205,000	$205,000	$205,000	$205,000
25	*Contingency Reserve*	$1,559,000	$1,554,000	$1,765,000	$1,952,000	$2,061,000	$2,176,000	$2,233,000	$2,290,000	$2,350,000	$2,410,000	$2,425,000
26	*Available Cash*	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Debt Coverage Calculations											
27	*Revenue Available for Debt Service**	$1,689,700	$1,628,500	$2,246,200	$2,842,200	$3,121,500	$3,418,700	$3,480,300	$3,544,500	$3,607,500	$3,673,000	$3,545,100
28	*Total Yearly Parity Debt Payment*	*$1,058,000*	*$1,063,000*	*$946,000*	*$780,000*	*$785,000*	*$632,000*	*$517,000*	*$518,000*	*$516,000*	*$520,000*	*$316,000*
29	**Debt Coverage Ratio**	**1.60**	**1.53**	**2.37**	**3.64**	**3.98**	**5.41**	**6.73**	**6.84**	**6.99**	**7.06**	**11.22**

* Includes Development Capacity Charge revenue

Schedule W-3 – Water Utility Cash Flow Pro Formas (2 of 2)

WATER CAPITAL REPLACEMENT RESERVE (522)

		Budget 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032
1	**Beginning Balance - 522**	979,000	$969,000	$310,000	$10,000	$373,000	$82,000	$164,000	$274,000	$370,000	$447,000	$502,000
	Revenues											
2	Interest Income	$19,700	$19,500	$6,200	$200	$7,500	$1,700	$3,300	$5,500	$7,500	$9,000	$10,100
3	Transfer In	58,000	341,000	894,000	1,684,000	2,040,000	2,490,000	2,722,000	2,783,000	2,843,000	2,903,000	3,023,000
4	**Total Revenues**	**$77,700**	**$360,500**	**$900,200**	**$1,684,200**	**$2,047,500**	**$2,491,700**	**$2,725,300**	**$2,788,500**	**$2,850,500**	**$2,912,000**	**$3,033,100**
	Expenditures											
5	Capital Projects	$88,000	$1,020,000	$1,200,000	$1,321,000	$2,339,000	$2,410,000	$2,615,000	$2,693,000	$2,774,000	$2,857,000	$2,943,000
6	**Ending Balance - 522**	**969,000**	**310,000**	**10,000**	**373,000**	**82,000**	**164,000**	**274,000**	**370,000**	**447,000**	**502,000**	**592,000**

WATER DEVELOPMENT CAPACITY CHARGE FUND (920)

		Budget 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032
1	**Beginning Balance - 920**	$1,400,000	$1,669,000	$669,000	$765,000	$200,000	$217,000	$229,000	$237,000	$240,000	$237,000	$229,000
	Revenues											
2	Interest Income	$28,000	$34,000	$13,000	$15,000	$4,000	$4,000	$5,000	$5,000	$5,000	$5,000	$5,000
3	Development Capacity Charges	$958,000	$176,000	$176,000	$176,000	$176,000	$176,000	$176,000	$176,000	$176,000	$176,000	$176,000
5	**Total Revenues**	**$986,000**	**$210,000**	**$189,000**	**$191,000**	**$180,000**	**$180,000**	**$181,000**	**$181,000**	**$181,000**	**$181,000**	**$181,000**
	Expenditures											
6	Transfer out	$717,000	$1,210,000	$93,000	$756,000	$163,000	$168,000	$173,000	$178,000	$184,000	$189,000	$195,000
7	**Ending Balance - 920**	**$1,669,000**	**$669,000**	**$765,000**	**$200,000**	**$217,000**	**$229,000**	**$237,000**	**$240,000**	**$237,000**	**$229,000**	**$215,000**

Schedule W-4 – Five-Year Schedule of Proposed Water Rates

	Current Rates	Effective July 1, 2022	Effective July 1, 2023	Effective July 1, 2024	Effective July 1, 2025	Effective July 1, 2026
Water Usage Rates ($/HCF)						
All Potable Water Use	**$5.51**	$6.00	$6.48	$7.00	$7.35	$7.72
Riverview HOA [1]	**$1.44**	$1.47	$1.59	$1.71	$1.80	$1.89
Fixed Monthly Service Charges						
Single Family	**$23.19**	$26.49	$28.61	$30.90	$32.45	$34.07
Single Family + ADU (per DU)	**$23.19**	$20.22	$21.84	$23.59	$24.77	$26.01
Multi-Family (per DU)	**$16.13**	$15.75	$17.01	$18.37	$19.29	$20.25
Non-Residential						
Up to 1" Meter	**$37.09**	$41.91	$45.26	$48.88	$51.32	$53.89
1 1/2" Meter	**$71.54**	$80.46	$86.90	$93.85	$98.54	$103.47
2" Meter	**$113.07**	$126.72	$136.86	$147.81	$155.20	$162.96
3" Meter	**$210.02**	$234.66	$253.43	$273.70	$287.39	$301.76
4" Meter	**$348.47**	$388.86	$419.97	$453.57	$476.25	$500.06
6" Meter	**$694.27**	$1,044.21	$1,127.75	$1,217.97	$1,278.87	$1,342.81
8" Meter	**$1,109.42**	$1,391.16	$1,502.45	$1,622.65	$1,703.78	$1,788.97
10" Meter	**$1,593.91**	$1,853.76	$2,002.06	$2,162.22	$2,270.33	$2,383.85
12" Meter	**$2,977.63**	$2,605.49	$2,813.93	$3,039.04	$3,190.99	$3,350.54

[1] Rate applicable to Riverview HOA for non-potable water under terms of 1997 order of condemnation.

Schedule WW-1 – Wastewater Utility Budgeted and Projected Operating and Debt Expense

		FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032
1	Wages	$701,300	$729,300	$758,500	$781,200	$804,700	$828,800	$853,700	$879,300	$905,700	$932,800	$960,800
2	Wages-Overtime	$8,500	$8,800	$9,200	$9,500	$9,800	$10,000	$10,300	$10,700	$11,000	$11,300	$11,600
3	Fringe Benefits	$243,900	$253,700	$263,800	$271,800	$279,900	$288,300	$297,000	$305,900	$315,000	$324,500	$334,200
4	Fringe Benefits: PERS Employer Share UAL	$114,900	$119,500	$124,300	$128,000	$131,800	$135,800	$139,900	$144,000	$148,400	$152,800	$157,400
5	Fringe Benefits: REMIF Workers Comp Ins	$33,400	$34,700	$36,100	$37,200	$38,300	$39,400	$40,600	$41,800	$43,100	$44,400	$45,700
6	Personal Protective Equipment	$6,600	$6,900	$7,100	$7,400	$7,600	$7,800	$8,000	$8,300	$8,500	$8,800	$9,000
7	Building Maintenance Service Fee	$76,700	$79,700	$82,900	$85,400	$88,000	$90,600	$93,300	$96,100	$99,000	$102,000	$105,000
8	Vehicle Service Fee	$135,300	$140,700	$146,300	$150,700	$155,200	$159,900	$164,700	$169,600	$174,700	$180,000	$185,400
9	Vehicle Replacement Fee	$100,000	$104,000	$108,200	$111,400	$114,700	$118,200	$121,700	$125,400	$129,100	$133,000	$137,000
10	Telecommunication & Data Services	$13,000	$13,500	$14,100	$14,500	$14,900	$15,400	$15,800	$16,300	$16,800	$17,300	$17,800
11	Contracted Services	$45,000	$46,800	$48,700	$50,100	$51,600	$53,200	$54,800	$56,400	$58,100	$59,900	$61,700
12	Meeting, Travel, and Training-Engineering	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,300	$1,300	$1,300	$1,400
13	Meeting, Travel, and Training-Maintenance	$4,800	$5,000	$5,200	$5,300	$5,500	$5,700	$5,800	$6,000	$6,200	$6,400	$6,600
14	Repairs and Maintenance	$92,000	$95,700	$99,500	$102,500	$105,600	$108,700	$112,000	$115,400	$118,800	$122,400	$126,100
15	License, Dues, Certs, Membrshps	$3,400	$3,500	$3,600	$3,700	$3,900	$4,000	$4,100	$4,200	$4,300	$4,500	$4,600
16	Rentals and Leases	$5,800	$6,000	$6,300	$6,500	$6,700	$6,900	$7,100	$7,300	$7,500	$7,700	$7,900
17	Land, Bldg, Vehicles and Equipment	$76,000	$79,000	$82,200	$84,700	$87,200	$89,800	$92,500	$95,300	$98,200	$101,100	$104,100
18	Office Supplies	$2,700	$2,800	$2,900	$3,000	$3,100	$3,200	$3,300	$3,400	$3,500	$3,600	$3,700
19	Noticing	$600	$600	$600	$600	$600	$700	$700	$700	$700	$700	$800
20	Operational Expense	$78,000	$81,100	$84,400	$86,900	$89,500	$92,200	$95,000	$97,800	$100,700	$103,800	$106,900
21	Wages	$1,045,000	$1,086,800	$1,130,300	$1,164,200	$1,199,100	$1,235,100	$1,272,200	$1,310,300	$1,349,600	$1,390,100	$1,431,800
22	Wages-Overtime	$30,900	$32,100	$33,400	$34,400	$35,400	$36,500	$37,600	$38,700	$39,900	$41,100	$42,300
23	Wages-Standby/On Call	$16,100	$16,700	$17,400	$17,900	$18,400	$19,000	$19,600	$20,100	$20,800	$21,400	$22,000
24	Fringe Benefits	$400,500	$416,500	$433,200	$446,200	$459,600	$473,300	$487,500	$502,200	$517,200	$532,700	$548,700
25	Fringe Benefits: PERS Employer Share UAL	$155,300	$161,500	$168,000	$173,000	$178,200	$183,500	$189,000	$194,700	$200,600	$206,600	$212,800
26	Fringe Benefits: REMIF Workers Comp Ins	$59,800	$62,200	$64,700	$66,600	$68,600	$70,700	$72,800	$75,000	$77,200	$79,500	$81,900
27	Personal Protective Equipment	$7,200	$7,500	$7,800	$8,000	$8,300	$8,500	$8,800	$9,000	$9,300	$9,600	$9,900
28	Telecommunication & Data Services	$700	$700	$700	$700	$800	$800	$800	$800	$900	$900	$900
29	Utility Services	$410,000	$426,400	$443,500	$456,800	$470,500	$484,600	$499,100	$514,100	$529,500	$545,400	$561,800
30	Contracted Services	$90,000	$93,600	$97,300	$100,300	$103,300	$106,400	$109,600	$112,800	$116,200	$119,700	$123,300
31	Meeting, Travel, and Training	$7,500	$7,800	$8,100	$8,400	$8,600	$8,900	$9,100	$9,400	$9,700	$10,000	$10,300
32	Repairs and Maintenance	$7,000	$7,300	$7,600	$7,800	$8,100	$8,300	$8,600	$8,800	$9,100	$9,400	$9,600
33	License, Dues, Certs, Membrshps	$10,500	$10,900	$11,400	$11,700	$12,000	$12,400	$12,800	$13,200	$13,600	$14,000	$14,400
34	Rentals and Leases	$8,000	$8,300	$8,700	$8,900	$9,200	$9,500	$9,700	$10,000	$10,300	$10,600	$11,000
35	Office Supplies	$4,000	$4,200	$4,300	$4,500	$4,600	$4,700	$4,900	$5,000	$5,200	$5,300	$5,500
36	Noticing	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,300	$1,300	$1,300	$1,400
37	Government Fees	$22,000	$22,900	$23,800	$24,500	$25,200	$26,000	$26,800	$27,600	$28,400	$29,300	$30,100
38	Operational Expense	$401,700	$417,700	$434,400	$447,500	$460,900	$474,700	$489,000	$503,600	$518,700	$534,300	$550,300
39	Transfers Out	$618,200	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
40	Overhead Allocation	$497,300	$596,000	$619,800	$638,400	$657,600	$677,300	$697,600	$718,600	$740,100	$762,300	$785,200
41	Information Services Service Fee	$277,100	$288,200	$299,700	$308,700	$318,000	$327,500	$337,400	$347,500	$357,900	$368,600	$379,700
42	Insurance	$110,500	$114,900	$119,500	$123,100	$126,800	$130,600	$134,500	$138,500	$142,700	$147,000	$151,400
43	Bank Fees	$35,000	$36,400	$37,900	$39,000	$40,200	$41,400	$42,600	$43,900	$45,200	$46,600	$48,000
44	Debt Service	$1,954,000	$1,957,000	$1,791,000	$1,795,000	$1,791,000	$1,796,000	$1,795,000	$1,793,000	$1,794,000	$1,796,000	$1,795,000
45	**Totals**	**$7,912,200**	**$7,588,900**	**$7,648,600**	**$7,828,200**	**$8,005,200**	**$8,196,700**	**$8,387,700**	**$8,583,300**	**$8,788,000**	**$9,000,000**	**$9,215,000**

Schedule WW-2 – Wastewater Utility Capital Spending Request (2022 dollars)

	Budgeted Project	Driver	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	College Street Sewer and Water Main Replacement	condition	$634,000				
2	Healdsburg Avenue Sewer Replacement	condition	$1,000,000				
3	McDonough Water Transmission Main Replacement	condition		$30,000	$300,000		
4	Brown Street Sewer and Water Replacement	condition		$88,000	$882,000		
5	University Street Sewer and Water Replacement	condition			$98,000	$882,000	
6	Reed Court and Bianca Lane Sewer and Water Replacement	condition			$0	$91,000	$817,000
7	Corp Yard Force Main - Westside Rd Gravity Sewer - Hendricks Lift Station	condition			$50,000	$334,000	
8	Corporation Yard Vactor Station and Pump Station	condition		$188,000	$1,250,000		
9	Reroof Pump Shop	condition	$40,000				
10	Water Reclamation Facility Membranes and Accessories	regulatory compliance	$191,000	$197,000			
11	WRF Dewatered Biosolids Modifications	operational change		$200,000			
12	Recycled Water System Expansion	regulatory compliance	$1,900,000				
13		**Totals:**	**$3,765,000**	**$703,000**	**$2,580,000**	**$1,307,000**	**$817,000**

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032
Budgeted Capital Spending in Out Years:	**$1,944,000**	**$1,944,000**	**$1,944,000**	**$1,944,000**	**$2,592,000**	**$3,240,000**	**$3,240,000**

	Deferred Projects	Driver	Estimated Cost (2022 dollars)
14	WRF Biosolids Dewatering Improvements	reliability / resilience	$1,650,000
15	I&I Reduction Investigation	regulatory compliance	$300,000
16	I&I Reduction Improvements/ Condition Based Rehab/Replacement, Basin 1	regulatory compliance	$3,000,000
17	Grove Street and Vine Street Sewer Trunk Main Replacement	capacity	$3,575,000
18	University Street Sewer and Water Replacement (North Street to Mason St)	condition	$935,000
19	Johnson Street Sewer and Water	condition	$85,500
		Totals:	**$9,545,500**

Schedule WW-3 – Wastewater Utility Cash Flow Pro Formas (1 of 2)

WASTEWATER OPERATING FUND (530)

		Budget FY2022	Forecast FY2023	Forecast FY2024	Forecast FY2025	Forecast FY2026	Forecast FY2027	Forecast FY2028	Forecast FY2029	Forecast FY2030	Forecast FY2031	Forecast FY2032
1	**Rate Revenue Increase:**	**8.0%**	**8.0%**	**7.0%**	**6.0%**	**6.0%**	**6.0%**	**6.0%**	**5.0%**	**6.0%**	**6.0%**	**5.0%**
	Revenue											
2	**Wastewater Rate Revenue**	$7,004,552	$7,005,000	$7,606,000	$8,259,000	$8,885,000	$9,470,000	$10,094,000	$10,759,000	$11,360,000	$12,109,000	$12,907,000
3	Change due to growth & use		$41,000	$45,000	$48,000	$52,000	$56,000	$59,000	$63,000	$67,000	$71,000	$76,000
4	Increase due to rate adjustments		$560,000	$608,000	$578,000	$533,000	$568,000	$606,000	$538,000	$682,000	$727,000	$645,000
	Non-Rate Revenues											
5	Interest Earnings	$70,000	$60,000	$42,000	$39,000	$42,000	$45,000	$48,000	$51,000	$54,000	$57,000	$61,000
6	Operating Revenue	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000
7	**Total Revenue**	**$7,096,552**	**$7,688,000**	**$8,323,000**	**$8,946,000**	**$9,534,000**	**$10,161,000**	**$10,829,000**	**$11,433,000**	**$12,185,000**	**$12,986,000**	**$13,711,000**
	O&M Costs											
8	Employee Costs	$3,357,000	$3,491,000	$3,631,000	$3,740,000	$3,852,000	$3,968,000	$4,087,000	$4,209,000	$4,335,000	$4,465,000	$4,599,000
9	Utilities & Fuel	$410,000	$426,000	$443,000	$457,000	$470,000	$485,000	$499,000	$514,000	$530,000	$545,000	$562,000
10	Maintenance & Operations	$897,000	$933,000	$971,000	$1,000,000	$1,030,000	$1,061,000	$1,093,000	$1,125,000	$1,159,000	$1,194,000	$1,230,000
11	General Administration	$675,000	$781,000	$812,000	$837,000	$862,000	$888,000	$914,000	$942,000	$970,000	$999,000	$1,029,000
12	***Total Operating Expenses***	**$5,339,000**	**$5,631,000**	**$5,857,000**	**$6,034,000**	**$6,214,000**	**$6,402,000**	**$6,593,000**	**$6,790,000**	**$6,994,000**	**$7,203,000**	**$7,420,000**
	Capital Costs											
13	**Total Capital Spending**	**$702,000**	**$2,658,000**	**$1,400,000**	**$910,000**	**$2,231,000**	**$2,298,000**	**$2,367,000**	**$2,438,000**	**$3,348,000**	**$4,310,000**	**$4,439,000**
14	Existing Debt Service	$1,954,000	$1,957,000	$1,791,000	$1,795,000	$1,791,000	$1,796,000	$1,795,000	$1,793,000	$1,794,000	$1,796,000	$1,795,000
15	Transfer Out	$1,054,552	$275,000	$538,000	$961,000	$1,382,000	$1,807,000	$2,275,000	$2,700,000	$3,210,000	$3,787,000	$4,316,000
16	***Total Capital Expenses***	**$3,008,552**	**$2,232,000**	**$2,329,000**	**$2,756,000**	**$3,173,000**	**$3,603,000**	**$4,070,000**	**$4,493,000**	**$5,004,000**	**$5,583,000**	**$6,111,000**
	Transfers											
17	Transfer In from Drainage Capital Fund	$26,000	$26,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
18	Transfer In from Fund 930	$300,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
19	**Total Revenue Requirement**	**$8,021,552**	**$7,837,000**	**$8,186,000**	**$8,790,000**	**$9,387,000**	**$10,005,000**	**$10,663,000**	**$11,283,000**	**$11,998,000**	**$12,786,000**	**$13,531,000**
20	**Beginning Year Balance - 530**	**$3,002,000**	**$2,077,000**	**$1,928,000**	**$2,065,000**	**$2,221,000**	**$2,368,000**	**$2,524,000**	**$2,690,000**	**$2,840,000**	**$3,027,000**	**$3,227,000**
21	**Surplus/(Shortfall)**	**($925,000)**	**($149,000)**	**$137,000**	**$156,000**	**$147,000**	**$156,000**	**$166,000**	**$150,000**	**$187,000**	**$200,000**	**$180,000**
22	**End of Year Balance - 530**	**$2,077,000**	**$1,928,000**	**$2,065,000**	**$2,221,000**	**$2,368,000**	**$2,524,000**	**$2,690,000**	**$2,840,000**	**$3,027,000**	**$3,227,000**	**$3,407,000**
23	*Contingency Reserve*	$1,751,000	$1,902,000	$2,065,000	$2,221,000	$2,368,000	$2,524,000	$2,690,000	$2,840,000	$3,027,000	$3,227,000	$3,407,000
24	*Available Cash*	$326,000	$26,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Debt Coverage Calculations											
25	*Revenue Available for Debt Service**	$4,295,652	$2,433,200	$2,773,100	$3,205,700	$3,617,500	$4,043,800	$4,513,900	$4,922,900	$5,479,700	$6,072,300	$6,572,800
26	*Total Yearly Parity Debt Payment*	*$1,954,000*	*$1,957,000*	*$1,791,000*	*$1,795,000*	*$1,791,000*	*$1,796,000*	*$1,795,000*	*$1,793,000*	*$1,794,000*	*$1,796,000*	*$1,795,000*
27	**Debt Coverage Ratio**	**2.20**	**1.24**	**1.55**	**1.79**	**2.02**	**2.25**	**2.51**	**2.75**	**3.05**	**3.38**	**3.66**

* Includes Development Capacity Charge revenue

Schedule WW-3 – Wastewater Utility Cash Flow Pro Formas (2 of 2)

WASTEWATER CAPITAL REPLACEMENT RESERVE (532)

		Budget FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025	Forecast FY 2026	Forecast FY 2027	Forecast FY 2028	Forecast FY 2029	Forecast FY 2030	Forecast FY 2031	Forecast FY 2032
1	**Beginning Balance - 532**	$736,000	$1,526,552	$1,617,552	$1,172,552	$1,362,552	$684,552	$359,552	$434,552	$873,552	$929,552	$609,552
	Revenues											
2	Interest Income	$49,000	$31,000	$33,000	$24,000	$27,000	$14,000	$7,000	$9,000	$18,000	$19,000	$12,000
3	Transfer In	1,054,552	275,000	538,000	961,000	1,382,000	1,807,000	2,275,000	2,700,000	3,210,000	3,787,000	4,316,000
4	**Total Revenues**	**$1,103,552**	**$306,000**	**$571,000**	**$985,000**	**$1,409,000**	**$1,821,000**	**$2,282,000**	**$2,709,000**	**$3,228,000**	**$3,806,000**	**$4,328,000**
	Expenditures											
5	Loan	$113,000	$113,000	$113,000	$113,000	$113,000	$113,000	$113,000	$113,000	$113,000	$113,000	$113,000
6	Capital Projects	$200,000	$102,000	$903,000	$682,000	$1,974,000	$2,033,000	$2,094,000	$2,157,000	$3,059,000	$4,013,000	$4,133,000
7	**Ending Balance - 532**	**$1,526,552**	**$1,617,552**	**$1,172,552**	**$1,362,552**	**$684,552**	**$359,552**	**$434,552**	**$873,552**	**$929,552**	**$609,552**	**$691,552**

WASTEWATER DEVELOPMENT CAPACITY CHARGE FUND (930)

		Budget 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032
1	**Beginning Balance - 930**	$1,428,000	$2,789,100	$553,300	$330,400	$372,100	$385,600	$392,400	$391,300	$382,200	$363,900	$337,200
	Revenues											
2	Interest Income	$12,100	$56,200	$11,100	$6,700	$7,500	$7,800	$7,900	$7,900	$7,700	$7,300	$6,800
3	Development Capacity Charges	$2,151,000	$263,000	$263,000	$263,000	$263,000	$263,000	$263,000	$263,000	$263,000	$263,000	$263,000
4	**Total Revenues**	**$2,163,100**	**$319,200**	**$274,100**	**$269,700**	**$270,500**	**$270,800**	**$270,900**	**$270,900**	**$270,700**	**$270,300**	**$269,800**
	Expenditures											
5	Capacity Charge Funded Capital Projec	$502,000	$2,555,000	$497,000	$228,000	$257,000	$264,000	$272,000	$280,000	$289,000	$297,000	$306,000
6	Transfer Out to 530	$300,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	**Total Expenditures**	**$802,000**	**$2,555,000**	**$497,000**	**$228,000**	**$257,000**	**$264,000**	**$272,000**	**$280,000**	**$289,000**	**$297,000**	**$306,000**
8	**Ending Balance - 930**	**$2,789,100**	**$553,300**	**$330,400**	**$372,100**	**$385,600**	**$392,400**	**$391,300**	**$382,200**	**$363,900**	**$337,200**	**$301,000**

Schedule WW-4 – Five-Year Schedule of Proposed Wastewater Rates

		Proposed Effective Date				
	Current	July 1, 2022	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026
Monthly Residential Service Charges						
Single Family	**$37.33**	$43.21	$46.67	$49.94	$52.94	$56.12
Single Family + ADU (per DU)	**$37.33**	$29.58	$31.95	$34.19	$36.24	$38.41
Flat Rate[1]	**$99.76**	$96.31	$104.01	$111.29	$117.97	$125.05
Multifamily (per DU)	**$34.50**	$35.00	$37.80	$40.45	$42.88	$45.45
Monthly Non-Residential Service Charges (per meter)						
Up to 1" meter	**$60.67**	$70.14	$75.75	$81.05	$85.91	$91.06
1 1/2" meter	**$118.49**	$137.49	$148.49	$158.88	$168.41	$178.51
2" meter	**$188.16**	$218.31	$235.77	$252.27	$267.41	$283.45
3" meter	**$350.82**	$406.89	$439.44	$470.20	$498.41	$528.31
4" meter	**$583.15**	$676.29	$730.39	$781.52	$828.41	$878.11
6" meter	**$1,163.46**	$1,821.24	$1,966.94	$2,104.63	$2,230.91	$2,364.76
8" meter	**$1,860.11**	$2,427.39	$2,621.58	$2,805.09	$2,973.40	$3,151.80
10" meter	**$2,673.10**	$3,235.59	$3,494.44	$3,739.05	$3,963.39	$4,201.19
12" meter	**$4,995.02**	$4,548.92	$4,912.83	$5,256.73	$5,572.13	$5,906.46
Wastewater Usage Charges ($/HCF)						
All Residential [2]	**$10.41**	$10.62	$11.47	$12.27	$13.01	$13.79
Non-Residential [3]						
Low Strength	**$9.37**	$9.55	$10.31	$11.03	$11.69	$12.39
Medium Strength	**$13.62**	$13.97	$15.09	$16.15	$17.12	$18.15
High Strength	**$19.85**	$20.44	$22.08	$23.63	$25.05	$26.55

[1] Applies to customers not receiving water service.

[2] Applies to average winter water usage during the proceeding January to April period, with the highest month being omitted.

[3] Applies to actual monthly water usage.