CITY OF
CLOVERDALE

2021 Water and Wastewater Rate Study

Final

May 10, 2021

HILDEBRAND
CONSULTING

May 10, 2021

David Kelley, City Manager
City of Cloverdale
124 N. Cloverdale Blvd.
Cloverdale, CA 95425

Re: 2021 Water and Wastewater Rate Study

Dear Mr. Kelley,

Hildebrand Consulting is pleased to present this 2021 Water and Wastewater Rate Study (Study) for the City of Cloverdale (City). In response to community feedback and City Council direction, this Study contains revisions to the capital spending plans that were proposed in the 2020 rate study (dated September 28, 2020). We appreciate the fine 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 Finance, Administration & Police Subcommittee.

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

Executive Summary

Hildebrand Consulting, LLC has been retained by City of Cloverdale (City) to develop five-year financial plans and to update user rates for the City's water and sewer utilities. The purpose of the 2021 Water and Wastewater Rate 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 full report describes in detail the assumptions, procedures, and results of the Study, including conclusions and recommendations.

The scope of the 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 update the City's water shortage rate surcharges.

The Study applies 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.

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

To assist in the development of the water and wastewater rate study, the project team conferred with the City Council's Finance, Administration, and Police Subcommittee

and Cloverdale City Council. Presentations on the 2020 Water and Wastewater Rate Study recommendations were presented to the City Council on August 26th, September 9th, 2020, and November 11th, 2020. Due to strong community opposition to staff first recommendation, a proposed Public Hearing in November 2020 was canceled in favor of conducting additional community outreach and further refinements to the capital spending program. Additional City Council meetings were held to present the 2021 Water and Wastewater Rate Study recommendations on March 24th, 2021 and April 14th, 2021 and a Public Forum was held on April 7th, 2021.

Water Utility Financial Plan

The Water Utility 10-year Financial Plan identifies a revenue shortfall in upcoming years as a result of a planned increase in capital spending and expense inflation. Rate revenue adjustments are required for the Water Utility to cover the increases. In recent years, the City has been able to keep water rates below the regional average by deferring capital reinvestment projects designed to rehabilitate or improve the water system. Going forward, the City is planning to increase its annual capital spending from $885 thousand per year to an average of $2.2 million 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 capital spending proposed by the report is a reduction from the original recommendation made in November 2020 based concerns raised by the ratepayer community. Since that time additional community outreach has been conducted and a series of capital projects have been deferred.

The water utility financial plan proposes the following 5-year schedule of annual rate adjustments and a cash-only financial strategy for capital spending.

Table ES.1 - Proposed Water Rate Revenue Increases

Rate Adjustment Date	Proposed Rate Revenue Increase
July 1, 2021	6.0%
July 1, 2022	12.0%
July 1, 2023	12.0%
July 1, 2024	12.0%
July 1, 2025	12.0%

Proposed Water Rates

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 California's Proposition 218, which requires water rates to be equitably apportioned and proportional to the cost of providing water service.

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 Base Charge and a consumption-based Usage Charge. The Base Charge is scaled based on the individual account's meter size while the Usage Charge is assessed based on actual water usage (measured in hundreds of cubic feet or "CCF", which is equal to 748 gallons). The Usage Charge is a flat (or "uniform") rate. Once the annual water rate revenue requirement was determined using the financial planning model, specific costs are allocated to be recovered through the various rate elements. The cost allocation methodology begins by assigning all costs to one of three categories: customers costs, capacity costs, or commodity costs. Customer costs and capacity costs are ultimately recovered through the fixed Base Charges while the commodity costs are recovered through the Usage Charges. The table below summarizes the water rates proposed for the 5-year study period.

Table ES.2 - Proposed Water Rate Schedule

		Effective Date				
	Current	July 1, 2021	July 1, 2022	July 1, 2023	July 1, 2024	July 1, 2025
Water Usage Rates						
Per CCF (748 gallons)	**$4.75**	$5.06	$5.67	$6.35	$7.11	$7.96
Fixed Monthly Base Charges						
Up to 1" Meter	**$24.32**	$25.92	$29.03	$32.51	$36.41	$40.78
1 1/2" Meter	**$45.97**	$48.96	$54.84	$61.42	$68.79	$77.04
2" Meter	**$71.96**	$76.62	$85.81	$96.11	$107.64	$120.56
3" Meter	**$132.60**	$150.36	$168.40	$188.61	$211.24	$236.59
4" Meter	**$219.24**	$233.32	$261.32	$292.68	$327.80	$367.14
6" Meter	**$405.81**	$463.77	$519.42	$581.75	$651.56	$729.75

Wastewater Utility Financial Plan

The Wastewater Utility 10-year Financial Plan 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 Wastewater Utility In recent years, the City has been able to keep wastewater rates below the regional average by deferring capital reinvestment projects designed to rehabilitate or improve the wastewater system. The Wastewater Utility 10-year Financial Plan was developed through several interactive work sessions with City staff, the Finance, Administration and Police Subcommittee, and the City Council. The capital spending proposed by the report is a reduction from the original recommendation made in November 2020 based on concerns raised by the ratepayer community. Since that time additional community outreach has been conducted and a series of capital projects have been deferred.

Unique to the wastewater utility is the possibility of a large project (the "Advanced Water Treatment" (AWT) project) in the next decade or two. The City has been notified by the State of California Regional Water Quality Control Board (RWQCB) that the wastewater utility may eventually (perhaps within 10 years) be required to increase the level of treatment of its wastewater. The AWT project is projected to cost on the order of $80 million. Preliminary analyses show that the City would need to immediately raise

rates by over 300% in order to be positioned to be able to debt finance the AWT project in 10 years. The Wastewater Utility Financial Plan does not directly propose a strategy for raising revenues for this future cost because the AWT project is still poorly defined and the costs are unknown; it is unclear if or when the RWQCB will enforce the mandate; it is unclear if the City will qualify for federal or state grants or other financial assistance to fund the project; and even without the AWT project the City must increase its wastewater rates considerably just to fund the rest of its capital program.

The wastewater utility financial plan proposes the following 5-year schedule of annual rate adjustments and a cash-only financial strategy for capital spending.

Table ES.3 - Proposed Wastewater Rate Increases

Rate Adjustment Date	Proposed Rate Revenue Increase
July 1, 2021	3.0%
July 1, 2022	10.0%
July 1, 2023	10.0%
July 1, 2024	10.0%
July 1, 2025	10.0%

Proposed Wastewater Rates

The City collects a flat (fixed) monthly charge from residential wastewater customers for wastewater services. Non-residential customers pay a fixed "Base Charge" (assessed based on size of the water) and a "Usage Charge" based on a "Usage Rate" applied to each CCF of actual monthly water use (most non-residential irrigation is separately metered). 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). 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. Unit costs are applied to the annual wastewater flows, as well as BOD and TSS loadings associated with each customer class to arrive at the allocation of total costs to each customer class. Rates for residential customers include flat monthly charges for each dwelling unit while non-residential (low, medium, and high strength) customers are subject to a monthly base charge based on meter size and wastewater usage rates applied to actual monthly water usage. The table below summarizes the wastewater rates proposed for the 5-year study period.

Table ES.4 - Proposed Wastewater Rate Schedule

		Effective Date				
	Current	July 1, 2021	July 1, 2022	July 1, 2023	July 1, 2024	July 1, 2025
Residential Flat Rates (monthly per dwelling unit)						
Single Family	**$41.75**	$42.86	$47.15	$51.87	$57.06	$62.77
Multi-Family	**$27.01**	$28.72	$31.59	$34.75	$38.23	$42.05
Non-Residential Base Charges (monthly per meter)						
Up to 1" Meter	**$11.94**	$11.93	$13.12	$14.43	$15.87	$17.46
1 1/2" Meter	**$21.56**	$21.53	$23.68	$26.05	$28.66	$31.53
2" Meter	**$33.11**	$33.05	$36.36	$40.00	$44.00	$48.40
3" Meter	**$60.07**	$63.77	$70.15	$77.17	$84.89	$93.38
4" Meter	**$98.59**	$98.33	$108.16	$118.98	$130.88	$143.97
Non-Residential Usage Charges ($/CCF)						
Low Strength	**$4.90**	$4.75	$5.23	$5.75	$6.33	$6.96
Medium Strength	**$6.11**	$5.95	$6.54	$7.19	$7.91	$8.70
High Strength	**$8.84**	$8.67	$9.54	$10.49	$11.54	$12.69
Public Schools (monthly)						
Per 100 ADA[1]	**$161.89**	$175.78	$193.36	$212.70	$233.97	$257.37

[1] Average daily attendance (student count)

Survey

A survey was conducted of numerous comparable public water and wastewater utilities in the region to compare the typical bill for a single-family home with median water usage. The graph below shows that the City of Cloverdale currently has the lowest combined bill in the region. After the first year of rate increases, the City would still rank

in the bottom third of the chart. Note: Other cities are anticipated to update their utility rates in the near future which will likely result in rate increased in the comparator utilities.

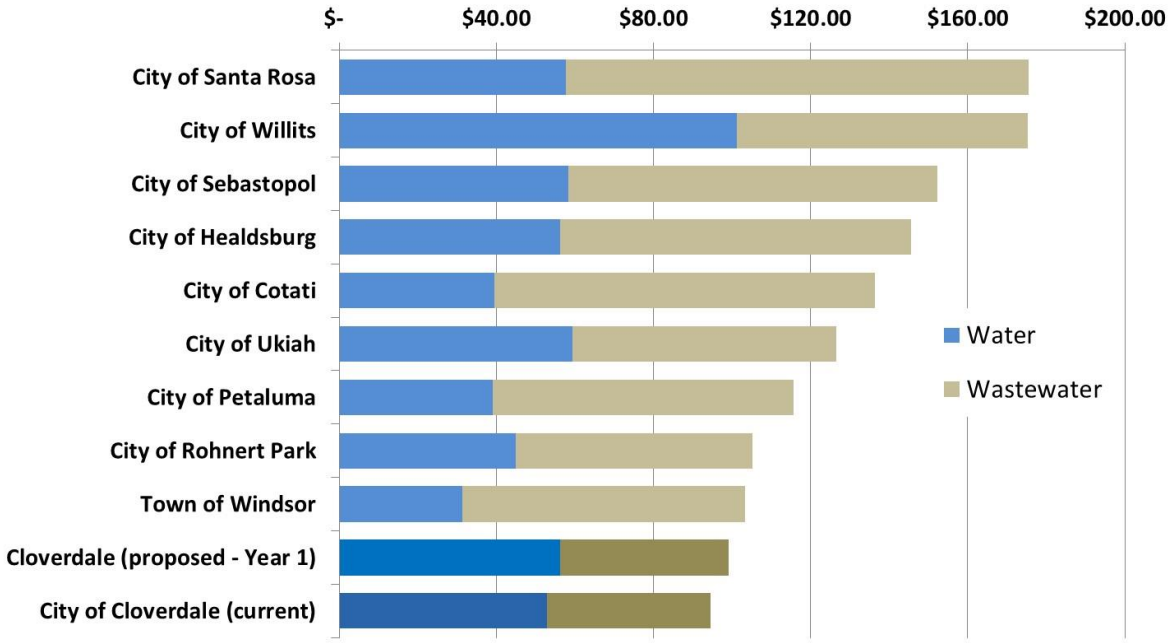


Figure ES.1 – Survey of Combined Monthly Water and Wastewater Bill (typical single family residence)

Conclusion

This water and wastewater rate study proposes updated the utility rates for the City of Cloverdale. 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.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ATTACHMENTS

LIST OF SCHEDULES

List of Acronyms

AF	acre-feet (measure of water volume)
AWT	Advanced Water Treatment project
AWWA	American Water Works Association
BOD	biochemical oxygen demand (BOD)
CCF	hundreds (centum) of cubic feet (measure of water volume)
CIP	capital improvement program
COS	cost of service
DCR	debt service coverage ratio
DU	dwelling unit
ESFD	equivalent single-family dwellings
FY	fiscal year (which ends on June 30 for the City)
gpm	gallons per minute
O&M	operations and maintenance
OPEB	Other Post-Employment Benefits
pay-go	“pay as you go” (i.e., cash financing for capital projects)
RWQCB	Regional Water Quality Control Board
SWRCB	California State Water Resources Control Board
TSS	total suspended solids
WTP	water treatment plant
WWTF	wastewater treatment facility

Section 1. INTRODUCTION

Hildebrand Consulting, LLC has been retained by City of Cloverdale (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, and the most recent adjustments to the level of water and wastewater rates occurred in July 2019. Hildebrand Consulting retained The Reed Group, Inc. as a subconsultant.

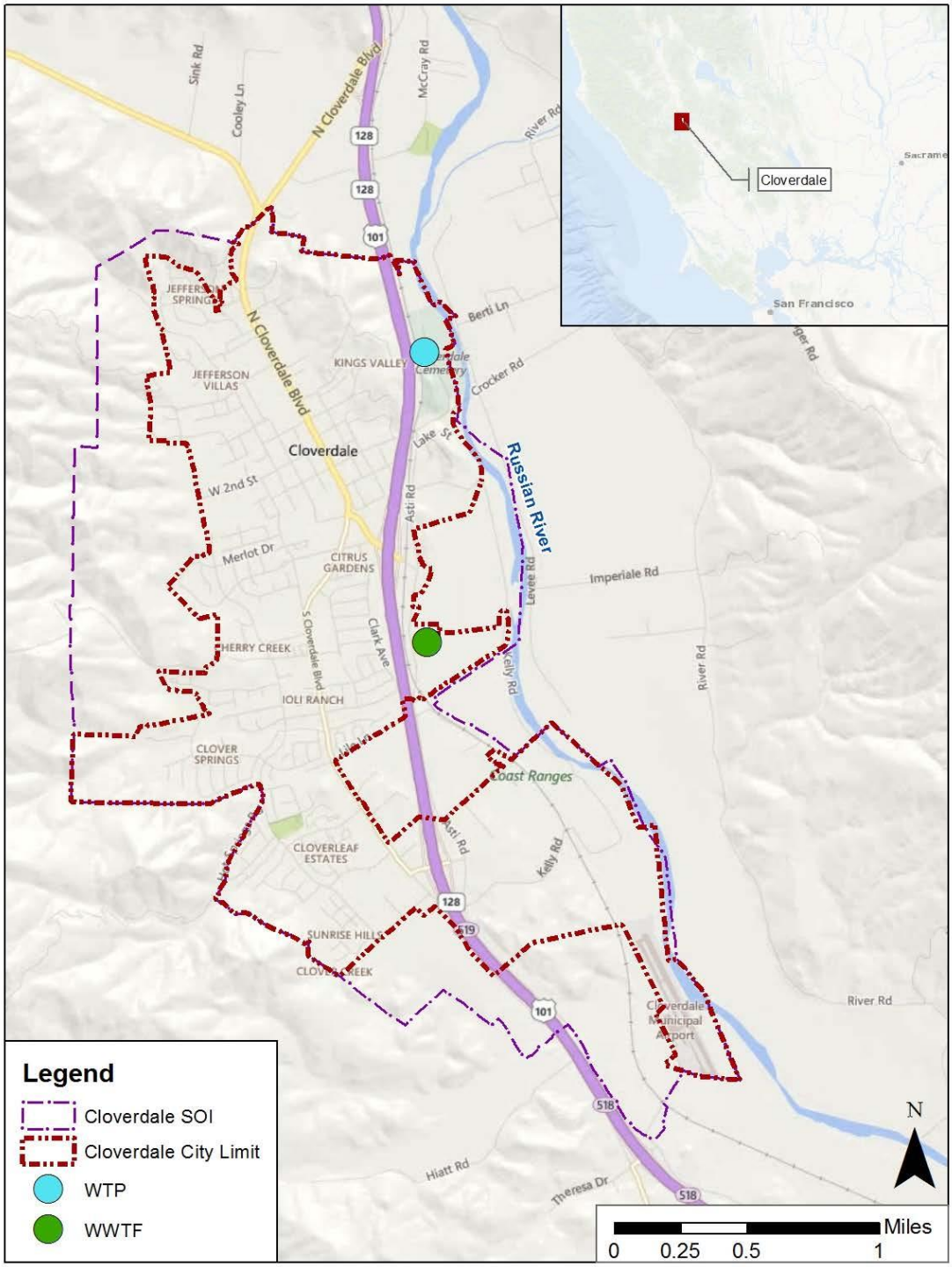
This report describes in detail the assumptions, procedures, and results of the Study, including conclusions and recommendations.

1.1 UTILITY BACKGROUND

The City of Cloverdale is located in northern Sonoma County at the northern portion of the Alexander Valley and borders the Russian River. The City provides water and wastewater services to just over 3,300 water and wastewater accounts and the City's Water Utility is the sole water purveyor for the City. The City's service area is generally contiguous with the City boundaries but also includes a few agreements to provide water and/or wastewater services just outside the City's boundaries. The City's service area includes a mix of residential, commercial, and industrial land uses with large water users including Bear Republic Brewing Company and Cloverdale High School.

The City's Wastewater Treatment Facility (WWTF) is located centrally in the City just to the east of Highway 101. The City's water production and delivery system receives water from the well field and Water Treatment Plant (WTP) located near the Russian River. A map of the City's service area and the locations of the WTP and WWTF can be found in Figure 1.

Figure 1: City of Cloverdale Service Area Boundary



Source: City of Cloverdale 2015 Urban Water Master Plan, June 2016, RMC

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 update the City's water shortage rate surcharges.

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.

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.

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),

[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.

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 2021 (FY 2021/22[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 (Proposition 218) and other generally accepted industry practices to develop rates that reflect the cost of providing service.

1.4 PROCESS AND SUBCOMMITTEE PARTICIPATION

To assist in the development of the water and wastewater rate study, the project team conferred with the City Council's Finance, Administration, and Police Subcommittee. The City's rate consultant facilitated the meeting and subcommittee provided input on the development of the financial plans and reviewed the proposed updates to the rate structure in order to ensure fairness and equity across the City's customer base within the constraints of legal requirements and the City's revenue needs. In addition, a presentation of the financial plans was provided to the Cloverdale City Council on August 26th September 9th, 2020, and November 11th, 2020. Due to strong community opposition to staff first recommendation, a proposed Public Hearing in November 2020 was canceled in favor of conducting additional community outreach and further refinements to the capital spending program. Additional City Council meetings were held on March 24th, 2021 and April 14th, 2021 and a Public Forum was held on April 7th, 2021.

[2] Fiscal years are sometimes indicated by their ending years. For example, FY 2021/22, starts on July 1, 2021 and ends on June 30, 2022, can also be expressed as FY 2022.

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

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

Rate Setting Objectives – As confirmed with the subcommittee and used to guide the selection and development of the financial plans and rate structure updates appropriate for the City. These objectives included:

- **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
    - Conservation incentive
    - 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 rate surcharges and shortage strategy.

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, the Finance, Administration and Police Subcommittee (see Section 1.4), and the City Council. As a result of this process, the Study has produced a robust 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 3 to 5 years, as conditions dictate.

2.2 WATER UTILITY BEGINNING FUND BALANCES

The ending cash balance for FY 2019/20 was used to establish the FY 2020/21 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 produce of its reserve policies (see Section 2.10).

Table 1: Water Utility FY 2019/20 Beginning Cash Balance

Cash and Marketable Securities	$2,037,000
Cash with Fiscal Agent	$162,000
Total Unrestricted:	$2,199,000
Impact Fee Fund (restricted):	$470,000
Total Reserves:	**$2,669,000**

2.3 CUSTOMER GROWTH

In recent years, the City has collected and average of approximately $90 thousand per year in Water Impact Fee revenue from new customers connecting to the system, which equates to a growth rate of approximately 0.4% per year. This Study assumes that this trend will continue for the duration of the next 10 years (with the exception of a 300-unit Baumgardner development expected to begin development in FY 2021/22).

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 "Base Charge" (assessed based on meter sizes) and a water "Usage Rate" (applied to each hundred cubic feet[3]

[3] One CCF is equal to 748 gallons

("CCF") of water use). Customers receive a monthly bill. The Water Utility Financial Plan starts with FY 2020/21 budgeted rate revenues. Estimated future water demand and rate revenues include the small amount of customer growth (see Section 2.3) as well as the annual rate revenue adjustments proposed by this Study. Other than demand increases associated with customer growth, water demand is anticipated to remain constant. Budgeted and projected rate revenues (including proposed rate adjustments) are listed 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, penalties, Impact Fees[4], and interest revenue on investments. In addition, the City transfers some funds from the general fund to the Water Utility to fund a portion of the utility's CalPERS expenses. Projections of all non-rate revenues were based on FY 2020/21 budgeted revenues with the exception of interest income which was calculated annually based upon projected fund balances and assumed interest rate of 0.75%, 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 **Schedule W-3**. Note that the City is expecting a one-time spike in Impact Fee revenue as a result of a 250-unit development that is scheduled for FY 2022.

[4] The City's "Impact Fees" are known as "Capacity Charges" per Government Code Section 66013.

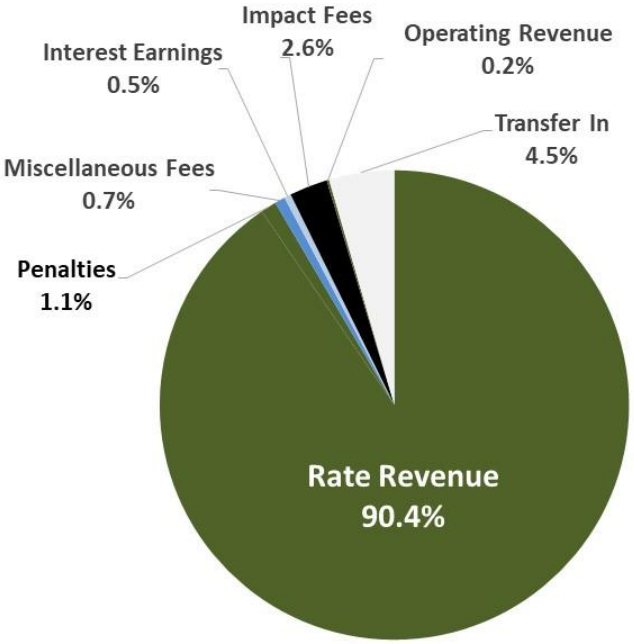


Figure 2: Budgeted Water Utility Revenue Categories (FY 2020/21)

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 2020/21 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**. The transfer out goes to the general fund and represents the cost of administrative support provided by the City's central services.

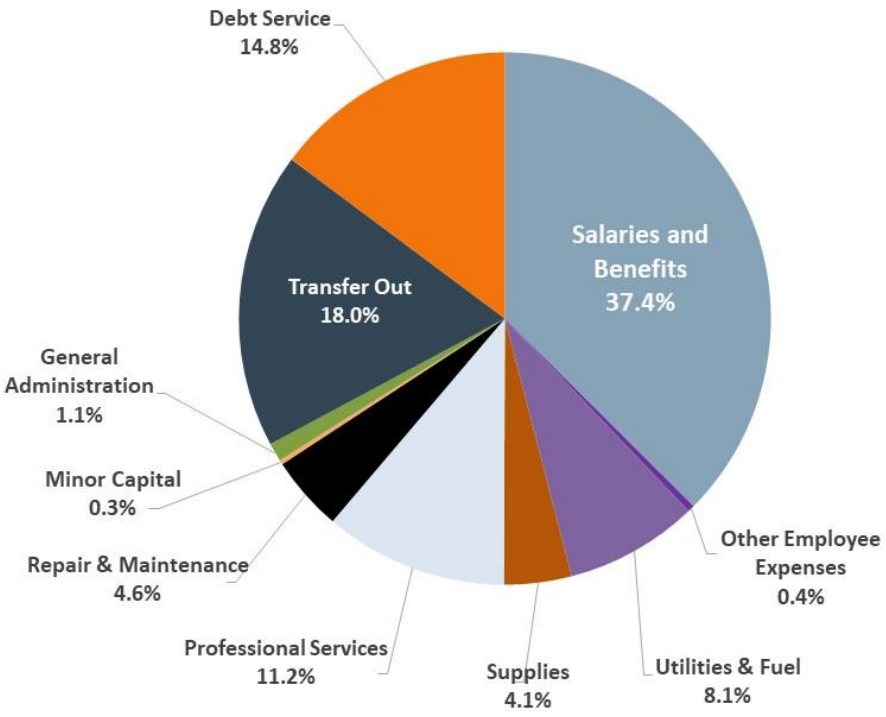


Figure 3: Operating and Debt Expense Categories (FY 2020/21)

The water utility currently pays about $500,000 annually on debt service related to a 1993 Safe Drinking Water loan, a 2014 City National Bank loan, and a 2014 United States Department of Agriculture (USDA) water system improvement loan. The loan from City National Bank was used to refund a 2000 California Statewide Communities Development Authority (CSCDA) water bond. The Water Utility financial plan does not propose any new debt issues during the five-year planning period. Annual debt service will be reduced to about $300,000 in FY 2022/23 and to about $167,000 in FY 2026/27 as existing obligations are paid off.

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 1.10 times annual debt service. Based on recently published guidance from Fitch Ratings[5], utility systems with *midrange* financial profiles should maintain a DCR greater than 1.50 times annual debt service. Due to the fact that the Water Utility holds minimal debt relative to its revenue profile, this Water Utility Financial Plan demonstrates that a DCR that is well above minimal levels will be maintained throughout the planning period. The DCR should not be interpreted as "excessive" but rather an indication that the City has made it a policy to minimize its reliance on debt as a means to finance capital projects.

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 3.0% per year.

2.9 WATER UTILITY CAPITAL IMPROVEMENT PROGRAM

Figure 4 shows that from FY 2016/17 to FY 2020/21 the City has not spent any money on capital projects to rehabilitate or improve the water system. In order to avoid spikes in capital spending, the City should be continuously re-investing in the Water Utility infrastructure as it ages and depreciates. Going forward, the City is planning to increase its annual capital spending to an average of $2.2 million 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. In addition, the proposed capital expenditures will ensure that the City is able to support new development in accordance with the City's adopted General Plan. A detailed list of capital projects and associated costs is provided in **Schedule W-2**. A more detailed description of a selection of projects has been provided in **Attachment A**. The cost for

[5] As published on July 31, 2013.

projects that are scheduled for beyond Year 6 (FY 2027) are assumed to be spread evenly between FY 2028 and FY 2031.

This financial plan is proposing that all capital spend be funded on "pay as you go" (PayGo) basis as opposed to using a debt strategy, based on direction from the Finance, Administration and Police Subcommittee and confirmed by the full City Council.

The Water Utility Financial Plan also proposed to use reserves from the Impact Fee reserve to pay for capital projects (namely $1.4 million for the new well in FY 2022/23 (see Row 2 of Schedule 3) and 20% of the Chlorine Contact Basin project in FY 2026/27 (see Row 16 of Schedule 3).

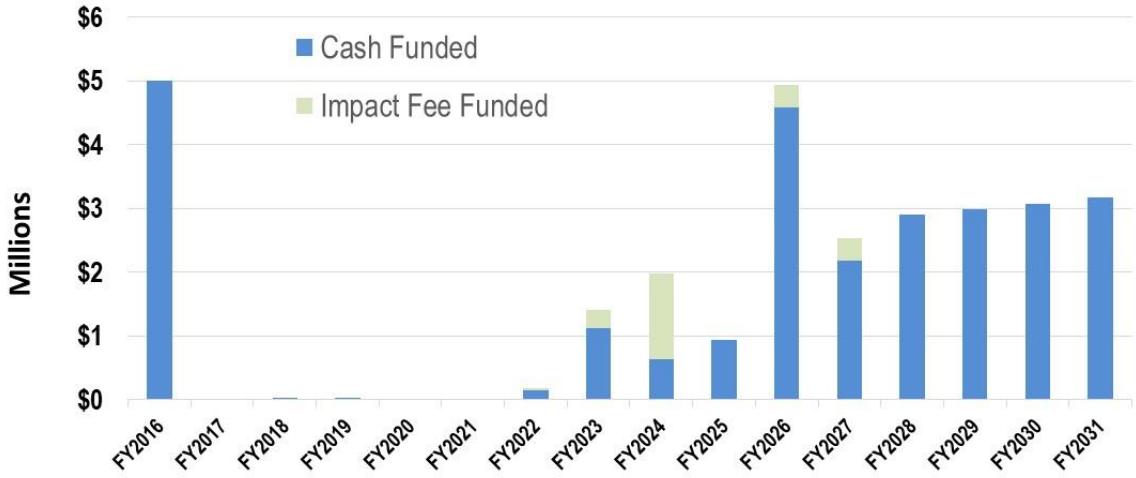


Figure 4: Water Utility Historic and Projected Capital Spending

2.10 WATER UTILITY 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 to maintain Contingency Reserves within the Operating Fund equal to 25 percent of annual operating and maintenance costs for the water system (or about $600 thousand). 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.

Capital Replacement Reserve - This reserve serves the dual function of supporting the City's Pay-Go strategy by absorbing some of the inherent fluctuations in the City's annual capital spending and also 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). The target amount for this reserve is proposed to be close to the average pay-go capital spending over the next 10 years ($2.0 million). This target is expected to increase with the inflation of construction costs.

2.11 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 detailed in Table 2.

Table 2: Recommended Water Rate Revenue Increase

Rate Adjustment Date	Proposed Rate Revenue Increase
July 1, 2021	6.0%
July 1, 2022	12.0%
July 1, 2023	12.0%
July 1, 2024	12.0%
July 1, 2025	12.0%

The numbers provided in **Schedule W-3** (cash flow proforma) are summarized graphically in Figure 5, which shows that the target reserves are maintained over the course of the planning period and the DCR remains a healthy level at all times.

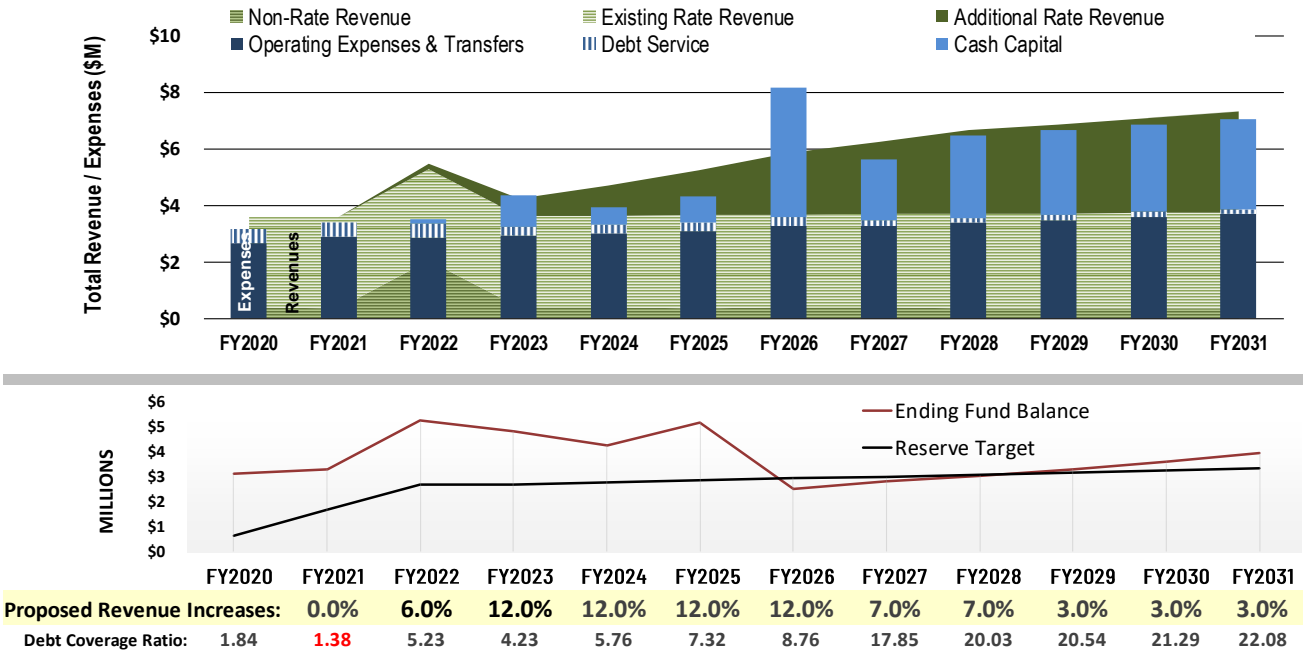


Figure 5: Water Utility Financial Projection with Recommended Rate Increases

Current water rate revenues generate about $3.2 million annually. It is important to understand that the rate increases that are being proposed are necessary in order to recalibrate the City's revenue to be able to support a more proactive capital spending program, which is increasing from nearly zero over the past several years to over $2.2 million per year (see detailed explanation in Section 2.9). After the final recommended increase in FY 2025/26, it is anticipated that rate increases of about 7% will need to continue for a couple of years in order to fully position the rates to fund the City's annual capital spending program.

2.12 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 halfway through FY 2020/21. The complete schedule of proposed rates for FY 2020/21 through FY 2024/25 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.

2.12.1 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 Base Charge and a consumption-based Usage Charge. The Base Charge is scaled based on the individual account's meter size and currently recovers approximately 32% of rate revenue. The current Base Charge schedule (which is assessed monthly) is summarized in Table 3.

Table 3: Current Fixed Monthly Water Base Charges

Up to 1" Meter	$24.32
1 1/2" Meter	$45.97
2" Meter	$71.96
3" Meter	$132.60
4" Meter	$219.24
6" Meter	$347.08

The Usage Charge is assessed based on actual water usage (measured in hundreds of cubic feet or "CCF", which is equal to 748 gallons). The Usage Charge is a flat (or "uniform") rate of $4.75 per CCF.

2.12.2 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. The City provides water service through 3,307 water service connections (customer accounts). Single-family customers comprise about 87 percent of the customer accounts and about 63 percent of annual water usage. Multi-family customer accounts make up about 3 percent of the customer accounts and 8 percent of annual water usage. Commercial customer accounts make up about 7 percent of the customers and 20 percent of annual water usage. Irrigation customer accounts make up about 2 percent of the customers and about 9 percent of the water usage.

While there are extremes on both the low and high ends, average monthly single-family water usage is about 8.2 CCF (about 205 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.

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 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 1" 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.

Table 4: Rated Water Flow Capacity by Meter Size

Meter Size	Rate Flow Capacity (gpm)[1]	Hydraulic Capacity Factor
Up to 1"	50	1.0
1 1/2"	100	2.0
2"	160	3.2
3"	320	6.4
4"	500	10.0
6"	1000	20.0

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

Table 5 summarizes customer account and water usage data used in water rate calculations for FY 2020/21. Account information is based on the utility billing data from FY 2018/19.

Table 5: Summary of Water Service Connections and Water Usage

	Meter Size						Total	Annual Water
	Up to 1"	1 1/2"	2"	3"	4"	6"	Accounts	Use (CCF)
No. of Accounts								
Single Family Residential	2,876	7	10	-	-	-	2,893	285,700
Multi-Family Residential	93	5	10	2	2	-	112	37,000
Non-Residential	152	23	45	2	1	-	223	89,900
Irrigation	43	18	17	1	-	-	79	40,400
Total Accounts	**3,164**	**53**	**82**	**5**	**3**	**-**	**3,307**	**453,000**
No. of 1" Equiv. Meters	3,164	106	262	32	30	-	**3,594**	
Operating Capacity (gpm)	50	100	160	320	500	1,000		
Hydraulic Capacity Factor	1.00	2.00	3.20	6.40	10.00	20.00		

2.12.3 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 Base Charge or the Usage Charge.

2.12.3.1 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 2021/22 and reflects the proposed 6 percent overall rate increase to be incorporated in the Water Utility's Financial Plan.

2.12.3.2 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 categories. The cost allocation process is performed with data available in the City's detailed budget and other documents. The three categories include:

- Customer costs, such as meter reading and billing, are fixed costs that tend to vary as a function of the number of customers being served. Customer costs are allocated to customers based on the number of accounts. That is, every customer will pay an equal share of customer-related costs.

- Capacity costs are also fixed costs; however, these tend to vary in relation to the capacity of the water system and the ability to serve the demands of active customers. Customers that place greater or lesser burdens on the capacity of the water system should bear greater or lesser shares of these costs. The sizing of the water system is based on the potential demand that each customer could place on the water system. Capacity costs are allocated to customers based on the hydraulic capacity of the water meter. The hydraulic capacity reflects the potential demand that a customer could place on the water system at any given time and is a general indicator of each customer's capacity requirement. A customer with a large meter size will be assigned a large share of fixed capacity-related costs than one with a smaller meter. Capacity costs include costs associated with the water system's capacity including contributions to the capital program, debt service, maintenance, and certain fixed operating costs.
- Commodity costs include variable costs that vary entirely or substantially in response to the amount of actual water use or are reasonable allocated on the basis of water use. Water treatment costs and energy costs are two typical examples. Even though some commodity costs are fixed, rather than variable, 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 capacity in order to further certain rate setting objectives (e.g., water conservation).

Table 6 summarizes how the FY 2021/22 revenue requirement of $3,399,000 is comprised of various functional categories of operating and maintenance costs, debt service obligations, and capital program transfers with offsetting revenues and the application of available reserves. It also illustrates how the functional cost categories that make up the revenue requirement are each assigned to one or more of the three cost components, previously described.

The costs within each of the functional categories were derived from the line-item detailed budget for FY 2021/22, as prepared by staff. Once functional cost categories are allocated to the components the total for each component is divided by the number

of units to arrive at a total unit costs for each component. The units of demand include the number of customer accounts (service connections), number of 1" equivalent meters, and annual water sales for the customer, capacity, and commodity components, respectively.

The allocations result in 3.4 percent of costs assigned to the customer component, 29.3 percent to the capacity component, and 67.4 percent to the commodity component. These percentages are similar but not identical to those developed in the 2015 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 2021/22 Water Units Cost of Service

Budget Expense	Test Year Budget	Cost Classification					
		Customer	Capacity	Commodity	Customer	Capacity	Commodity
Department 202- Billing & Revenue							
Salaries and Employee Benefits	$294,000	50%	50%		$147,000	$147,000	
Services and Supplies	$67,000	50%	50%		$33,500	$33,500	
Department 800-Water Operations							
Salaries and Employee Benefits	$714,000		75%	25%		$535,500	$178,500
Overhead & Administration	$625,000		75%	25%		$468,750	$156,250
Misc. Services & Supplies	$323,000			100%			$323,000
Utilities and Fuel	$280,000			100%			$280,000
Department 801-Water Distribution							
Salaries and Employee Benefits	$292,000		100%			$292,000	
Misc. Services & Supplies	$273,000			100%			$273,000
Capital							
Existing Debt	$499,000		50%	50%		$249,500	$249,500
Average Capital	$2,359,000			100%			$2,359,000
Credits & Other							
Transfer In (Impact Fees)	$29,000		100.0%			$29,000	
Transfer In (PERS)	($164,000)		50.0%	50.0%		($82,000)	($82,000)
Non Rate Revenue	($91,000)		50.0%	50.0%		($45,500)	($45,500)
Use of Reserves	($2,101,000)	3.2%	30.1%	66.7%	($66,000)	($633,000)	($1,401,000)
Total Revenue Requirement:	**$3,399,000**			**Totals:**	**$114,500**	**$994,750**	**$2,290,750**
				Units of Service:	3,307 Accounts	3,594 Equivalent Meters	453,000 CCF
				Unit Rate:	**$34.62** per account	**$276.75** per eq. meter	**$5.06** per CCF

2.12.4 Base Charges

Service charges are intended to recover the customer and capacity costs identified through the cost of service analysis. Base Charges apply to all customer water bills, regardless of the amount of water actually used. Customers 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 costs are allocated equally to all customers and capacity costs are allocated based on meter size in relation to the hydraulic capacity associated with the various meter sizes.

The proposed monthly Base Charge in FY 2021/22 for a 1" meter (for all customer types) is $25.92, as shown in Table 7. This value was calculated by adding the monthly Customer Cost of $2.87 ($34.32 divided by 12 (rounded), see the bottom of Table 6) to the monthly Capacity Cost of $23.05 ($276.75 divided by 12 (rounded), see the bottom of Table 6).

For larger meters, the Capacity Cost portion of the Base Charge increases in proportion to the meter equivalency, while the Customer Cost 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 Base 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 Water Base Charges

Meter Size	Monthly Customer Cost	Hydraulic Capacity Factor	Monthly Capacity Cost	Monthly Base Charge
Up to 1"	$2.87	1.0	$23.05	$25.92
1 1/2"	$2.87	2.0	$46.09	$48.96
2"	$2.87	3.2	$73.74	$76.62
3"	$2.87	6.4	$147.49	$150.36
4"	$2.87	10.0	$230.45	$233.32
6"	$2.87	20.0	$460.90	$463.77

2.12.5 Water Usage Rates

Current water rates include a uniform usage rate for all customer classes of $4.75 per CCF. Under the proposed water rates for FY 2021/22, the uniform water rate would be $5.06 per CCF (see the bottom of Table 6) for all customer types.

2.12.6 Bill Impacts of Proposed Water Rates

Table 8 summarizes how the proposed water rates for FY 2021/22, with the proposed rate structure updates, would affect a sampling of customers. The difference between the change in the bills (about 6.5%) and the general revenue increase (6%) is due to recent general reductions in water usage, which requires slightly higher rates in order to recover the same amount of revenue.

Table 8: Water Bill Impacts for a Sampling of Customers

	Meter Size	Water Use (CCF)	Current Bill	Proposed Bill Year 1	Change $	Change %
Single Family						
Low Use	1"	5	$48.07	$51.22	$3.15	6.6%
Median Use	1"	6	$52.82	$56.28	$3.46	6.6%
Average Use	1"	9	$67.07	$71.46	$4.39	6.5%
High Use	1"	20	$119.32	$127.12	$7.80	6.5%
Duplex	1"	10	$71.82	$76.52	$4.70	6.5%
Apartment	1 1/2"	50	$283.47	$301.96	$18.49	6.5%
Apartment	4"	200	$1,169.24	$1,245.32	$76.08	6.5%
Retail Business	1"	35	$190.57	$203.02	$12.45	6.5%
School	4"	400	$2,119.24	$2,257.32	$138.08	6.5%
Irrigation	2"	400	$1,971.96	$2,100.62	$128.66	6.5%

* Year 1 with 6% rate revenue increases

2.12.7 Adoption of Proposed Rates

The 5-year schedule of proposed water rates are presented in Schedule W-4). All rate increases will occur on the first day of the fiscal year (July 1).

2.13 WATER SHORTAGE RATE SURCHARGE

This section presents recommended updates to the City's existing Water Shortage Rate Surcharges, which are to be overlaid on then-current water usage rates during the time that a water shortage is declared by the City. Water shortage surcharges would be temporary and affect only the Usage Rate and not the fixed monthly Base Charge.

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 5 of Table 9), reducing capital spending (see row 16 of Table 9), and relying (modestly) on reserves to help bridge the financial deficit (see row 21 of Table 9).

The proposed updates to the City's Water Shortage Surcharges addresses the requirements of (recently passed) Senate Bill (SB) 606, which has directed 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 will bring the City into alignment with state regulators.

Table 9 presents:

1) The water usage reduction goals (by stage) as dictated by SB 606
2) The assumed actual water use reduction during each respective stage
3) The proposed Water Shortage Rate Surcharge (expressed as a percent increase to the Usage Charge)
4) The changes in revenue for each respective stage
5) The changes in expenditures for each respective stage (including the proposed reduction in capital spending)
6) The financial deficit that will occur even with the mitigating measures.

The Water Shortage Rate Surcharges and reduction in capital spending have been calibrated to yield an overall deficit of approximately $100 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.

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.

Table 9: Proposed Water Shortage Surcharges and Capital Spending Reductions

		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	Base Charge Revenues	1,046,000	1,046,000	1,046,000	1,046,000	1,046,000	1,046,000	1,046,000
4	Water Usage Charge Revenues (2)	2,161,000	2,053,000	1,837,000	1,621,000	1,405,000	1,189,000	972,000
5	Water Shortage Surcharge Rev. (3)	**Percentage:**	0%	12%	18%	25%	35%	40%
6		**Revenue:**	$ -	$ 220,000	$ 292,000	$ 351,000	$ 416,000	$ 389,000
7	Other Revenue and Transfers In	252,000	252,000	252,000	252,000	252,000	252,000	252,000
8	Use of Reserves (4)	2,024,000	2,024,000	2,024,000	2,024,000	2,024,000	2,024,000	2,024,000
9	**Total Revenue**	**5,483,000**	**5,375,000**	**5,379,000**	**5,235,000**	**5,078,000**	**4,927,000**	**4,683,000**
	(% of Normal)		98%	98%	95%	93%	90%	85%
	Expenditures and Transfers							
10	Department 202- Billing & Revenue	371,000	371,000	371,000	371,000	371,000	371,000	371,000
11	Department 800-Water Operations	1,519,000	1,519,000	1,519,000	1,519,000	1,519,000	1,519,000	1,519,000
12	Water Conservation (5)	50,000	53,000	59,000	67,000	77,000	91,000	111,000
13	Water Production (6)	316,000	308,100	292,300	276,500	260,700	244,900	229,100
14	Department 801-Water Distribution	634,000	634,000	634,000	634,000	634,000	634,000	634,000
15	Debt Service	499,000	499,000	499,000	499,000	499,000	499,000	499,000
16	Typical Capital Spending	2,094,000	2,094,000	2,094,000	2,094,000	2,094,000	2,094,000	2,094,000
17	Capital Spending Reduction	0%	0%	0%	6%	12%	20%	30%
18		$ -	$ -	$ -	$ (125,640)	$ (251,280)	$ (418,800)	$ (628,200)
19	**Revenue Requirement**	**5,483,000**	**5,478,100**	**5,468,300**	**5,334,860**	**5,203,420**	**5,034,100**	**4,828,900**
20	(% of Normal)		100%	100%	97%	95%	92%	88%
21	***Surplus/Deficit in Operations (7)***	**-**	**(103,100)**	**(89,300)**	**(99,860)**	**(125,420)**	**(107,100)**	**(145,900)**

Notes:

(1) Analysis based on FY 20-21 budget and assumed that current usage reflects normal water supply conditions.
(2) Water usage revenue would decline in proportion to water sales.
(3) Water shortage charges are an incremental increase in the water usage rates. Monthly base charges are not affected.
(4) Represents the planned change in fund balance during test year.
(5) Estimated water conservation program costs assumed to increase in inverse proportion to water use reductions.
(6) Estimated water production costs include electricity for pumping and operating supplies.
(7) Deficits to be absorbed by Water Enterprise 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, the Finance, Administration and Police Subcommittee (see Section 1.4), and the City Council. 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 minimize 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 Wastewater Utility**.** 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 3 to 5 years, as conditions dictate.

3.2 WASTEWATER UTILITY BEGINNING FUND BALANCES

The ending cash balance for FY 2019/20 was used to establish the FY 2020/21 beginning balance, as outlined in Table 10. 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 10: Wastewater Utility FY 2019/20 Beginning Cash Balance

Cash and Marketable Securities	$2,762,000
Accounts Receivable	$187,000
Total Unrestricted:	$2,949,000
Impact Fee Fund (restricted):	$935,000
Total Reserves:	**$3,884,000**

3.3 CUSTOMER GROWTH

In recent years, the City has collected and average of approximately $140 thousand per year in Wastewater Impact Fee revenue from new customers connecting to the system, which equates to a growth rate of approximately 0.4% per year. This Study assumes that this trend will continue for the duration of the next 10 years (with the exception of a 250-unit development that expected to occur in FY 2021/22).

3.4 WASTEWATER UTILITY RATE REVENUE

Rate revenue is the revenue generated from customers for wastewater service. The Wastewater Utility Financial Plan starts with FY 2020/21 budgeted rate revenues.

Estimated future wastewater 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. Budgeted and projected rate revenues (including proposed rate adjustments) are listed 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, penalties, Impact Fees[6], and interest revenue on investments. In addition, the City transfers some funds from the general fund to the Wastewater Utility to fund a portion of the utility's CalPERS expenses. Projections of all non-rate revenues were based on FY 2020/21 budgeted revenues with the exception of interest income which was calculated annually based upon projected fund balances and assumed interest rate of 0.75%, 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 6 below and listed in detail in **Schedule WW-3**. Note that the City is expecting a one-time spike in Impact Fee revenue as a result of a 250-unit development that is scheduled for FY 2021/22.

[6] The City's "Impact Fees" are known as "Capacity Charges" per Government Code Section 66013.

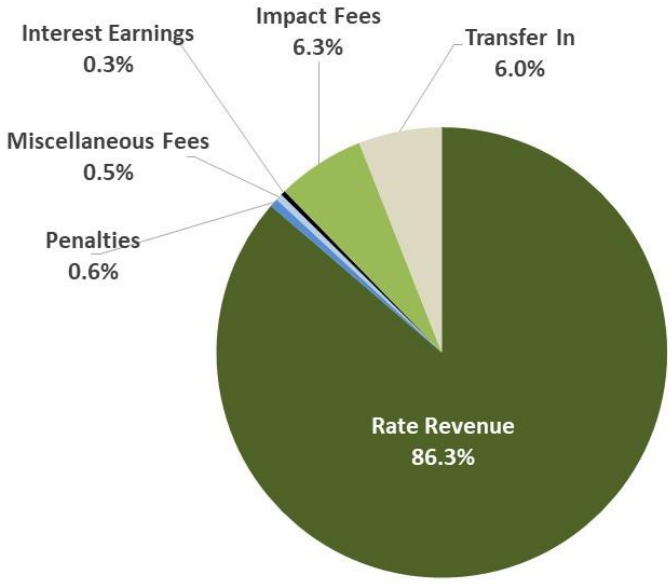


Figure 6: Budgeted Wastewater Utility Revenue Categories (FY 2020/21)

3.6 WASTEWATER UTILITY OPERATING AND DEBT EXPENSES

The Wastewater Utility's expenses include operating and maintenance expenses, debt service, and capital spending. The Wastewater Utility's debt expense is minimal ($13,000 per year) and will be paid off by FY 2022/23. Capital spending is addressed separately in Section 3.9. Future operating and maintenance expenses were projected based upon the budgeted expenditures from FY 2020/21 and adjusted for inflation (see Section 3.8).

Major budgeted expense categories for FY 2020/21 are depicted in Figure 7 Budgeted and projected operating and maintenance costs as well as debt service expenses are listed in detail in **Schedule WW-1**. The transfer out goes to the general fund and represents the cost of administrative support provided by the City's central services.

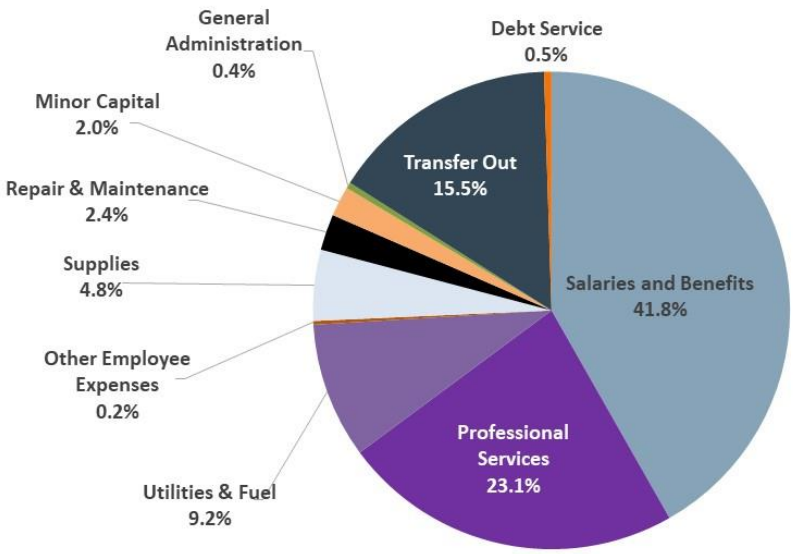


Figure 7: Wastewater Operating and Debt Expense Categories (FY 2020/21)

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 1.10 times annual debt service. However, because existing debt of the wastewater utility is so minimal, the coverage requirement currently has no bearing on the rates.

As described in below regarding the wastewater capital improvement program, while this financial plan does not include new debt (relying instead on a PayGo strategy) there is a future potential need to debt finance an AWT project in the future. While the debt service coverage requirement does not affect the rate recommendations in this study it is, nevertheless, a factor considered in developing the financial plan.

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

3.9 WASTEWATER UTILITY CAPITAL IMPROVEMENT PROGRAM

Figure 8 shows that from FY 2015/16 to FY 2020/21 the City has spent very on capital projects. Figure 8 also shows a very large project (the "Advanced Water Treatment" (AWT) project) occurring in FY2029/30. The City has been notified by the State of California Regional Water Quality Control Board (RWQCB) that the City will eventually (perhaps within 10 years) be required to increase the level of treatment of its wastewater. The AWT project is projected to cost on the order of $80 million. Preliminary analyses show that the City would need to immediately raise rates by over 300% in order to be positioned to be able to debt finance the AWT project in 10 years.

The Wastewater Utility Financial Plan does not directly propose a strategy for raising revenues for this future cost for several reasons:

1) The AWT project is still poorly defined, and the costs are unknown
2) It is unclear if or when the RWQCB will enforce the mandate
3) It is unclear if the City will qualify for federal or state grants or other financial assistance to fund the project
4) Even without the AWT project the City must increase its wastewater rates considerably just to fund the rest of its capital program (as will be described below).

For these reasons, this financial plan acknowledges that the AWT project may need to be funded at some point in the future but defers action until more is understood about the project.

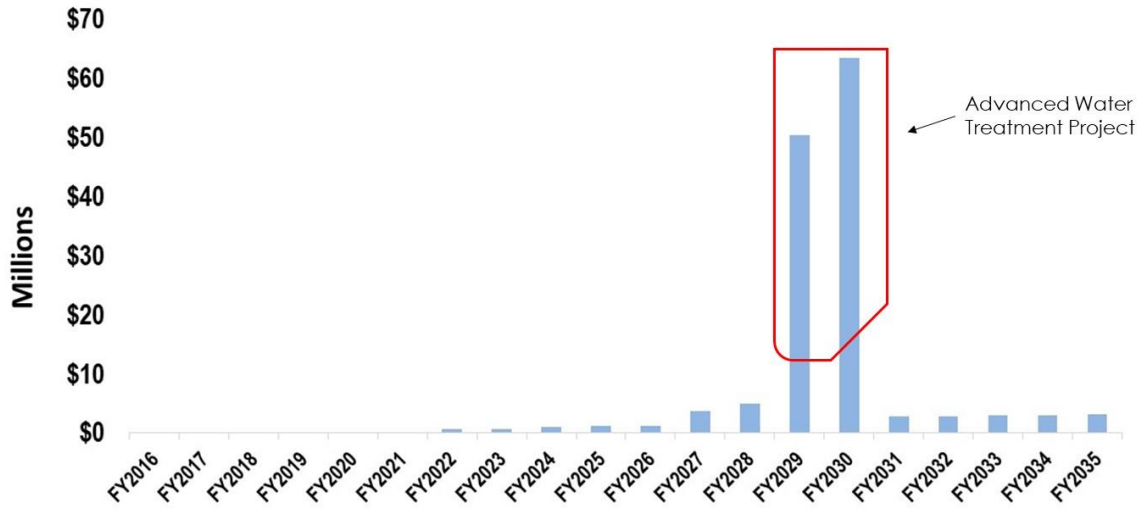


Figure 8: Historic and Projected Wastewater Capital Spending

Figure 9 shows that the Wastewater Utility's historical and projected capital spending without the AWT project. This shows that the City is planning to increase its annual capital spending from about $13 thousand per year to an average of about $950 thousand. This increase in capital spending is being done in order to pro-actively address the wastewater system's rehabilitation needs associated with aging pipes, pump stations, treatment facilities, and other system deficiencies. A detailed list of capital projects and associated costs is provided in **Schedule WW-2**. A more detailed description of a selection of projects has been provided in **Attachment A**.

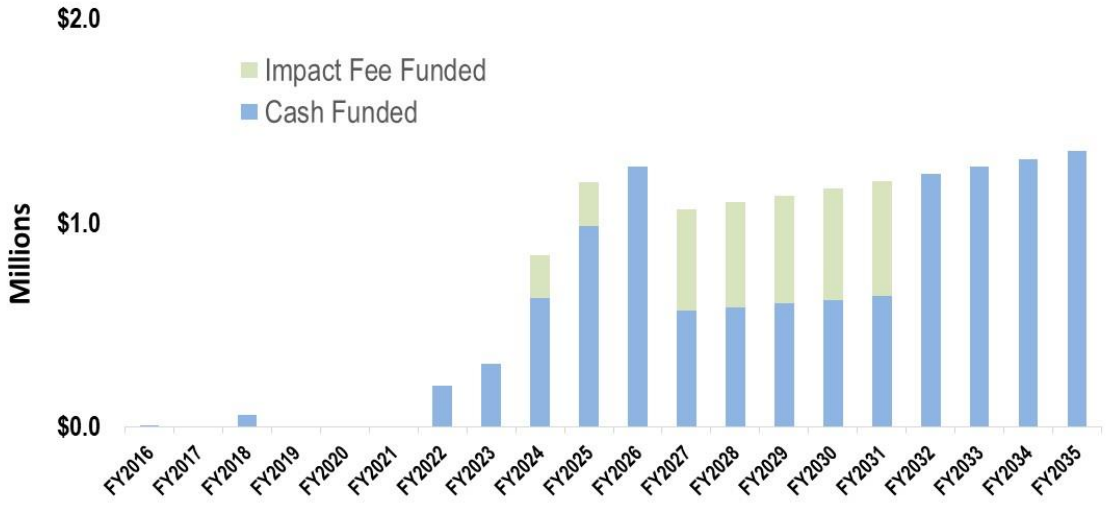


Figure 9: Historic and Projected Wastewater Capital Spending without AWT Project

This financial plan identifies that all capital spending is funded on a "pay as you go" (PayGo) basis as opposed to using a debt strategy, based on direction from the Finance, Administration and Police Subcommittee and confirmed by the full City Council.

While the Wastewater Utility currently has about $1 million in its restricted Impact Fee reserve (soon to be more than $2 million after the large development that is expected for FY 2021/22), there are no capital projects in the immediate term that have been identified as being eligible to be funded with Impact Fees. The AWT project is a major project that will be eligible to be funded (at least partially) with Impact Fee revenue because the need for the project is being driven (in part) by growth. Government Code 660000 et. seq. (commonly known as the Mitigation Fee Act) requires that Impact Fee revenue be tracked and expended only for the purposes for which it was collected. For all unexpended Impact Fee funds, City is required to make findings every five years that (1) demonstrate a reasonable relationship between the unexpended balance and the purpose for which the fee was charged; (2) identify the sources and funding for any as-yet uncompleted public improvements; and (3) designate the approximate date the agency expects the funding for uncompleted improvements to be deposited in the account. If the findings are not made as required, the City will be required to refund the

moneys to the current owners of the properties for which the fees were paid. The City should complete this reporting to document the fact that the Impact Fees are being held in reserve in anticipation of the AWT project.

3.10 WASTEWATER UTILITY CASH RESERVE POLICIES

Cash reserve policies provide cash balance 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 to maintain Contingency Reserves within the Operating Fund equal to 25 percent of annual operating and maintenance costs for the wastewater system (or about $650 thousand). 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.

Capital Replacement Reserve - This reserve serves the dual function of supporting the City's Pay-Go strategy by absorbing some of the inherent fluctuations in the City's

annual capital spending and also 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 force main). The target amount for this reserve should be the average pay-go capital spending over the next 10 years ($950 thousand). This target is expected to increase with the inflation of construction costs.

3.11 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 detailed in Table 11.

Table 11: Recommended Wastewater Rate Revenue Increase

Rate Adjustment Date	Proposed Rate Revenue Increase
July 1, 2021	3.0%
July 1, 2022	10.0%
July 1, 2023	10.0%
July 1, 2024	10.0%
July 1, 2025	10.0%

The numbers provided in **Schedule WW-3** (cash flow proforma) are summarized graphically in Figure 10, which shows that the target reserves are maintained over the course of the planning period.

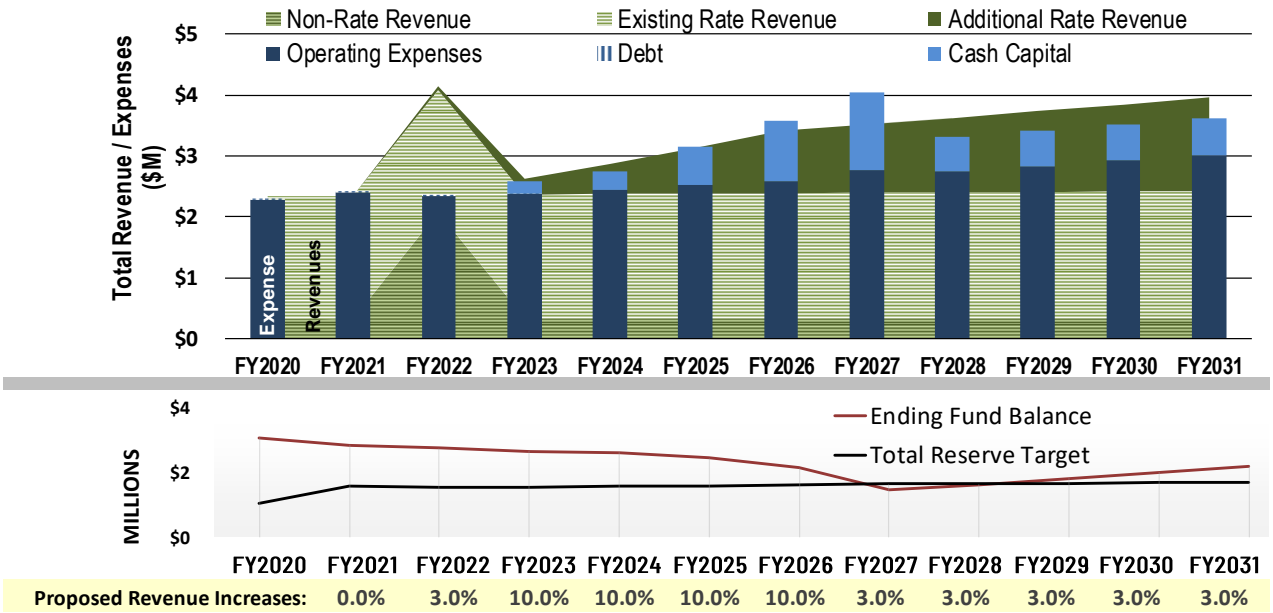


Figure 10: Wastewater Utility Financial Projection with Recommended Rate Increases

At present, wastewater rates generate about $2.0 million annually. It is important to understand that the rate increases that are being proposed are necessary in order to recalibrate the City's revenue to be able to support a more proactive capital spending program, which is increasing from nearly zero over the past several years to nearly $1.0 million per year (see detailed explanation in Section 3.9). After the final recommended increase in FY 2025/26, it is anticipated (barring unforeseen emergencies or changes in infrastructure/operational needs) that the increases thereafter will drop to near inflationary adjustments (3.0%).

3.12 WASTEWATER COST OF SERVICE & RATE STRUCTURE

The City collects a flat (fixed) monthly charge from residential wastewater customers for wastewater services. Non-residential customers pay a fixed "Base Charge" (assessed based on size of the water) and a "Usage Charge" based on a "Usage Rate" applied to

each CCF[7] of actual monthly water use (most non-residential irrigation is separately metered). Customers receive a monthly bill. The Usage Rate varies depending on the strength classification of the non-residential customer. In addition, the school district pays for sewer service based on average daily attendance (ADA). The City's current wastewater rates are summarized in Table 12.

Table 12: Current Wastewater Rates

Residential Flat Rates (monthly)		
Single Family	$41.75	per dwelling unit
Multi-Family	$27.01	per dwelling unit
Non-Residential Base Charges (monthly)		
Up to 1" Meter	$11.94	per meter
1 1/2" Meter	$21.56	per meter
2" Meter	$33.11	per meter
3" Meter	$60.07	per meter
4" Meter	$98.59	per meter
Non-Residential Usage Charges ($/CCF)		
Low Strength	$4.90	per CCF
Medium Strength	$6.11	per CCF
High Strength	$8.84	per CCF
Public Schools (monthly)		
Per 100 ADA	$161.89	per 100 ADA

3.12.1 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).

Table 13 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.

[7] One CCF is equal to 748 gallons

Table 13: Wastewater Customer Account Data and Estimated Sewer Flows and Loadings

Customer Class	No. of DUs/ Accts. (1)	No. of ESFDs	Water Usage (1)	Rate of Return	Estimated Annual Sewer Flow (2)	Estimated Annual Sewer	BOD Strength (4)	Annual BOD Loading	TSS Strength (4)	Annual TSS Loading
			CCF		CCF	MG	mg/l	lbs	mg/l	lbs
Residential										
Single Family	2,867	2,867	285,679	71%	201,552	150.8	240	301,764	200	251,470
Multi-Family (3)	679	442	37,026	84%	31,076	23.2	240	46,527	200	38,773
Non-Residential										
Low Strength	116	178	21,968	90%	19,772	14.8	240	29,602	200	24,668
Medium Strength	50	75	13,510	90%	12,159	9.1	500	37,926	300	22,756
High Strength	26	40	14,397	90%	12,957	9.7	1,000	80,829	600	48,497
Schools	1	22	9,605	60%	5,769	4	150	5,398	100	3,599
Totals	**3,739**	**3,624**	**382,185**		**283,285**	**212**	**284**	**502,046**	**221**	**389,762**

Notes:

(1) Based on utility billing system data for FY 2018/19. DU = dwelling units.

(2) Based on annualized average winter water usage for residential accounts and annual water usage for non-residential accounts.

(3) Utility billing indicate there are 679 multi-family dwelling units served by the wastewater utility through 107 separate service connections.

(4) Based on previous sewer rate analyses, SWRCB guidelines, and adjustments to better match actual treatment plant flows and loadings.

Residential sewer flows are estimated based on average water usage during winter months. A review of residential water usage data indicated that about 71 percent of annual water usage returns to the sewer system (based on average winter water usage). For multi-family customers, about 84 percent of annual water usage is estimated to return to the sewer system. For multi-family customers irrigation water usage tends to be either minimal or separately metered. Non-residential sewer flows are based on actual water usage, as most non-residential irrigation is separately metered. However, wastewater rate calculations assume a 90 percent rate of return to the sewer system to reflect minor irrigation usage.

The sewer utility serves about 2,867 single-family homes, about 679 multi-family dwelling units, and about 193 non-residential customers. On average, single-family sewer flows (based on winter water usage) are about 5.9 CCF per month. For multi-family dwellings, the average sewer flow is about 3.8 CCF per month (based on winter water usage). This average sewer flow value is then used to convert the number of multifamily dwellings to the equivalent number of single-family dwellings (ESFU). 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 area 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 13.

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. 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.

3.12.2 Sewer Rate Calculations

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.

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 14 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 13. 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 14: Determination of Wastewater Unit Costs

Cost Category	Category Allocation Percentages	Parameter Allocation Percentages (5)	Annual Cost Allocated to Each Parameter	Total Quantities (6)	Unit Cost for Each Parameter
Fixed Charge Costs *(1)*	25%		**$522,000**		
Customer Accounts		20%	$104,400	3,739	$27.92
Equiv. Single Family Dwellings (ESFDs)		80%	$417,600	3,624	$115.24
Usage Charge Costs for Collection *(2)*	35%		**$730,000**		
Flow (MG)			$730,000	212	$3,445.07
Usage Charge Costs for Treatment *(3)*	40%		**$834,400**		
Flow (MG)		34%	$284,000	212	$1,340.27
BOD (lbs)		33%	$275,000	502,046	$0.55
TSS (lbs)		33%	$275,000	389,762	$0.71
Total FY 20/21 Wastewater Rate Revenue Requirement (4)			**$2,086,000**		

Notes:

(1) Includes estimated administrative costs, debt service costs, a portion of maintenance costs, and transfer to the capital
(2) Includes estimated collection system and a portion of maintenance costs.
(3) Includes estimated wastewater treatment costs.
(4) Revenue requirement based on financial plan model.
(5) Parameter allocations based on previous rate analyses, information provided by City, and rate setting practices.
(6) From previous table

The City's budget structure does not lend itself to the segregation of costs into collection and treatment components, or to the allocation of treatment costs to flow, BOD and TSS parameters. 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 25 percent to fixed service charges, 35 percent to the collection system, and 40 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.

Unit costs are applied to the annual wastewater flows, as well as BOD and TSS loadings associated with each customer class to arrive at the allocation of total costs to each customer class. Table 15 presents the allocation of costs to each user class.

Table 15: Allocation of Wastewater Costs to Users (1)

		Fixed Charge Costs		Usage Charge Costs				
				Collection	Treatment			
No. of DUs/ Accts.	Customer Class	Customer Unit Cost = $27.92	Capacity Unit Cost = $115.24	Flow Unit Cost = $3,445.07	Flow Unit Cost = $1,340.27	BOD Unit Cost = $0.55	SS Unit Cost = $0.71	Allocation of Total Costs
	Residential							
2,867	Single Family	$80,052	$330,402	$519,383	$202,061	$165,294	$177,426	$1,474,618
679	Multi-Family	$18,959	$50,943	$80,081	$31,155	$25,486	$27,356	$233,980
	Non-Residential							
116	Low Strength	$3,239	$20,467	$50,950	$19,821	$16,215	$17,405	$128,097
50	Medium Strength	$1,396	$8,643	$31,333	$12,190	$20,774	$16,055	$90,392
26	High Strength	$726	$4,610	$33,389	$12,990	$44,275	$34,218	$130,206
1	Schools	$28	$2,535	$14,865	$5,783	$2,957	$2,539	$28,708
3,739	**Totals** (rounded)	**$104,400**	**$417,600**	**$730,000**	**$284,000**	**$275,000**	**$275,000**	**$2,086,000**

Notes:

(1) Unit costs from Table 13 are multiplied by the sewer flow, the BOD loading, or the SS loading for each customer class from Table 12

Table 16 presents the final wastewater user rates and charges recommended for each customer class. Rates for residential customers include flat monthly charges for each dwelling unit. Non-residential (low, medium, and high strength) customers are subject to a monthly base charge based on meter size and wastewater usage rates applied to actual monthly water usage. Usage charges vary for each strength category. The usage charges have also been adjusted for an estimated 90 percent rate of return to the wastewater system. That is, it is estimated that 10 percent of non-residential water use (exclusive of dedicated irrigation meters) does not return to the sewer system. Sewer rates for schools include a monthly flat rate applied to the average daily attendance (ADA) for each school.

3.12.3 Proposed Sewer Rate Schedules

Schedule WW-4 summarizes the proposed wastewater rate schedule for the next 5 years. Each rate increase will be effective on the first day of the fiscal year (July 1). The proposed wastewater rates are designed to generate the rate revenue requirements as identified by this Wastewater Utility Financial Plan. The rate increases after the initial increase will occur without additional rate structure updates. Without rate restructuring all bills will change by the same percentage.

Table 16: Wastewater Rate Determination

No. of DUs/ Accts.	Customer Class	Est. Ann. Sewer Flow	BOD Strength	TSS Strength	Monthly Fixed Charge	Usage Rate (1)	Fixed Charges	Usage Charges	Total Annual Revenue	Flat Rates ($/mo.)
		CCF	mg/l	mg/l	$/DU	$/CCF				
	Residential									
2,867	Single Family	201,552	240	200	$11.93	$5.28	$410,454	$1,064,164	$1,474,618	**$42.86** /DU
679	Multi-Family	31,076	240	200	$8.58	$5.28	$69,902	$164,078	$233,980	**$28.72** /DU
	Non-Residential									
116	Low Strength	19,772	240	200	**Varies by**	**$4.75**	$23,706	$104,391	$128,097	
50	Medium Strength	12,159	500	300	**Meter**	**$5.95**	$10,039	$80,352	$90,392	
26	High Strength	12,957	1,000	600	**Size** (2)	**$8.67**	$5,336	$124,871	$130,206	
1	Schools	5,769	150	100		**$2.72**	$2,563	$26,145	$28,708	**$175.78** /100 ADA
3,739	**Totals**	**283,285**					**$522,000**	**$1,564,000**	**$2,086,000**	

Notes:

(1) Sewer 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).

Section 4. CONCLUSION

This 2021 water and wastewater rate study proposes updated utility rates for the City of Cloverdale. 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, 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.

ATTACHMENTS

Attachment A – Descriptions of Water Capital Projects

Attachment B – Descriptions of Wastewater Capital Projects

ATTACHMENT A – Description of Water Capital Projects

The following describes a selection of capital projects listed in Schedule W-2.

New Well – The Cloverdale WTP operates and maintains a series of shallow wells (7) along the Russian River. As wells age, their production capacity and reliability begins to drop off. As part of the CIP, the City has developed plans for the replacement or redevelopment of aged wells. The next proposed well is scheduled to be design and constructed within the next two fiscal years. The proposed well site is on the eastern bank of the Russian River on a city-owned lot in what is believed to be a water-rich site. In order to get the water to the water treatment plant, the well pumps will need about ½ to 1 mile of pipeline, depending on the preferred route. The order-of-magnitude cost estimated for this project is about $1.4 million dollars.

Ritter Reservoir No.1 – This bolt-together tank was installed in 1988 and is showing signs of deterioration. The plan is to replace it with a more-reliable welded steel tank. The interior coating is failing, and the bolt-together structure is leaking at about a dozen locations. The CIP delivery date is scheduled for Fiscal Year 2024 & 2025, and the estimated cost is 1.6 million dollars.

WTP Chlorine Contact Tank Addition – The Cloverdale WTP currently has one contact tank that has been in continuous operations since it was constructed in 2001. A redundant tank is needed to assure continuous operations when one tank is removed from service. The CIP has an estimated project delivery in FY 2024 & FY 2025.

WTP Sludge Drying Beds – The Cloverdale WTP does not currently have a proper solids handling facility. When the water filters are flushed, the backwash water is sent to a pond for settlement and the decant is sent to the head of the plant. The settled sludge at the bottom of the pond is removed through the use of a vactor truck and the sludge is placed on a "drying mound" and then sent to a landfill. Future compliance will require the placement of the sludge into drying beds where water will be removed through evaporation. Once dried, the solids are mechanically removed and sent to a landfill.

Water Main Replacement Program – The water distribution system consist of pumps, pipes, and reservoirs (tanks). A key component of keeping the distribution system resilient and reliable is to have a program to replace older pipelines. Delaying the investment will result in degrading water service, increasing water service disruptions, and increasing expenditures for emergency repairs. The CIP has included this program at $0.25 million dollars annually. The funding level would replace approximately 200 feet per year.

ATTACHMENT B – Description of Wastewater Capital Projects

The following provides descriptions of a selection of capital projects listed in Schedule WW-2.

Sewer Replacement Program – This program addresses the sewer collection system renewal for older pipelines or undersized pipelines. The sewer pipeline replacement program is included in the CIP at $400k in FY 2024 for bid package preparation and $1.5M per year for five years to construct new sewers.

Sewer Rehabilitation Program – This program identifies pipelines that have sufficient capacity but need extensive repair. Sewer lining allows the city to extend the service life of a sewer. The CIP has a sewer lining program funded at about $200k annually and adjusted to conform to available infrastructure budget.

Wastewater Treatment Plant Upgrade – Cloverdale's WWTP was built in 1980 and has not had any renewals/upgrades. Currently the operations area is within the motor control center room. The MCC needs to be upgraded, and the operations area need to be separated. The upgrade is an interim project. The entire WWTP will need to be replaced within 10 to 20 years. The CIP has this project scheduled for delivery in FYs 2024 and 2025.

Wastewater SCADA – The WWTP currently has a rudimentary graphic interface that was developed when the WWTP was built. The plant will be upgraded to include a complete SCADA (Supervisory Control and Data Access) system which allows complete operational control through the use of computers. This planned system will be sufficiently robust to be incorporated into a new WWTP at that time. The CIP has the project delivery scheduled for FY's 2024 and 2025.

Biosolids Removal – The WWTP uses settling ponds as part of the treatment process. Periodically (every 3 to 5 years) the ponds are dredged, the material that is removed is dewatered, and the decant is returned to the head of the plant. The dewatered sludge is trucked to a landfill. The next scheduled biosolids removal is scheduled for FY 2021 and in FY 2025.

SCHEDULES

Schedule W-1 - Budgeted and Projected Water Utility Operating and Debt Expenses

Schedule W-2 – Water Utility Capital Spending Plan

Schedule W-3 – Water Utility Cash Flow Pro Forma

Schedule W-4 - 5-Year Schedule of Proposed Water Rates

Schedule WW-1 - Budgeted and Projected Wastewater Utility Operating and Debt Expenses

Schedule WW-2 - Wastewater Utility Capital Spending Plan

Schedule WW-3 - Wastewater Utility Cash Flow Pro Forma

Schedule WW-4 - 5-Year Schedule of Proposed Wastewater Rates

Schedule W-1 – Budgeted and Projected Water Utility Operating and Debt Expense (1 of 2)

		FY2020/21	FY2021/22	FY2022/23	FY2023/24	FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30	FY2030/31
1	**Department 202- Billing & Revenue**											
2	**Salaries and Employee Benefits**											
3	Regular Employees	$172,200	$177,400	$182,700	$188,200	$193,800	$199,700	$205,600	$211,800	$218,200	$224,700	$231,500
4	Overtime	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,200	$1,300	$1,300	$1,300
5	Benefit Buyouts	$2,800	$2,900	$3,000	$3,100	$3,200	$3,300	$3,400	$3,500	$3,600	$3,700	$3,800
6	Insurance Benefits	$54,000	$55,600	$57,300	$59,000	$60,800	$62,600	$64,500	$66,400	$68,400	$70,500	$72,600
7	Social Security	$2,600	$2,600	$2,700	$2,800	$2,900	$3,000	$3,000	$3,100	$3,200	$3,300	$3,400
8	Retirement	$36,100	$37,200	$38,300	$39,500	$40,700	$41,900	$43,200	$44,500	$45,800	$47,200	$48,600
9	Workers Compensation	$16,300	$16,800	$17,300	$17,800	$18,300	$18,900	$19,400	$20,000	$20,600	$21,200	$21,900
10	**Services and Supplies**											
11	Banking Fees	$17,000	$17,500	$18,000	$18,600	$19,100	$19,700	$20,300	$20,900	$21,500	$22,200	$22,800
12	Miscellaneous Contract Services	$8,500	$8,700	$9,000	$9,200	$9,500	$9,800	$10,100	$10,400	$10,700	$11,000	$11,400
13	Other Government Services	$15,800	$16,200	$16,700	$17,200	$17,700	$18,300	$18,800	$19,400	$20,000	$20,600	$21,200
14	Computer Maintenance	$2,500	$2,600	$2,700	$2,700	$2,800	$2,900	$3,000	$3,100	$3,200	$3,300	$3,400
15	Postage & Shipping	$15,000	$15,500	$15,900	$16,400	$16,900	$17,400	$17,900	$18,400	$19,000	$19,600	$20,200
16	Training, Conferences, Tution	$1,500	$1,500	$1,600	$1,600	$1,700	$1,700	$1,800	$1,800	$1,900	$2,000	$2,000
17	Travel Expense, Meals	$2,500	$2,600	$2,700	$2,700	$2,800	$2,900	$3,000	$3,100	$3,200	$3,300	$3,400
18	Utilities-Telephone, Cell	$1,000	$1,000	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,300	$1,300
19	Bad Debt Expense	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,200	$1,300	$1,300	$1,300
	Department 800-Water Operations											
	Salaries and Employee Benefits											
20	Regular Employees	$372,000	$383,200	$394,700	$406,500	$418,700	$431,300	$444,200	$457,500	$471,300	$485,400	$500,000
21	Overtime	$42,000	$43,300	$44,600	$45,900	$47,300	$48,700	$50,200	$51,700	$53,200	$54,800	$56,400
22	Benefit Buyouts	$1,900	$2,000	$2,000	$2,100	$2,200	$2,200	$2,300	$2,400	$2,400	$2,500	$2,600
23	Standby Wages	$60,000	$61,800	$63,700	$65,600	$67,500	$69,600	$71,600	$73,800	$76,000	$78,300	$80,600
24	Insurance Benefits	$80,700	$83,100	$85,600	$88,200	$90,800	$93,500	$96,300	$99,200	$102,200	$105,300	$108,400
25	Social Security	$7,400	$7,600	$7,900	$8,100	$8,300	$8,600	$8,900	$9,100	$9,400	$9,700	$10,000
26	Retirement	$83,500	$86,000	$88,500	$91,200	$93,900	$96,800	$99,700	$102,600	$105,700	$108,900	$112,200
27	Workers Compensation	$43,300	$44,600	$45,900	$47,300	$48,700	$50,100	$51,600	$53,200	$54,800	$56,400	$58,100
28	Other Employee Benefits	$2,100	$2,200	$2,200	$2,300	$2,400	$2,400	$2,500	$2,600	$2,700	$2,800	$2,800
29	Overhead & Administration	$606,500	$624,700	$643,500	$662,800	$682,700	$703,100	$724,200	$746,000	$768,300	$791,400	$815,100
30	**Services and Supplies**											
31	Other Professional Services	$32,500	$33,500	$34,500	$35,500	$36,600	$37,700	$38,800	$40,000	$41,200	$42,400	$43,700
32	Misc Contract Services	$66,500	$68,500	$70,500	$72,700	$74,800	$77,100	$79,400	$81,800	$84,200	$86,800	$89,400
33	Other Government Services	$25,500	$26,200	$27,000	$27,800	$28,600	$29,500	$30,400	$31,300	$32,200	$33,200	$34,200
34	Vehicle Maintenance	$2,500	$2,600	$2,700	$2,700	$2,800	$2,900	$3,000	$3,100	$3,200	$3,300	$3,400
35	General Repairs & Maintenance	$87,500	$90,100	$92,800	$95,600	$98,500	$101,400	$104,500	$107,600	$110,800	$114,200	$117,600
36	Advertising	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,200	$1,300	$1,300	$1,300
37	Membership Dues	$700	$700	$700	$700	$700	$800	$800	$800	$800	$800	$900
38	Training, Conferences, Tuition	$2,500	$2,600	$2,700	$2,700	$2,800	$2,900	$3,000	$3,100	$3,200	$3,300	$3,400
39	Travel Expense, Meals	$2,500	$2,600	$2,700	$2,700	$2,800	$2,900	$3,000	$3,100	$3,200	$3,300	$3,400
40	Promotions	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,200	$1,300	$1,300	$1,300
41	Rentals	$9,000	$9,300	$9,500	$9,800	$10,100	$10,400	$10,700	$11,100	$11,400	$11,700	$12,100

Schedule W-1 – Budgeted and Projected Water Utility Operating and Debt Expense (2 of 2)

		FY2020/21	FY2021/22	FY2022/23	FY2023/24	FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30	FY2030/31
	Department 800-Water Operations											
42	**Operating Supplies**											
43	Small Tools & Equipment	$11,500	$11,800	$12,200	$12,600	$12,900	$13,300	$13,700	$14,100	$14,600	$15,000	$15,500
44	Fuel	$6,700	$6,900	$7,100	$7,300	$7,500	$7,800	$8,000	$8,200	$8,500	$8,700	$9,000
45	Utilities-Gas & Electric	$245,000	$252,400	$259,900	$267,700	$275,700	$284,000	$292,500	$301,300	$310,400	$319,700	$329,300
46	Utilities - Telephone, pagers, cell	$15,000	$15,500	$15,900	$16,400	$16,900	$17,400	$17,900	$18,400	$19,000	$19,600	$20,200
47	Utilities - Water	$5,300	$5,500	$5,600	$5,800	$6,000	$6,100	$6,300	$6,500	$6,700	$6,900	$7,100
	Department 801-Water Distribution											
	Salaries and Employee Benefits											
48	Regular Employees	$157,400	$162,200	$167,000	$172,000	$177,200	$182,500	$188,000	$193,600	$199,400	$205,400	$211,600
49	Overtime	$5,000	$5,200	$5,300	$5,500	$5,600	$5,800	$6,000	$6,100	$6,300	$6,500	$6,700
50	Standby Wages	$2,800	$2,800	$2,900	$3,000	$3,100	$3,200	$3,300	$3,400	$3,500	$3,600	$3,700
51	Insurance Benefits	$48,000	$49,400	$50,900	$52,400	$54,000	$55,600	$57,300	$59,000	$60,700	$62,600	$64,400
52	Social Security	$2,400	$2,500	$2,500	$2,600	$2,700	$2,800	$2,900	$2,900	$3,000	$3,100	$3,200
53	Retirement	$49,900	$51,400	$53,000	$54,600	$56,200	$57,900	$59,600	$61,400	$63,300	$65,200	$67,100
54	Workers Compensation	$15,300	$15,700	$16,200	$16,700	$17,200	$17,700	$18,200	$18,800	$19,400	$19,900	$20,500
55	Other Employee Benefits	$3,200	$3,300	$3,400	$3,500	$3,600	$3,700	$3,800	$3,900	$4,100	$4,200	$4,300
56	**Services and Supplies**											
57	Other Professional Services	$180,000	$25,400	$26,200	$26,900	$27,800	$128,600	$32,400	$33,400	$34,400	$35,500	$36,500
58	Misc Contract Services	$47,100	$48,500	$50,000	$51,500	$53,000	$54,600	$56,200	$57,900	$59,700	$61,500	$63,300
59	Vehicle Maintenance	$30,000	$30,900	$31,800	$32,800	$33,800	$34,800	$35,800	$36,900	$38,000	$39,100	$40,300
60	General Repairs & Maintenance	$34,000	$35,000	$36,100	$37,200	$38,300	$39,400	$40,600	$41,800	$43,100	$44,400	$45,700
61	Training, Conferences, Tuition	$2,000	$2,100	$2,100	$2,200	$2,300	$2,300	$2,400	$2,500	$2,500	$2,600	$2,700
62	Travel Expense, Meals	$2,000	$2,100	$2,100	$2,200	$2,300	$2,300	$2,400	$2,500	$2,500	$2,600	$2,700
63	Rentals	$3,000	$3,100	$3,200	$3,300	$3,400	$3,500	$3,600	$3,700	$3,800	$3,900	$4,000
64	Operating Supplies	$42,500	$43,700	$45,000	$46,400	$47,800	$49,200	$50,700	$52,200	$53,800	$55,400	$57,000
65	Small Tools & Equipment	$9,000	$9,300	$9,500	$9,800	$10,100	$10,400	$10,700	$11,100	$11,400	$11,700	$12,100
66	Vehicle outlay	$0	$33,300	$0	$0	$0	$0	$0	$0	$0	$0	$0
67	**Debt Service**	$499,000	$499,000	$309,000	$296,000	$293,000	$293,000	$167,000	$165,000	$167,000	$167,000	$167,000
68	**Total Operating & Debt Expenses**	**$3,296,900**	**$3,254,100**	**$3,112,300**	**$3,183,200**	**$3,266,700**	**$3,456,200**	**$3,324,700**	**$3,417,400**	**$3,517,400**	**$3,618,200**	**$3,721,400**

Schedule W-2 – Water Utility Capital Spending Plan

		FY21/22	FY22/23	FY23/24	FY24/25	FY25/26	FY26/27	Year 7 and Beyond	Priority Level
1	*Source Capacity*	*$12,000*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	Necessary
2	New Well	*$0*	*$185,000*	*$1,246,000*	*$0*	*$0*	*$0*	*$0*	Development
3	Well Replacement #7	*$0*	*$0*	*$0*	*$302,800*	*$0*	*$0*	*$0*	Mandate
4	Well Rehabilitation #8	*$0*	*$0*	*$0*	*$0*	*$260,176*	*$0*	*$0*	Mandate
5	Water Master Plan	*$0*	*$0*	*$0*	*$200,000*	*$0*	*$0*	*$0*	Mandate
6	SCADA Expansion	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$626,200*	Necessary
7	Cherry Creek Reservoir Rehab.	*$165,000*	*$828,750*	*$276,250*	*$0*	*$0*	*$0*	*$0*	Mandate
8	Water Main Replacement	*$0*	*$250,000*	*$250,000*	*$250,000*	*$250,000*	*$250,000*	*$4,860,000*	Necessary
9	Site Security Fencing	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$203,200*	Important
10	Ritter Reservoir	*$0*	*$0*	*$0*	*$0*	*$1,290,000*	*$400,000*	*$0*	Necessary
11	Reservoir Siting Study	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$100,000*	Necessary
12	Del Webb Reservoir # 1,2,3 Coat	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$1,262,000*	Mandate
13	Vista View PS Rehab.	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$75,000*	Necessary
14	School Street PS Rehab.	*$0*	*$0*	*$0*	*$0*	*$50,000*	*$0*	*$173,440*	Necessary
15	Meter Radio Read Upgrade	*$0*	*$100,000*	*$100,000*	*$100,000*	*$150,000*	*$0*	*$300,000*	Important
16	WTP 2nd Chlorine Contact Tank	*$0*	*$0*	*$0*	*$0*	*$1,535,000*	*$1,535,000*	*$0*	Necessary
17	WTP Chemical Tank Rehab-Repl	*$0*	*$0*	*$0*	*$0*	*$454,600*	*$0*	*$0*	Mandate
18	WTP Sludge Drying Bed	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$1,551,500*	Necessary
19	WTP Backwash Pond Rehab.	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$174,000*	Necessary
20	WTP Upgrade Covered Parking	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$172,000*	Important
21	WTP Filter Upgrades	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$885,000*	Necessary
22	WTP Gantry Crane	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$875,000*	Important
23	WTP Transfer Pumps	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$400,000*	Important
24	Furber Tanks	*$0*	*$0*	*$0*	*$0*	*$400,000*	*$0*	*$0*	Mandate
25	Tanks - Seismic Eval	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$492,000*	Necessary
26	**Totals:**	**$ 177,000**	**$1,363,750**	**$ 1,872,250**	**$ 852,800**	**$ 4,389,775**	**$ 2,185,000**	**$ 12,149,340**	

Schedule W-3 – Water Utility Cash Flow Pro Forma

		Actual FY 2019	Projected FY 2020	Budget FY 2021	Forecast FY2022	Forecast FY2023	Forecast FY2024	Forecast FY2025	Forecast FY2026	Forecast FY2027	Forecast FY2028	Forecast FY2029	Forecast FY2030	Forecast FY2031
1	**Water Revenue Increase:**			**0.0%**	**6.0%**	**12.0%**	**12.0%**	**12.0%**	**12.0%**	**8.0%**	**6.0%**	**6.0%**	**6.0%**	**6.0%**
	Rate Revenue													
2	**Sewer Service Charge Revenue**	$3,113,596	$3,191,026	$3,191,000	$3,207,000	$3,415,000	$3,842,000	$4,322,000	$4,863,000	$5,472,000	$5,938,000	$6,324,000	$6,735,000	$7,173,000
3	Change due to growth & use			$16,000	$16,000	$17,000	$19,000	$22,000	$25,000	$28,000	$30,000	$32,000	$34,000	$36,000
4	Increase due to rate adjustments			$0	$192,000	$410,000	$461,000	$519,000	$584,000	$438,000	$356,000	$379,000	$404,000	$430,000
	Non-Rate Revenues													
5	Penalties	$43,197	$40,318	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000
6	Miscellaneous Fees	$29,815	$26,436	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000
7	Interest Earnings	$22,716	$12,071	$17,000	$19,000	$19,000	$24,000	$22,000	$27,000	$33,000	$15,000	$19,000	$20,000	$22,000
8	Impact Fees	$44,241	$118,133	$119,000	$1,370,000	$130,000	$129,000	$120,000	$121,000	$119,000	$117,000	$118,000	$119,000	$120,000
9	Operating Revenue	$8,278	$33,000	$6,000	$446,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000
10	**Total Revenue**	**$3,261,842**	**$3,420,985**	**$3,415,000**	**$5,316,000**	**$4,063,000**	**$4,547,000**	**$5,077,000**	**$5,692,000**	**$6,162,000**	**$6,528,000**	**$6,944,000**	**$7,384,000**	**$7,853,000**
	O&M Costs													
11	Salaries and Benefits	$1,230,343	$1,268,000	$1,262,000	$1,300,000	$1,339,000	$1,379,000	$1,420,000	$1,463,000	$1,507,000	$1,552,000	$1,598,000	$1,646,000	$1,696,000
12	Professional Services	$6,590	$2,000	$14,000	$14,000	$14,000	$15,000	$15,000	$16,000	$16,000	$17,000	$17,000	$18,000	$18,000
13	Utilities & Fuel	$241,677	$268,000	$273,000	$281,000	$290,000	$298,000	$307,000	$316,000	$326,000	$336,000	$346,000	$356,000	$367,000
14	Other Employee Expenses	$135,908	$196,000	$138,000	$142,000	$146,000	$150,000	$155,000	$159,000	$164,000	$169,000	$174,000	$180,000	$185,000
15	Supplies	$79,855	$232,000	$376,000	$227,000	$234,000	$241,000	$248,000	$356,000	$266,000	$274,000	$282,000	$291,000	$300,000
16	Repair & Maintenance	$85,851	$103,000	$154,000	$159,000	$163,000	$168,000	$173,000	$179,000	$184,000	$189,000	$195,000	$201,000	$207,000
17	Minor Capital	$0	$11,000	$9,000	$43,000	$10,000	$10,000	$10,000	$10,000	$11,000	$11,000	$11,000	$12,000	$12,000
18	General Administration	$34,469	$38,000	$38,000	$39,000	$40,000	$41,000	$42,000	$43,000	$45,000	$46,000	$48,000	$49,000	$50,000
19	***Total Operating Expenses***	**$1,814,692**	**$2,118,000**	**$2,264,000**	**$2,205,000**	**$2,236,000**	**$2,302,000**	**$2,370,000**	**$2,542,000**	**$2,519,000**	**$2,594,000**	**$2,671,000**	**$2,753,000**	**$2,835,000**
	Capital Costs													
20	**Total Capital Spending**	**$36,673**	**$0**	**$0**	**$177,000**	**$1,405,000**	**$1,986,000**	**$932,000**	**$4,941,000**	**$2,533,000**	**$2,901,000**	**$2,988,000**	**$3,078,000**	**$3,170,000**
21	**Bond Proceeds**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
22	Existing Debt Service	$483,449	$500,039	$499,000	$499,000	$309,000	$296,000	$293,000	$293,000	$167,000	$165,000	$167,000	$167,000	$167,000
23	Cash Funded Capital Projects	$36,673	$0	$0	$149,000	$1,129,000	$635,000	$932,000	$4,595,000	$2,177,000	$2,901,000	$2,988,000	$3,078,000	$3,170,000
24	Impact Fee Funded Projects	$0	$0	$0	$29,000	$276,000	$1,351,000	$0	$346,000	$356,000	$0	$0	$0	$0
25	***Total Capital Expenses***	**$520,122**	**$500,039**	**$499,000**	**$677,000**	**$1,714,000**	**$2,282,000**	**$1,225,000**	**$5,234,000**	**$2,700,000**	**$3,066,000**	**$3,155,000**	**$3,245,000**	**$3,337,000**
	Transfers													
26	Transfer In - PERS	$149,641	$152,379	$164,000	$164,000	$164,000	$164,000	$164,000	$164,000	$164,000	$164,000	$164,000	$164,000	$164,000
27	Transfer Out - Fund 211	$17,378	$0	$21,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
28	Transfer Out - General Fund	$389,514	$535,217	$607,000	$665,000	$685,000	$705,000	$726,000	$748,000	$771,000	$794,000	$818,000	$842,000	$867,000
29	**Total Revenue Requirement**	**$2,592,065**	**$3,000,877**	**$3,227,000**	**$3,354,000**	**$4,195,000**	**$3,774,000**	**$4,157,000**	**$8,014,000**	**$5,470,000**	**$6,290,000**	**$6,480,000**	**$6,676,000**	**$6,875,000**
30	**Beginning Year Balance**	**$1,619,808**	**$2,245,344**	**$2,547,000**	**$2,616,000**	**$3,208,000**	**$2,946,000**	**$3,590,000**	**$4,390,000**	**$1,947,000**	**$2,520,000**	**$2,641,000**	**$2,987,000**	**$3,576,000**
31	**Surplus/(Shortfall)***	**$625,536**	**$301,974**	**$69,000**	**$592,000**	**($262,000)**	**$644,000**	**$800,000**	**($2,443,000)**	**$573,000**	**$121,000**	**$346,000**	**$589,000**	**$858,000**
32	**End of Year Balance**	**$2,245,344**	**$2,547,318**	**$2,616,000**	**$3,208,000**	**$2,946,000**	**$3,590,000**	**$4,390,000**	**$1,947,000**	**$2,520,000**	**$2,641,000**	**$2,987,000**	**$3,576,000**	**$4,434,000**
33	*Reserve Target*	$578,880	$654,510	$1,696,000	$2,676,000	$2,696,000	$2,772,000	$2,852,000	$2,961,000	$2,992,000	$3,080,000	$3,172,000	$3,266,000	$3,363,000
34	*Available Cash*	$1,666,464	$1,892,808	$920,000	$532,000	$250,000	$818,000	$1,538,000	($1,014,000)	($472,000)	($439,000)	($185,000)	$310,000	$1,071,000
35	*Capacity Fee Reserve (Restricted)*	$469,601	$587,734	$707,000	$2,048,000	$1,902,000	$680,000	$800,000	$575,000	$338,000	$455,000	$573,000	$692,000	$812,000
	Debt Coverage Calculations													
36	*Revenue Available for Debt Service*	$1,145,658	$802,013	$568,000	$1,240,000	$1,176,000	$1,575,000	$2,025,000	$2,445,000	$2,917,000	$3,187,000	$3,501,000	$3,834,000	$4,195,000
37	*Total Yearly Parity Debt Payment*	*$483,449*	*$500,039*	*$499,000*	*$499,000*	*$309,000*	*$296,000*	*$293,000*	*$293,000*	*$167,000*	*$165,000*	*$167,000*	*$167,000*	*$167,000*
39	**Debt Coverage Ratio**		**1.60**	**1.14**	**2.48**	**3.81**	**5.32**	**6.91**	**8.34**	**17.47**	**19.32**	**20.96**	**22.96**	**25.12**

* Doesn't include the Impact Fee revenue or expenses, which is accounted for seperately in Row 31

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

		Effective Date				
	Current	July 1, 2021	July 1, 2022	July 1, 2023	July 1, 2024	July 1, 2025
Water Usage Rates						
Per CCF (748 gallons)	**$4.75**	$5.06	$5.67	$6.35	$7.11	$7.96
Fixed Monthly Base Charges						
Up to 1" Meter	**$24.32**	$25.92	$29.03	$32.51	$36.41	$40.78
1 1/2" Meter	**$45.97**	$48.96	$54.84	$61.42	$68.79	$77.04
2" Meter	**$71.96**	$76.62	$85.81	$96.11	$107.64	$120.56
3" Meter	**$132.60**	$150.36	$168.40	$188.61	$211.24	$236.59
4" Meter	**$219.24**	$233.32	$261.32	$292.68	$327.80	$367.14
6" Meter	**$405.81**	$463.77	$519.42	$581.75	$651.56	$729.75

Schedule WW-1 – Budgeted and Projected Wastewater Utility Operating and Debt Expense (1 of 2)

		FY2020/21	FY2021/22	FY2022/23	FY2023/24	FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30	FY2030/31
1	**Department 202- Billing & Revenue**											
2	**Salaries and Employee Benefits**											
3	Regular Employees	$123,700	$127,400	$131,200	$135,100	$139,200	$143,300	$147,600	$152,100	$156,600	$161,300	$166,200
4	Benefit Buyouts	$1,800	$1,800	$1,900	$2,000	$2,000	$2,100	$2,100	$2,200	$2,300	$2,300	$2,400
5	Insurance Benefits	$40,400	$41,600	$42,900	$44,100	$45,500	$46,800	$48,200	$49,700	$51,200	$52,700	$54,300
6	Social Security	$1,800	$1,900	$1,900	$2,000	$2,000	$2,100	$2,200	$2,200	$2,300	$2,400	$2,400
7	Retirement	$22,800	$23,500	$24,200	$24,900	$25,600	$26,400	$27,200	$28,000	$28,800	$29,700	$30,600
8	Workers Compensation	$11,600	$12,000	$12,300	$12,700	$13,100	$13,500	$13,900	$14,300	$14,700	$15,100	$15,600
	Services and Supplies											
9	Banking Fees	$8,700	$9,000	$9,200	$9,500	$9,800	$10,100	$10,400	$10,700	$11,000	$11,400	$11,700
10	Misc Contract Services	$5,500	$5,600	$5,800	$6,000	$6,100	$6,300	$6,500	$6,700	$6,900	$7,100	$7,300
11	Computer Maintenance	$2,000	$2,100	$2,100	$2,200	$2,300	$2,300	$2,400	$2,500	$2,500	$2,600	$2,700
12	Postage & Shipping	$13,800	$14,200	$14,600	$15,000	$15,500	$15,900	$16,400	$16,900	$17,400	$17,900	$18,500
13	Training, Conferences, Tuition	$800	$800	$800	$800	$800	$900	$900	$900	$1,000	$1,000	$1,000
14	Travel Expense, Meals	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,200	$1,300	$1,300	$1,300
15	Office Supplies	$400	$400	$400	$400	$400	$400	$400	$400	$400	$500	$500
16	Bad Debt Expense	$1,800	$1,800	$1,900	$1,900	$2,000	$2,000	$2,100	$2,200	$2,200	$2,300	$2,400
	Department 800-Sewer Operations											
	Salaries and Employee Benefits											
17	Regular Employees	$325,000	$334,800	$344,800	$355,200	$365,800	$376,800	$388,100	$399,800	$411,800	$424,100	$436,800
18	Overtime	$37,000	$38,100	$39,300	$40,400	$41,600	$42,900	$44,200	$45,500	$46,900	$48,300	$49,700
19	Benefit Buyouts	$5,800	$6,000	$6,100	$6,300	$6,500	$6,700	$6,900	$7,100	$7,300	$7,500	$7,800
20	Standby Wages	$47,000	$48,400	$49,900	$51,400	$52,900	$54,500	$56,100	$57,800	$59,500	$61,300	$63,200
21	Insurance Benefits	$94,300	$97,200	$100,100	$103,100	$106,200	$109,400	$112,600	$116,000	$119,500	$123,100	$126,800
22	Social Security	$6,400	$6,600	$6,800	$7,000	$7,200	$7,500	$7,700	$7,900	$8,100	$8,400	$8,600
23	Retirement	$99,300	$102,300	$105,400	$108,600	$111,800	$115,200	$118,600	$122,200	$125,900	$129,600	$133,500
24	Workers Compensation	$37,800	$38,900	$40,100	$41,300	$42,500	$43,800	$45,100	$46,400	$47,800	$49,300	$50,700
25	Other Employee Benefits	$2,100	$2,200	$2,200	$2,300	$2,400	$2,400	$2,500	$2,600	$2,700	$2,700	$2,800
26	Overhead & Administration	$374,800	$386,000	$397,600	$409,500	$421,800	$434,500	$447,500	$460,900	$474,700	$489,000	$503,700

Schedule WW-1 – Budgeted and Projected Wastewater Utility Operating and Debt Expense (2 of 2)

		FY2020/21	FY2021/22	FY2022/23	FY2023/24	FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30	FY2030/31
	Department 800-Sewer Operations											
	Services and Supplies											
27	Legal Services	$35,000	$36,100	$37,100	$38,200	$39,400	$40,600	$41,800	$43,000	$44,300	$45,700	$47,000
28	Other Professional Services	$78,000	$55,300	$57,000	$58,700	$60,500	$62,300	$64,200	$66,100	$68,100	$70,100	$72,200
29	Misc Contract Services	$67,100	$69,100	$71,100	$73,300	$75,500	$77,700	$80,100	$82,500	$84,900	$87,500	$90,100
30	Other Government Services	$31,400	$32,300	$33,300	$34,300	$35,300	$36,400	$37,500	$38,600	$39,800	$41,000	$42,200
31	Computer Maintenance	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,200	$1,300	$1,300	$1,300
32	Vehicle Repair	$2,000	$2,100	$2,100	$2,200	$2,300	$2,300	$2,400	$2,500	$2,500	$2,600	$2,700
33	General Repair & Maintenance	$34,000	$35,000	$36,100	$37,200	$38,300	$39,400	$40,600	$41,800	$43,100	$44,400	$45,700
34	Membership Dues	$800	$800	$800	$800	$800	$900	$900	$900	$1,000	$1,000	$1,000
35	Training, Conferences, Tuition	$2,000	$2,100	$2,100	$2,200	$2,300	$2,300	$2,400	$2,500	$2,500	$2,600	$2,700
36	Travel Expense, Meals	$1,000	$1,000	$1,100	$1,100	$1,100	$1,200	$1,200	$1,200	$1,300	$1,300	$1,300
37	Rentals	$18,000	$18,500	$19,100	$19,700	$20,300	$20,900	$21,500	$22,100	$22,800	$23,500	$24,200
38	Operating Supplies	$47,600	$49,000	$50,500	$52,000	$53,600	$55,200	$56,800	$58,500	$60,300	$62,100	$64,000
39	Small Tools & Equipment	$16,500	$17,000	$17,500	$18,000	$18,600	$19,100	$19,700	$20,300	$20,900	$21,500	$22,200
40	Fuel	$8,000	$8,200	$8,500	$8,700	$9,000	$9,300	$9,600	$9,800	$10,100	$10,400	$10,800
41	Utilities-Gas & Electric	$190,000	$195,700	$201,600	$207,600	$213,800	$220,300	$226,900	$233,700	$240,700	$247,900	$255,300
42	Utilities - Telephone, Pagers, Cell	$5,000	$5,200	$5,300	$5,500	$5,600	$5,800	$6,000	$6,100	$6,300	$6,500	$6,700
43	Utilities-Water	$18,500	$19,100	$19,600	$20,200	$20,800	$21,400	$22,100	$22,800	$23,400	$24,100	$24,900
44	Vehicle Capital Outlay	$0	$33,300	$0	$0	$0	$0	$0	$0	$0	$0	$0
45	Machinery & Equipment	$25,000	$25,800	$26,500	$27,300	$28,100	$29,000	$29,900	$30,700	$31,700	$32,600	$33,600
	Department 801-Sewer Collections											
	Salaries and Employee Benefits											
46	Regular Employees	$76,900	$79,200	$81,600	$84,000	$86,500	$89,100	$91,800	$94,600	$97,400	$100,300	$103,300
47	Overtime	$3,000	$3,100	$3,200	$3,300	$3,400	$3,500	$3,600	$3,700	$3,800	$3,900	$4,000
48	Standby Wages	$1,800	$1,900	$1,900	$2,000	$2,000	$2,100	$2,100	$2,200	$2,300	$2,300	$2,400
49	Insurance Benefits	$27,600	$28,400	$29,200	$30,100	$31,000	$32,000	$32,900	$33,900	$34,900	$36,000	$37,000
50	Social Security	$1,200	$1,200	$1,300	$1,300	$1,300	$1,400	$1,400	$1,500	$1,500	$1,500	$1,600
51	Retirement	$31,600	$32,500	$33,500	$34,500	$35,600	$36,600	$37,700	$38,900	$40,000	$41,200	$42,500
52	Workers Compensation	$7,600	$7,800	$8,000	$8,300	$8,500	$8,800	$9,000	$9,300	$9,600	$9,900	$10,200
53	Other Employee Benefits	$2,200	$2,300	$2,300	$2,400	$2,500	$2,500	$2,600	$2,700	$2,800	$2,900	$2,900
	Services and Supplies											
54	Other Professional Services	$135,000	$4,100	$4,200	$4,300	$4,400	$4,600	$104,700	$7,800	$8,100	$8,300	$8,600
55	Misc Contract Services	$200,000	$206,000	$212,200	$218,500	$225,100	$231,900	$238,800	$246,000	$253,400	$261,000	$268,800
56	Other Government Services	$3,100	$3,200	$3,300	$3,400	$3,500	$3,600	$3,700	$3,800	$3,900	$4,000	$4,200
57	Vehicle Repair	$18,000	$18,500	$19,100	$19,700	$20,300	$20,900	$21,500	$22,100	$22,800	$23,500	$24,200
58	General Repair & Maintenance	$5,000	$5,200	$5,300	$5,500	$5,600	$5,800	$6,000	$6,100	$6,300	$6,500	$6,700
59	Operating Supplies	$36,000	$25,100	$25,800	$26,600	$27,400	$28,200	$29,100	$29,900	$30,800	$31,800	$32,700
60	Small Tools & Equipment	$7,500	$7,700	$8,000	$8,200	$8,400	$8,700	$9,000	$9,200	$9,500	$9,800	$10,100
61	**Debt Service**	$12,000	$13,000	$13,000	$0	$0	$0	$0	$0	$0	$0	$0
62	**Total Operating Expenses**	**$2,415,000**	**$2,349,400**	**$2,384,900**	**$2,443,000**	**$2,516,000**	**$2,592,000**	**$2,769,500**	**$2,752,200**	**$2,834,900**	**$2,919,900**	**$3,007,600**

Schedule WW-2 – Wastewater Utility Capital Spending Plan*

	Project	FY21/22	FY22/23	FY23/24	FY24/25	FY25/26	FY26/27	FY27/28	FY28/29	FY29/30	FY30/31	Totals	
SA-032	SewerLineReplacement	$0	$0	$400,000	$0	$0	$861,600	$861,600	$861,600	$861,600	$861,600	**$0**	Mandate
SA-033	SlipLine	$200,000	$200,000	$0	$150,000	$0	$0	$0	$0	$0	$0	**$9,016,000**	Necessary
SA-034	WWTPUpgrades	$0	$0	$49,000	$100,000	$284,000	$0	$0	$0	$0	$0	**$550,000**	Necessary
SA-035	SCADAUpgrades	$0	$0	$246,200	$300,000	$0	$0	$0	$0	$0	$0	**$433,000**	Necessary
SA-015A	ShahanPumpStation	$0	$0	$0	$0	$0	$60,500	$60,500	$60,500	$60,500	$60,500	**$546,200**	Necessary
SA-038	SewerMasterPlan	$0	$0	$0	$200,000	$0	$0	$0	$0	$0	$0	**$605,000**	Necessary
SA-039	CCTV	$0	$100,000	$100,000	$100,000	$0	$0	$0	$0	$0	$0	**$200,000**	Mandate
SA-040	GISMapping	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$300,000**	Necessary
SA-029	AstiSewerandPumpStation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**	Important
SA-042	SSMHLining	$0	$0	$0	$250,000	$250,000	$0	$0	$0	$0	$0	**$8,476,730**	Development funded
SA-043	BiosolidsRemoval	$0	$0	$0	$0	$600,000	$0	$0	$0	$0	$0	**$500,000**	Important
	Totals:	**$200,000**	**$300,000**	**$795,200**	**$1,100,000**	**$1,134,000**	**$922,100**	**$922,100**	**$922,100**	**$922,100**	**$922,100**	**$20,626,930**	

** Does not include the Advance Water Treatment (AWT) due to uncertainty as to scope, cost, timing, and financing (see Section 3.9).*

Schedule WW-3 – Wastewater Utility Cash Flow Pro Forma

		Requested FY 2021	Forecast FY2022	Forecast FY2023	Forecast FY2024	Forecast FY2025	Forecast FY2026	Forecast FY2027	Forecast FY2028	Forecast FY2029	Forecast FY2030	Forecast FY2031
1	**Rate Revenue Increases**	**0.0%**	**3.0%**	**10.0%**	**10.0%**	**10.0%**	**10.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**
	Rate Revenue											
2	**Sewer Service Charge Revenue**	$2,009,000	$2,017,000	$2,086,000	$2,304,000	$2,543,000	$2,807,000	$3,100,000	$3,206,000	$3,315,000	$3,428,000	$3,545,000
3	Change due to growth & use	$8,000	$8,000	$9,000	$9,000	$10,000	$12,000	$13,000	$13,000	$14,000	$14,000	$15,000
4	Increase due to rate adjustments	$0	$61,000	$209,000	$230,000	$254,000	$281,000	$93,000	$96,000	$99,000	$103,000	$106,000
	Non-Rate Revenues											
5	Penalties	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000
6	Miscellaneous Fees	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	Interest Earnings	$7,500	$7,556	$7,612	$7,669	$7,726	$7,784	$7,842	$7,900	$7,959	$8,018	$8,078
8	Impact Fees	$147,477	$1,898,083	$155,880	$156,520	$156,292	$156,036	$156,677	$155,269	$153,794	$152,249	$150,633
9	**Total Revenue**	**$2,185,977**	**$4,005,639**	**$2,481,492**	**$2,721,189**	**$2,985,018**	**$3,277,820**	**$3,384,519**	**$3,492,169**	**$3,603,753**	**$3,719,267**	**$3,838,711**
	O&M Costs											
10	Salaries and Benefits	$1,009,000	$1,039,000	$1,070,000	$1,102,000	$1,135,000	$1,169,000	$1,204,000	$1,240,000	$1,278,000	$1,316,000	$1,355,000
11	Professional Services	$558,000	$415,000	$427,000	$440,000	$453,000	$467,000	$581,000	$498,000	$513,000	$529,000	$544,000
12	Utilities & Fuel	$222,000	$228,000	$235,000	$242,000	$249,000	$257,000	$264,000	$272,000	$281,000	$289,000	$298,000
13	Other Employee Expenses	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$7,000	$7,000	$7,000	$7,000	$7,000
14	Supplies	$116,000	$107,000	$110,000	$114,000	$117,000	$121,000	$124,000	$128,000	$132,000	$136,000	$140,000
15	Repair & Maintenance	$59,000	$61,000	$63,000	$64,000	$66,000	$68,000	$70,000	$73,000	$75,000	$77,000	$79,000
16	Minor Capital	$49,000	$84,000	$52,000	$54,000	$55,000	$57,000	$59,000	$60,000	$62,000	$64,000	$66,000
17	General Administration	$10,000	$11,000	$11,000	$11,000	$12,000	$12,000	$12,000	$13,000	$13,000	$14,000	$14,000
18	***Total Operating Expenses***	**$2,029,000**	**$1,951,000**	**$1,974,000**	**$2,033,000**	**$2,093,000**	**$2,157,000**	**$2,321,000**	**$2,291,000**	**$2,361,000**	**$2,432,000**	**$2,503,000**
	Capital Costs											
19	**Total Capital Spending**	**$0**	**$200,000**	**$309,000**	**$844,000**	**$1,202,000**	**$1,276,000**	**$1,069,000**	**$1,101,000**	**$1,134,000**	**$1,168,000**	**$1,203,000**
20	Existing Debt Service	$12,000	$13,000	$13,000	$0	$0	$0	$0	$0	$0	$0	$0
21	Cash Funded Capital Projects	$0	$0	$200,000	$309,000	$631,000	$983,000	$1,276,000	$570,000	$587,000	$604,000	$622,000
22	Impact Fees Funded Projects	$0	$0	$0	$212,180	$218,545	$0	$499,415	$514,398	$529,830	$545,725	$562,096
23	***Total Capital Expenses***	**$12,000**	**$13,000**	**$213,000**	**$521,180**	**$849,545**	**$983,000**	**$1,775,415**	**$1,084,398**	**$1,116,830**	**$1,149,725**	**$1,184,096**
	Transfers											
24	Transfer In - PERS	$148,332	$148,332	$148,332	$148,332	$148,332	$148,332	$148,332	$148,332	$148,332	$148,332	$148,332
25	Transfer Out - to General Fund	$374,769	$386,012	$397,593	$409,520	$421,806	$434,460	$447,494	$460,919	$474,746	$488,989	$503,658
26	**Total Revenue Requirement**	**$2,267,437**	**$2,201,680**	**$2,436,261**	**$2,603,188**	**$2,997,474**	**$3,426,128**	**$3,896,162**	**$3,173,587**	**$3,274,414**	**$3,376,657**	**$3,480,326**
27	**Beginning Year Balance**	**$3,081,552**	**$2,852,615**	**$2,758,491**	**$2,647,842**	**$2,609,323**	**$2,440,575**	**$2,136,231**	**$1,467,910**	**$1,631,223**	**$1,806,768**	**$1,997,130**
28	**Surplus/(Shortfall)***	**($228,937)**	**($94,124)**	**($110,648)**	**($38,519)**	**($168,748)**	**($304,345)**	**($668,320)**	**$163,313**	**$175,545**	**$190,362**	**$207,752**
29	**End of Year Balance**	**$2,852,615**	**$2,758,491**	**$2,647,842**	**$2,609,323**	**$2,440,575**	**$2,136,231**	**$1,467,910**	**$1,631,223**	**$1,806,768**	**$1,997,130**	**$2,204,881**
30	*Reserve Target*	$1,561,000	$1,544,000	$1,550,000	$1,568,000	$1,586,000	$1,605,000	$1,649,000	$1,645,000	$1,666,000	$1,688,000	$1,709,000
31	*Available Cash*	$1,291,615	$1,214,491	$1,097,842	$1,041,323	$854,575	$531,231	($181,090)	($13,777)	$140,768	$309,130	$495,881
32	*Restricted Fund Balance*	$1,229,204	$3,127,287	$3,283,167	$3,227,507	$3,165,254	$3,321,290	$2,978,551	$2,619,423	$2,243,387	$1,849,911	$1,438,447
	Debt Coverage Calculations											
33	*Total Revenue Available for Debt Service*	$9,500	$156,556	$351,612	$531,669	$735,726	$964,784	$906,842	$1,045,900	$1,088,959	$1,135,018	$1,185,078
34	*Total Yearly Parity Debt Payment*	*$12,000*	*$13,000*	*$13,000*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
35	**Debt Coverage Ratio**	**0.79**	**12.04**	**27.05**	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**na**

* Doesn't include the Impact Fee revenue or expenses, which is accounted for seperately in Row 31

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

		Effective Date				
	Current	July 1, 2021	July 1, 2022	July 1, 2023	July 1, 2024	July 1, 2025
Residential Flat Rates (monthly per dwelling unit)						
Single Family	**$41.75**	$42.86	$47.15	$51.87	$57.06	$62.77
Multi-Family	**$27.01**	$28.72	$31.59	$34.75	$38.23	$42.05
Non-Residential Base Charges (monthly per meter)						
Up to 1" Meter	**$11.94**	$11.93	$13.12	$14.43	$15.87	$17.46
1 1/2" Meter	**$21.56**	$21.53	$23.68	$26.05	$28.66	$31.53
2" Meter	**$33.11**	$33.05	$36.36	$40.00	$44.00	$48.40
3" Meter	**$60.07**	$63.77	$70.15	$77.17	$84.89	$93.38
4" Meter	**$98.59**	$98.33	$108.16	$118.98	$130.88	$143.97
Non-Residential Usage Charges ($/CCF)						
Low Strength	**$4.90**	$4.75	$5.23	$5.75	$6.33	$6.96
Medium Strength	**$6.11**	$5.95	$6.54	$7.19	$7.91	$8.70
High Strength	**$8.84**	$8.67	$9.54	$10.49	$11.54	$12.69
Public Schools (monthly)						
Per 100 ADA[1]	**$161.89**	$175.78	$193.36	$212.70	$233.97	$257.37

[1] Average daily attendance (student count)