

# CITY OF SEBASTOPOL



## Water and Sewer Rate Study





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## Section 1 – Executive Summary

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The City of Sebastopol (City) provides water and sewer service to approximately 3,400 customers. The City's water and sewer enterprise funds are self-supporting and fund the operations and maintenance (O&M) associated with the two utilities, capital projects and repayment of any associated debt, and routine repair and replacement of aging system components for the water and sewer systems. Water and Sewer user rate revenue provides a stable secure revenue source for the two utilities, is the primary revenue source for the operations of both utilities and can only be used for the two utilities. Revenue from water and sewer user rates cannot be used for any other general or special purpose. The main objective of this study was to develop five-year financial plans that helps to ensure the water and sewer utilities are generating sufficient revenue over the five-year period to cover the costs of operating the utilities. These financial plans include recommended rate revenue adjustments to ensure continued revenue sufficiency and stability. These are discussed in further detail in the body of this report.

### 1.1 Study Overview

The City contracted with Willdan Financial Services ("Willdan"), to complete a water and sewer rate study comprised of the following objectives:

- **Five-Year Financial Plan:** Identify the revenues required by each utility to meet the respective annual costs of operation, maintenance and system expansion.
- **Rate Update:** Review and update the City's existing water and sewer rates and comment on their adequacy to meet projected revenue requirements and the City's objectives.

### 1.2 Financial Plans

The five-year water and sewer financial plans were developed based on projected revenues and expenditures, system growth and recent consumption and discharge trends. The projections reflect the best available information and assessments developed and refined through numerous meetings and teleconferences between Willdan and City staff. Upon completion of the financial plans it was determined that revenues that would be generated through projected system growth, existing user rates and projected system utilization alone will not be sufficient to meet anticipated system expenditures, and additional rate revenue increases will be required.



## 1.3 Cash Reserve Targets

Through the study process Willdan worked with City staff to identify and recommended financially prudent cash reserve targets for each utility to help ensure the financial viability of the water and sewer enterprise funds. The cash reserve targets include:

- **Operating Reserve:** Cash reserve equivalent to 90 days of annual operations and maintenance expenses.

## 1.4 User Rates

As identified in section 1.2, additional rate revenue increases are projected during the five-year study period. The study also proposes refinements to the existing user rates, which are discussed in Section 4.2.3.

## 1.5 Findings and Recommendations

It is recommended that the City update the cashflow portion of this study each year to ensure projected revenue is sufficient to fund projected expenses going forward as assumptions made during this analysis may change and have a material impact on the analysis. As customer usage and discharge patterns change, or the composition of the City's customer base changes, the City should conduct an in-depth cost of service analysis to ensure appropriate allocation of costs to customer classes. The proposed revenue increases, and rates are illustrated in Table 1-1 through 1-3.

Table 1-1 Projected Rate Revenue Increases Fiscal Years Ending June 30		
Description	Water Rate Revenue Increases	Sewer Rate Revenue Increases
2018-19	0.0%	0.0%
2019-20	4.0%	7.0%
2020-21	3.0%	5.0%
2021-22	3.0%	4.5%
2022-23	2.0%	4.5%





**Table 1-2**  
Proposed Water Rates  
Fiscal Years 2019-20 through FY 2022-23

Bi-Monthly Base Charge					
Bi-Monthly Charge - \$	Existing	19-20 <sup>(1)</sup>	20-21 <sup>(2)</sup>	21-22 <sup>(2)</sup>	22-23 <sup>(2)</sup>
5/8 x 3/4-inch	\$49.11	\$45.49	\$46.96	\$48.37	\$49.33
1-inch	82.03	76.16	78.14	80.79	82.41
1 ½-inch	163.37	151.67	156.22	160.91	164.13
2-inch	261.56	242.83	250.11	257.62	262.77
3-inch	572.72	531.71	547.66	564.09	575.37
4-inch	817.99	759.41	782.20	805.66	821.78
Volume Rate					
Volume Rate - \$/100 CF	18-19	19-20 <sup>(1)</sup>	20-21 <sup>(2)</sup>	21-22 <sup>(2)</sup>	22-23 <sup>(2)</sup>
0-100 CF	\$0.00	\$3.12	\$3.22	\$3.31	\$3.38
100 to 3,000 CF	3.03	3.12	3.22	3.31	3.38
> 3,000 CF	3.20	3.12	3.22	3.31	3.38
(1) Effective January 1, 2020					
(2) Effective July 1, 2020 and every July thereafter					



**Table 1-3**  
Proposed Sewer Rates  
Fiscal Years 2019-20 through FY 2022-23

Bi-Monthly Base Charge					
Bi-Monthly Charge - \$	Existing	19-20 <sup>(1)</sup>	20-21 <sup>(2)</sup>	21-22 <sup>(2)</sup>	22-23 <sup>(2)</sup>
5/8 x 3/4-inch	\$74.50	\$66.81	\$70.15	\$73.31	\$76.61
1-inch	124.28	111.60	117.18	122.46	127.97
1 ½-inch	247.84	222.27	233.38	243.88	254.86
2-inch	396.77	355.86	373.65	390.46	408.03
3-inch	868.30	779.19	818.15	854.97	893.44
4-inch	1,240.69	1,112.89	1,168.53	1,221.11	1,276.06
Flow Rate					
Residential 0 -100 CF	\$0.00	\$6.73	\$7.06	\$7.38	\$7.71
Residential > 100 CF	6.60	6.73	7.06	7.38	7.71
Dining Facility (Take Out) 0 – 100 CF	0.00	6.73	7.06	7.38	7.71
Dining Facility (Take Out) > 100 CF	7.42	6.73	7.06	7.38	7.71
Dining Facility (On Premise) 0 – 100 CF	0.00	6.73	7.06	7.38	7.71
Dining Facility (On Premise) > 100 CF	9.19	6.73	7.06	7.38	7.71
All Other 0 – 100 CF	0.00	6.73	7.06	7.38	7.71
All Other 100 – 50,000 CF	6.60	6.73	7.06	7.38	7.71
All Other > 50,000 CF	5.49	6.73	7.06	7.38	7.71
(1) Effective January 1, 2020					
(2) Effective July 1, 2020 and each July thereafter					



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## Section 2 - Introduction

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### 2.1 Introduction

Willdan Financial Services (“Willdan”) was retained by the City of Sebastopol, California (“City”) to conduct a Water and Sewer Rate and Financial Study (“Rate Study”) for the City’s water and sewer utilities (“Utilities”). This report details the results of the Rate Study analysis for the forecast period, fiscal year (FY) 2018-19 through FY 2022-23, the results of which are presented in this Rate Study Report.

The results of the Rate Study presented herein are a financial plan and suggested rate adjustments designed to provide revenues sufficient to fund the ongoing operating, maintenance and capital costs necessary to operate the City’s water and sewer utilities, while striving to meet the financial requirements and goals set forth by the City’s for the water and sewer enterprise funds.

Based on discussion with City staff, this report presents the recommended financial plans and adjustments to meet the City’s objectives.

### 2.2 Goal and Objectives

The primary goal of the Rate Study was to develop financial plans for each of the two utilities that evaluate the adequacy of the current revenue streams to meet ongoing costs (operations & maintenance, debt service and capital), and to maintain industry standard financially prudent cash reserves. More specifically the Rate Study was undertaken to:

- Conduct the analysis in accordance with industry standards consistent with American Water Works (“AWWA”) and Water Environment Federation (“WEF”) guidelines;
- Develop financial plans consistent with industry standards and best practices while recognizing the needs specific to the City; and
- Recommend rates that adhere to and meet Proposition 218 requirements which requires a matching between the fees being assessed to customers and the cost they place on the systems.

### 2.3 Overview of the Rate Study Process

The rate study process for each of the two utilities consists of two primary study components. First, a determination of the adequacy of system revenues to meet system expenses during the study forecast period must be made. The result of this analysis, known as the Revenue Sufficiency Analysis, is an assessment of the ability of the existing revenue stream to meet the projected financial requirements of the system during the





forecast period and, to the extent required, the identification of the magnitude and timing of any required rate adjustments.

Next, a determination of the adequacy of existing user rates and charges to meet the City's goals and objectives, and a review of these current rates and charges.

## 2.4 Organization of this Report

This Rate Study presents an overview of the rate-making concepts employed in the development of the analysis contained here. The analysis is followed by a discussion of the data, assumptions and results associated with each component of the analysis. Finally, appendices with detailed schedules are presented for further investigation and insight into the data, assumptions and calculations which drive the results presented in this Rate Study. The report is organized as follows:

- Section 1 – Executive Summary
- Section 2 – Introduction
- Section 3 – Overview of Utility Rate-Making Principles, Processes and Issues
- Section 4 – Rate Study Development and Results
- Section 5 – Conclusions and Recommendations
- Appendix A –Water System Financial Plan

Appendix B – Sewer System Financial Plan

Appendix C – Water Cost of Service Analysis and Rate Design

Appendix D – Sewer Cost of Service Analysis and Rate Design

## 2.5. Reliance on Data

During this project the City (and/or its representatives) provided Willdan with a variety of technical information, including capital cost and demographic data. This data was used by Willdan in the process of developing the financial plans and recommended rates adjustments. Willdan did not independently assess or test for the accuracy of such data, historic or projected, but worked with City staff to better understand the data and its sources and believe it to be the best available information at the time of the study.



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## Section 3 – Overview of Financial Planning Principles, Processes and Issues

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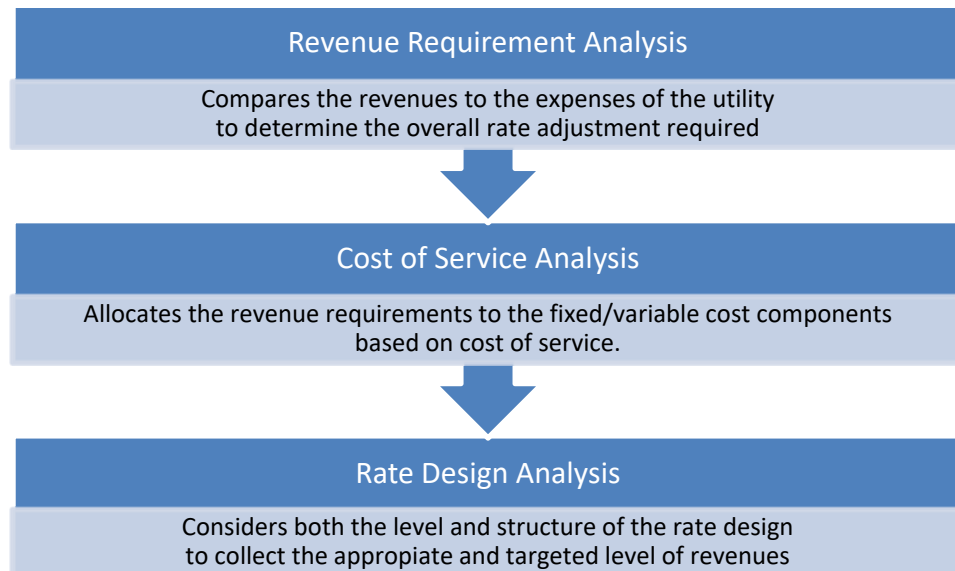
### 3.1 Introduction

The scope of this study included the development of water and sewer financial plans for the planning period FY 2018-19 through FY 2022-23.

The scope of this study also included the development of cost-based water and sewer user charges through a cost of service and rate design analysis. Utility rates must be set at a level where operating, maintenance and capital expenses are met with the revenues received from customers; and that revenues generated from utility rates are used only for this purpose. This is a significant point, as failure to achieve this level could lead to insufficient funds being available to adequately maintain the system. A comprehensive rate study typically consists of following three interrelated analyses:

- I. **Financial Planning/Revenue Requirement Analysis:** Create a five-year plan to support an orderly, efficient program of on-going maintenance and operating costs, capital improvement and replacement activities, debt financing, and retirement of any outstanding debt. In addition, the long-term plan should fund and maintain appropriate reserve balances to adequate levels based on industry standards and the City of Sebastopol's fiscal policies and specific needs.
- II. **Cost of Service Analysis:** Identifies and apportions annual revenue requirements to functional cost components based on the demand placed on the utility system.

**Rate Design:** Develops an equitable and proportionate fixed/variable schedule of rates for the City's customer base. The policy objectives are harmonized with cost of service objectives to achieve the delicate balance between customer equity and financial stability goals. The balance of fixed and variable charges ensures that the City has a stable revenue source (the fixed charge) and the variable component of the rate structure helps to ensure those customers who place higher costs on the system (through higher water and sewer use) incur a higher bill reflective of their system use.



This Rate Study utilized generally accepted rate-making principles and standards established by the industries governing bodies, American Water Works Association (AWWA) in its “M1 Principles of Water Rates Fees and Charges” manual and by the Water Environment Federation (WEF) in its “Financing and Charges for Sewer Systems, Manual of Practice No. 27 (2004)”. The principles used resulted in the development of rates and charges which are projected to: 1) generate sufficient revenue to meet the financial requirements of the water and sewer utilities, and 2) address the need to recover costs from users in a manner which is proportionate to the cost of providing service on a fair and equitable basis relative to the service provided, and which does not exceed the cost of providing the service. A discussion of some of the key principles of rate-making, and how the processes employed herein are guided by those principles, is presented below.

## 3.2 Discussion of General Financial Planning Principles

While the individual rates for each of the utilities vary based on a variety of factors, rates should be consistent with general rate-making principles set forth in utility rate-making practice and literature. The principles by which rate practitioners are guided is that rates designed for any utility should strike a reasonable balance between several key factors. In general, rates designed should:

- Generate a stable rate revenue stream which, when combined with other sources of funds, is sufficient to meet the financial requirements and goals of the utility;
- Be based upon the proportionate cost of providing the service and not exceed the cost of providing the service;



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- Be fair and equitable – that is, they should generate revenue from customer classes which is reasonably in proportion to the cost to provide service to that customer class;
  - Be easy to understand by customers; and
  - Be easy to administer by the utility.

Striking the appropriate balance between the principles of rate-making is the result of a detailed process of evaluation of revenue requirements and cost of service, and how those translate into the rate design alternatives which meet legal requirements and the specific objectives of the utility under the circumstances in which it operates. A review of the City's existing rates and their adherence to these principles is discussed in Section 4.2.2 of this report.

### 3.3 The Revenue Sufficiency Process

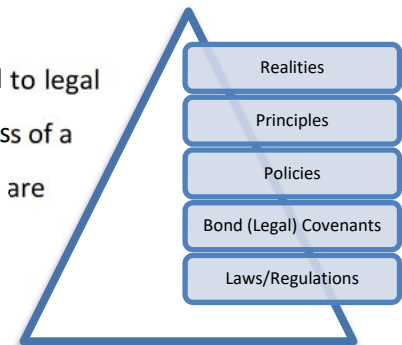
In order to evaluate whether existing rates and charges which will generate sufficient revenue to meet the fiscal requirements of the water and sewer utilities, a determination of the annual rate revenue required must be completed. The first step in the process is the Revenue Sufficiency Analysis. The Revenue Sufficiency Analysis compares the forecasted revenues of the utility under its existing rates to its forecasted operations and maintenance, capital, and reserve costs to determine the adequacy of the existing rates to recover the utility's costs.

The process employed in the Revenue Sufficiency Analysis involves a rigorous review of operating, maintenance and capital budgets for the utility, and results in the identification of revenue requirements of the system, such as operating expenses, capital expenses (minor and major), debt service expense (including a provision for debt service coverage), transfers in and out, and the maintenance of both restricted and unrestricted reserves at appropriate levels. These revenue requirements are then compared to the total sources of funds available during each year of the forecast period to determine the adequacy of projected revenues to meet projected revenue requirements. To the extent that the existing revenue stream is projected to be insufficient to meet the annual revenue requirements of the system during the projection period, a series of recommended rate revenue increases are calculated which if enacted, would provide revenue sufficient to meet those needs.

### 3.3.1 Determination of the Revenue Requirements

#### Considerations in Setting Revenue Requirements

There are a multitude of considerations, ranging from financial to political to legal that must be analyzed or discussed during the revenue requirements process of a rate analysis. This section provides an overview of the considerations that are reviewed during this process.



#### Capital Budgeting and Financing

Capital needs are identified in the City's Water and Sewer Capital Improvement Plan which is updated on an annual basis. As part of its budget and planning process, the City identifies capital improvements that are necessary for the continued delivery of clean, safe, drinking water, and collection and treatment of sewer flows. The Capital Improvement Plan is funded by a variety of sources including, utility rates and capital reserves.

#### Capital Funding: Debt vs. PAYGO

The selection of the appropriate funding strategy for capital projects is primarily a policy decision between use of cash ("Pay-as-you-go financing" or PAYGO), the issuance of debt, or a combination. PAYGO is the use or build-up of cash to fund capital improvements. With debt financing, capital improvements are funded with borrowed funds (usually through the issuance of bonds) with the obligation of repayment, typically with interest, in future years. Development of an optimal capital financial plan depends on the definition of optimal. Each funding mechanism has a different impact on water rates in the short and long run, different net present values, risks, and legal obligations. Due to the borrowing costs associated with debt, cash funding can be cheaper in the end( by not having to incur interest costs on borrowed money) ; however, debt typically ensures greater generational equity for larger and longer lasting capital projects (by contributing to annual debt payments, new customers who connect to the system help pay for the infrastructure that was installed prior to their arrival, but still benefits them).

The City, as is typical for a public utility, operates its water and sewer utilities on a "cash basis". Under the "cash basis" approach, revenues and expenses are recognized at the time physical cash is received or paid out. Revenue requirements are determined for a specified period of time (in the case of the City an annual fiscal year), by summing the total anticipated expenses to be paid out during the fiscal year. Where cash flows and balances are insufficient, the revenue requirements analysis recommends the needed additional cash flows to meet all funding goals. The two primary categories of expenses are as follows:



- Operations and Maintenance (O&M) expenses, such as salaries and benefits of utility personnel, transfers out, existing and anticipated debt service, and reserves; and
- Capital expenses, such as the annual capital improvement program, including waterline replacements and sewer treatment plant related projects.

## Financial Planning

In the development of the revenue requirements, certain parameters are utilized to project future expenditures, growth in customers and consumption, and necessary revenue adjustments. The City's budget documents are used as the baseline, which are then projected over a planning horizon to account for fluctuations in costs from year to year as well as any adjustments to debt service payments. Growth assumptions and prudent financial planning are fundamental in ensuring adequate rate revenue to promote financial stability. The financial model developed for this study considers the City's existing debt service coverage ratio and operating cash balances (cash on hand). As existing debt is redeemed, additional debt may be utilized to fund additional capital improvements required due to aging infrastructure.

## 3.4 Financial Management Goals of the City

The establishment of specific financial management goals of a utility is a key step in developing financial plans which will ensure the financial health of the utility remains strong. The financial management goals of the City are described below.

### 3.4.1 Cash Reserve Targets

In order to maintain financially stable and sustainable utilities, the City has identified a reserve target for each utility that it strives to maintain. The reserve target is identified in Table 3-1.

Table 3-1 Reserve Targets		
Reserve	Purpose	Minimum Balance
Water and Sewer Operating Reserves	Manage timing differences between revenue receipt and expense payments	90 days of O&M

While it is not essential that the City meet the operating reserve on annual basis (it is not a legal requirement), prudent financial planning suggests that the City should strive to maintain the operating reserve and should not dip below the minimum balance on a continuous basis.





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### 3.4.2 Debt Service Coverage

The City currently has outstanding water and sewer related debt which contains covenants requiring the City to maintain rates and charges such that a debt service coverage ratio, defined as Current Year Net Revenues divided by Maximum Annual Debt Service, be maintained at a minimum of 1.20. The coverage requirement of 1.20x is associated with all outstanding debt for each specific year the coverage is being calculated. The recommended revenue increases presented herein results in the achievement of this goal in each year of the forecast period. While the operating reserve target identified in section 2.6.1 is a City policy, the debt service coverage requirement is a legal obligation that must be met on an annual basis.

### 3.4.3 Financial Management Conclusions

The City's utilities should strive to satisfy both tests (while only debt service coverage is a legal requirement) as each test provides a different perspective on the utilities' revenue needs and overall financial viability. An appropriate level of revenue requirements may result in an overlapping of the tests such that each separate set of objectives are met. As an example, the need to maintain a 1.20 times debt service coverage may generate a positive cashflow allowing for the funding of the identified cash reserve targets. Similarly, the need to meet and maintain the cash reserve targets may generate sufficient cashflow to meet the required debt service coverage ratio on an annual basis. The ability of the utilities to satisfy both sets of requirements will reduce overall financial risk, increase stability and help with a long-term strategy of utility financial planning.



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## Section 4 – Rate Study Development and Results

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### 4.1 Revenue Sufficiency Analysis

#### 4.1.1 General Methodology

In order to develop rates and charges which generate sufficient revenue to meet the fiscal requirements of the City, a determination of the annual required revenue from rates which, when combined with other sources of funds, will provide sufficient funds to meet those fiscal requirements must first be completed. This process is typically referred to as a Revenue Sufficiency Analysis.

The process employed in the Revenue Sufficiency Analysis resulted in the identification of revenue requirements of the system, such as operating expenses, capital expenses (minor and major), debt service expense (including a provision for debt service coverage, as applicable), transfers out and the maintenance of both restricted and unrestricted reserves at appropriate levels. These revenue requirements were then compared to the total sources of funds during each year of the forecast period to determine the adequacy of projected revenues to meet requirements. To the extent that the existing revenue stream is not sufficient to meet the annual revenue requirements of the system, a series of rate revenue increases are calculated, which I implemented, would provide revenue sufficient to meet those needs.

#### 4.1.2 Data Items

Key data items reviewed, discussed and incorporated into the Revenue Sufficiency Analysis were:

- Financial management goals of the City
- FY 2018-19 Beginning of Year Fund Balances;
- FY 2018-19 Adopted Budget;
- Capital Improvement Needs based on City's plans;
- Outstanding Debt Schedules;
- General assumptions related to:
  - Customer growth;
  - Cost escalation factors;

A discussion of the use of each of the above data items is presented below.



### 4.1.3 FY 2018-19 Beginning of Year Cash Balance

To better understand the available funds the City's utilities had on hand to start the forecast period, a detailed review of cash balances as of the beginning of FY 2018-19 was conducted and discussed with City staff. A summary of the fund balances associated with the water and sewer utility enterprise funds for the beginning of FY 2018-19, as adjusted for use in this analysis, is presented in Table 4-2 below.

Table 4-2 Beginning Fund Balance Fiscal Year Ending June 30, 2019		
Description	Water	Sewer
Cash Balance	\$2,367,968	\$2,543,174

### 4.1.4 FY 2018-19 Budget

Staff provided Willdan with the FY 2018-19 Adopted Budget, and associated line-item detail, as the basis for the financial projections for the forecast period. The line-item projected expenses for FY 2018-19 were used as the basis for the projection of future budgetary line-items for the remainder of the forecast period.

Cost escalation factors were reviewed by staff and were used to project increases in line-item costs beyond the FY 2018-19 budget. Those factors were applied based on line-item cost classifications.

A summary of the FY 2018-19 budget, and subsequent projected budgetary expenses is presented below in Table 4-3. A more detailed presentation of the line-item budgeted and projected revenues and expenses is presented in Schedules A-2 through A-4 and B-4 through B-4 respectively, in the Appendices.



<b>Table 4-3</b> <b>Operating Budget</b> <b>Fiscal Years Ending June 30</b>					
<b>Description</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>
<b>Water</b>					
O&M	\$2,098,186	\$2,017,822	\$2,052,607	\$2,114,185	\$2,177,610
Debt Service and Loans	291,978	261,438	300,474	286,391	286,391
Cash Funded Capital	<u>478,190</u>	<u>46,350</u>	<u>0</u>	<u>0</u>	<u>298,260</u>
<b>Total Expenses</b>	<b>\$2,868,354</b>	<b>\$2,325,610</b>	<b>\$2,353,081</b>	<b>\$2,400,576</b>	<b>\$2,762,250</b>
<b>Sewer</b>					
O&M	\$2,341,700	\$2,428,833	\$2,607,466	\$2,800,499	\$3,234,814
Debt Service and Loans	695,010	685,610	724,260	705,856	709,941
Cash Funded Capital	<u>1,010,522</u>	<u>46,350</u>	<u>371,315</u>	<u>368,795</u>	<u>168,826</u>
<b>Total Expenses</b>	<b>\$4,047,232</b>	<b>\$3,160,793</b>	<b>\$3,703,041</b>	<b>\$3,875,150</b>	<b>\$4,113,581</b>

### 4.1.5 Capital Improvements Plan (CIP)

The City provided Willdan with a forecast of capital requirements for the study period. The CIP provided by the City was provided in current day dollars and has been escalated for future years using an inflationary rate of 3.00%. The CIP items were identified as being non-growth-related, growth-related or a combination of both. The water inflated CIP for FY 2018-19 through FY 2022-23 totals \$0.823 million. The sewer inflated CIP for FY 2018-19 through FY 2022-23 totals \$2.650 million. A summary table of the CIP (in inflated dollars) for the FY 2017-18 – FY 2022-23 forecast period is presented below in Table 4-4. The CIP is presented in Schedules A-5 and B-5, respectively, in the Appendices.

<b>Table 4-4</b> <b>Capital Improvement Plan</b> <b>Fiscal Years Ending June 30 (\$ thousands)</b>						
<b>FY</b>	<b>18-19</b>	<b>19-20</b>	<b>20-21</b>	<b>21-22</b>	<b>22-23</b>	<b>Total</b>
Water	\$478	\$46	\$0	\$0	\$298	\$823
Sewer	1,011	46	371	546	675	2,650
Note: Values are rounded to the nearest \$1,000						

### 4.1.6 Outstanding Debt

The City, like many utilities, has utilized long-term debt to fund capital assets in the past. The City has both outstanding water and sewer debt and the financial plans anticipate need for the issuance of new sewer related debt (\$684,000 between FY 2021-22 and FY 2022-23), based on planned capital projects. Issuance of debt provides a reasonable generational matching between the use of the facilities or infrastructure to be constructed and the rate payers who will be benefiting from the assets. Because the debt is retired over time,



new customers who connect to the system in the future will share (through their rates) in the cost of the assets that they will benefit from through their use of the system.

## 4.1.7 General Assumptions

In order to develop the financial and rate projections, certain assumptions were made with regard to elements of the revenue sufficiency analysis. A summary of those assumptions is presented below.

### 4.1.7.1. System Growth

The City anticipates growth of the water and sewer systems of approximately 0.5% per year and an additional 1.1% increase in 2021 with the opening of a new hotel.

### 4.1.7.2. O&M Escalation Factors

Willdan worked with City staff to identify reasonable cost escalation factors to be applied to operations and maintenance expenses in recognition of increasing costs over time. It was determined that a 3% inflationary factor represented a reasonable estimate of annual cost increases during the study period.

### 4.1.7.3. Debt Service Coverage

The City's bond covenants require a 1.20 times debt service coverage on a combined water and sewer utility basis. Our analysis shows that the water and sewer utilities revenues are sufficient to meet or exceed this requirement for the FY 2018-19 through FY 2022-23 period on existing debt and new debt. The debt service coverage ratios are summarized in Table 4-5 below.

Table 4-5 Debt Service Coverage by Fiscal Year						
FY	Target	18-19	19-20	20-21	21-22	22-23
Water	1.20	1.26	2.47	3.63	4.47	4.46
Sewer	1.20	24.36	25.02	30.15	74.54	18.71

### 4.1.7.4. Results of the Revenue Sufficiency Analysis

After a thorough review of the above-mentioned data elements, a draft of the Revenue Sufficiency Analysis was developed and reviewed with City staff. This draft provided the forum in which various alternative assumptions were discussed, tested and evaluated for both their reasonableness and their impact upon the ultimate financial health of the utilities.

The resulting financial plan presented herein is the embodiment of the data, assumptions and review process undertaken with City staff through the course of several meetings. Table 4-6 provides a summary of the annual



revenue requirements (O&M, debt service and CIP) for both the water and sewer utilities incorporating the assumptions in Section 4.1.7 of this report as compared to the revenues under existing rates and system growth.

<b>Table 4-6</b> <b>Revenue Requirements vs. Revenue Under Existing Rates</b> <b>Fiscal Years Ending June 30 (\$ thousands)</b>					
	18-19	19-20	20-21	21-22	22-23
<b>Water</b>					
Beginning Cash Balance	\$2,368	\$1,779	\$1,721	\$1,671	\$1,584
Revenue Under Existing Rates	2,279	2,268	2,304	2,313	2,323
O&M, Debt Service & Cash Funded Capital	<u>2,868</u>	<u>2,326</u>	<u>2,353</u>	<u>2,401</u>	<u>2,762</u>
Net Cashflow	(589)	(58)	(49)	(88)	(439)
Ending Cash Balance	\$1,779	\$1,721	\$1,671	\$1,584	\$1,144
<b>Sewer</b>					
Beginning Cash Balance	\$2,543	\$1,534	\$1,411	\$800	(\$156)
Revenue Under Existing Rates	3,038	3,038	3,092	3,098	3,108
O&M, Debt Service & Cash Funded Capital	<u>4,047</u>	<u>3,161</u>	<u>3,703</u>	<u>4,052</u>	<u>4,484</u>
Net Cashflow	(1,009)	(123)	(611)	(956)	(1,286)
Ending Cash Balance	\$1,534	\$1,411	\$800	(\$156)	(\$1,443)
Note: Values are rounded to the nearest \$1,000					

The revenues and expenditures identified in Table 4-6 represent revenues under existing rates and system growth and operating expenditures. As noted in the table, revenues increasing by just system growth is not sufficient to meet ongoing expenses. Revenue are projected to increase by 0.5% per year due to new connections, while O&M expenses are projected to increase by 3% a year. There are additional cash inflows and outflows for both utilities which are identified in Table 4-8 - Net Operating Fund Results.

#### 4.1.7.2. Rate Revenue Increases Required

Our analysis of the water and sewer utilities indicate that assuming all capital expenditures occur as projected, there will not be sufficient operating revenue to fund ongoing operations and maintenance, routine repair and replacement of aging system components, planned capital improvements, and debt service throughout the study period. In part this is because anticipated growth is projected to be less than the expected cost increases associated with operating expenses. Therefore, we recommend increases each year for both the water and the sewer utilities in order to maintain pace with increasing operating costs, fund capital needs and pay annual debt service.





Table 4-7 below reflects our projections of revenue increases required during the forecast period in order for the City to meet its ongoing operational costs.

Table 4-7 Projected Rate Revenue Increases Fiscal Years Ending June 30		
Description	Water Rate Revenue Increases	Sewer Rate Revenue Increases
2018-19	0.0%	0.0%
2019-20	4.0%	7.0%
2020-21	3.0%	5.0%
2021-22	3.0%	4.5%
2022-23	2.0%	4.5%

A more detailed presentation of the pro forma, including a fund balance reconciliation is presented in Schedules A-1 and B-1 of the appendices.

#### 4.1.7.3. Summary of Revenue Sufficiency Analysis

The resulting financial plans, including recommended revenue adjustments, are presented in Table 4-8, and provide for funding of projected revenue requirements during the forecast period.

A more detailed presentation of the financial plan, including fund balance reconciliations for each fund, is presented in Schedules A-1 and B-1 in the appendices.



**Table 4-8**  
Projected Net Operating Fund Results  
Fiscal Years 2018-19 to 2022-23  
(\$ thousands)

Description	18-19	19-20	20-21	21-22	22-23
<b>Water</b>					
<b>Beginning Cash Balance</b>	\$2,368	\$1,779	\$1,765	\$1,877	\$2,026
Total Revenue	2,279	2,312	2,465	2,549	2,611
Operating Expenses	<u>2,098</u>	<u>2,018</u>	<u>2,053</u>	<u>2,114</u>	<u>2,178</u>
Net Revenue	181	295	413	435	433
Less:					
CIP, Debt Service (Existing) and Loans	<u>770</u>	<u>308</u>	<u>300</u>	<u>286</u>	<u>585</u>
<b>Net Cash Flow</b>	<b>(589)</b>	<b>(13)</b>	<b>112</b>	<b>149</b>	<b>(151)</b>
<b>Ending Cash Balance</b>	<b>\$1,779</b>	<b>\$1,765</b>	<b>\$1,877</b>	<b>\$2,026</b>	<b>\$1,875</b>
<b>Sewer</b>					
<b>Beginning Cash Balance</b>	\$2,543	\$1,534	\$1,517	\$1,288	\$1,045
Total Revenue	3,038	3,144	3,474	3,643	3,822
Operating Expenses	<u>2,342</u>	<u>2,429</u>	<u>2,607</u>	<u>2,800</u>	<u>3,009</u>
Net Revenue	696	715	867	843	813
Less:					
CIP, Debt Service (Existing & New) and Loans	<u>1,706</u>	<u>732</u>	<u>1,096</u>	<u>1,086</u>	<u>922</u>
<b>Net Cash Flow</b>	<b>(1,009)</b>	<b>(17)</b>	<b>(229)</b>	<b>(243)</b>	<b>(109)</b>
<b>Ending Cash Balance</b>	<b>\$1,534</b>	<b>\$1,517</b>	<b>\$1,288</b>	<b>\$1,045</b>	<b>\$936</b>
Note: Variances are due to rounding values to the nearest \$1,000					



#### **4.1.6.7. Revenue Sufficiency Analysis Conclusions**

Based on the revenue requirements identified in our analysis, it is our opinion that:

- Revenue projections based on existing rates are insufficient to meet the revenue requirements for FY 2018-19 through FY 2022-23;
- Rate revenue adjustments are needed for both utilities in order to keep pace with increasing O&M and capital costs; and
- The proposed rate revenue increases identified in Table 4-7, are needed to ensure debt service coverage and operating reserve targets are met based upon the assumptions contained in this report.

## **4.2 Rate Design Analysis**

### **4.2.1 General Methodology**

With the rate revenue requirement determined in the Revenue Sufficiency Analysis, the development of specific rates and charges was completed as described below.

First, the rate design goals of the City were reviewed to identify areas the City wanted to address over the forecast period included in this Rate Study. Next, an assessment of the existing rate design was completed to identify areas which have worked well for the City with regard to their specific goals and objectives, and the general goals and objectives of utility rate-making. In addition to the City's goals, rate design should seek to achieve the following industry standard objectives:

- Generate a stable rate revenue stream which, when combined with other sources of funds, is sufficient to meet the financial requirements and goals of the utility;
- Be fair and equitable – that is, they should generate revenue from customer classes which is reasonably in proportion to the cost to provide service to that customer class;
- Be easy to understand by customers; and
- Be easy to administer by the utility;
- Be compliant with California State law, specifically Proposition 218, whereby the rates must be based upon the proportionate cost of providing water and sewer service.

### **4.2.2 Review of Existing Rate Structure**

The City's current water rates are comprised of two components, first a bi-monthly base charge which varies by meter size and includes the first 100 cubic feet (CCF) and second a volume rate per 100 cubic feet of



additional water use. The volume component of the rate structure is comprised of increasing rates for 3 tiers of water usage; 0 to 100 cubic feet (included with the base charge) 100 cubic feet to 3,000 cubic feet of volumetric use and use above 3,000 cubic feet. The volume rate component of the water rate structure is the same for all customer classes. The City's sewer rate structure is comprised of a bi-monthly base charge which varies by meter size and includes the first 100 cubic feet of discharge. The flow component rate varies based on class (residential, dining facility take out, dining facility on premise, all other up to 50,000 cubic feet and all other over 50,000 cubic feet).

#### 4.2.2.1. Allocation to Cost Categories

Water costs are allocated based on their need to meet base demand, peak demand (max day and max hour water needs), as well as customer service costs such as billing and collection. Table 4-9 summarizes the cost of service for the City's water costs.

<b>Table 4-9</b> <b>Water System - Summary of Functional Allocations to Cost Categories</b> <b>Fiscal Year 2019-20</b>						
<b>Functional Cost</b>	<b>Base</b>	<b>Max Day</b>	<b>Max Hour</b>	<b>Meters &amp; Services</b>	<b>Billing &amp; Collection</b>	<b>Total</b>
Source of Supply	\$46,350	\$0	\$0	\$0	\$0	\$46,350
Treatment	251,094	53,806	-	-	-	304,900
Transmission & Distribution	27,161	5,820	43,069	-	-	76,050
Administration <sup>(1)</sup>	807,936	-	-	414,468	414,468	1,636,872
Debt Service	261,438	-	-	-	-	261,438
Non-Operating Revenue/Changes in Reserves <sup>(2)</sup>	<u>(31,799)</u>	<u>(1,360)</u>	<u>(982)</u>	<u>(9,455)</u>	<u>(9,455)</u>	<u>(53,050)</u>
<b>Total</b>	\$1,362,181	\$58,266	\$42,087	\$199,390	\$199,390	\$2,272,560
Units (CCF/Meters/Bills)	<u>371,122</u>	<u>1,913</u>	<u>5,739</u>	<u>26,745</u>	<u>20,562</u>	
Cost per Unit	\$3.67	\$30.46	\$7.33	\$15.14	\$19.70	
(1) Administration costs include O&M costs such as salaries, supplies and cost allocations from the General Fund. (2) A positive value results in an increase of reserves through rates, while a negative value indicates use of non-operating revenue and existing reserves to meet annual expenses in addition to rates.						

Table 4-9 illustrates the allocated costs to provide water service to customers. Total costs are allocated to functional categories such as treatment or transmission and distribution and then to cost categories such as base or max day.

Sewer costs are allocated based on their need to meet general capacity requirements, as well as customer related costs such as billing and collection. Table 4-10 summarizes the cost of service-based allocation of the City's Sewer costs.

<b>Table 4-10</b> <b>Sewer System - Summary of Functional Allocations to Cost Categories</b> <b>Fiscal Year 2019-20</b>			
<b>Functional Cost</b>	<b>Volume and Capacity</b>	<b>Customer Service/Billing &amp; Collection</b>	<b>Total</b>
Collection & Treatment	\$103,600	\$0	\$103,600
Administration <sup>(1)</sup>	649,267	649,266	1,298,533
Subregional O&M <sup>(2)</sup>	513,350	513,350	1,026,700
Debt Service	671,526	14,085	685,610
Transfers	46,350	-	46,350
Changes in Reserves <sup>(3)</sup>	<u>(25,277)</u>	<u>(14,991)</u>	<u>(40,268)</u>
<b>Total</b>	\$1,958,815	\$1,161,710	\$3,120,525
Units (CCF/Bills)	<u>220,332</u>	<u>20,658</u>	
Cost per Unit	\$8.89	\$56.24	
(1) Administration costs include O&M costs such as salaries, supplies and cost allocations from the General Fund. (2) City of Santa Rosa Subregional Water Reclamation treatments costs (pass through to the City) (3) A positive value results in an increase of reserves through rates, while a negative value indicates use of non-operating revenue and existing reserves to meet annual expenses in addition to rates.			

#### 4.2.2.1. Summary of Cost of Service Analysis

The Cost of Service Analysis presented herein sets forth how to appropriately recover the rate revenue requirements for FY 2019-20 and subsequent years. The allocations presented herein were used, along with the other goals and objectives of the utility, in the development of the water and sewer rates and charges presented in the next section.

### 4.2.3 Rate Design Analysis

#### 4.2.3.1. General Methodology

With the rate revenue requirement determined in the Revenue Sufficiency Analysis, and allocations previously described in the Cost of Service Analysis, the development of specific rates and charges was completed as described below.



First, the rate design goals of the City were reviewed to identify areas the City wanted to address over the forecast period included in this Rate Study. Next, an assessment of the existing rate design was completed to identify areas which have worked well for the City with regard to their specific goals and objectives, and the general goals and objectives of utility rate-making.

With an evaluation of the existing rate structure, and the goals of the City going forward, the analysis required for the development of alternative rate structures was then completed. Cost of service and rate design schedules can be found in Appendices C and D. It is important to note that the revenue requirement portion of the study identifies the additional revenue that is needed, while the cost of service and rate design portions of the study identify how the revenue will be generated, in other words each class of customer will have rates designed that are based on the proportionate cost of providing service to them, and which do not exceed the cost of providing service to them.. As such, the overall percentage system-wide revenue increase identified in the revenue requirements analysis may not directly translate to the same percentage increase in rates for each customer classes.

#### 4.2.3.2. Proposed Water Rate Structure Changes

Through discussions with City staff it was determined that improvements could be made to simplify the existing water rate structure. The current water rate structure is comprised of multiple tiers. The proposed rate structure is simplified and is comprised of a single uniform volume rate for all water use and all customers. Table 4-11 illustrates the proposed monthly water fixed charges through FY 2022-23.

<b>Table 4-11</b> <b>Proposed Water Rates</b> <b>Fiscal Years 2019-20 through FY 2022-23</b>					
<b>Bi-Monthly Base Charge</b>					
<b>Bi-Monthly Charge - \$</b>	<b>Existing</b>	<b>19-20 <sup>(1)</sup></b>	<b>20-21 <sup>(2)</sup></b>	<b>21-22 <sup>(2)</sup></b>	<b>22-23 <sup>(2)</sup></b>
5/8 x 3/4-inch	\$49.11	\$45.49	\$46.96	\$48.37	\$49.33
1-inch	82.03	76.16	78.14	80.79	82.41
1 ½-inch	163.37	151.67	156.22	160.91	164.13
2-inch	261.56	242.83	250.11	257.62	262.77
3-inch	572.72	531.71	547.66	564.09	575.37
4-inch	817.99	759.41	782.20	805.66	821.78
<b>Volume Rate</b>					
<b>Volume Rate - \$/100 CF</b>	<b>18-19</b>	<b>19-20 <sup>(1)</sup></b>	<b>20-21 <sup>(2)</sup></b>	<b>21-22 <sup>(2)</sup></b>	<b>22-23 <sup>(2)</sup></b>
0-100 CF	\$0.00	\$3.12	\$3.22	\$3.31	\$3.38
100 to 3,000 CF	3.03	3.12	3.22	3.31	3.38
> 3,000 CF	3.20	3.12	3.22	3.31	3.38
(1) Effective January 1, 2020					
(2) Effective July 1, 2020 and every July thereafter					





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The bi-monthly base charge is assessed to all customers regardless of class or volume of water used and acts to ensure safe and reliable water systems such that customers can be assured of ongoing system maintenance and available water when the service is needed.

The proposed fixed charges increase by meter size based on the ratio of flow capacities by meter size as identified by AWWA. It should be noted that a 1-inch meter has the ability to provide more water per minute (greater capacity) than a  $\frac{3}{4}$ -inch meter and the cost of service analysis calculated a higher rate for a 1-inch meter compared to a  $\frac{3}{4}$ -inch meter. The volumetric portion of a customer's bill is being refined to be applied to all water usage in a uniform rate, with the existing tiers being eliminated.

The full water cost of service analysis can be found in Appendix C.

#### **4.2.3.3. Proposed Sewer Rate Structure Changes**

Similar to the water rate structure, through discussions with the City, it was determined the existing sewer rate structure has opportunities for simplification. The bi-monthly base charge that varies by meter size is proposed to remain but will no longer include an allotment for sewer discharge. The flow-based component of the rate structure is proposed to be simplified to a uniform rate that applies to all customers rather than the multiple customer classes that exist today. Table 4-12 summarizes the proposed sewer rates based on the class cost of service analysis that was conducted.

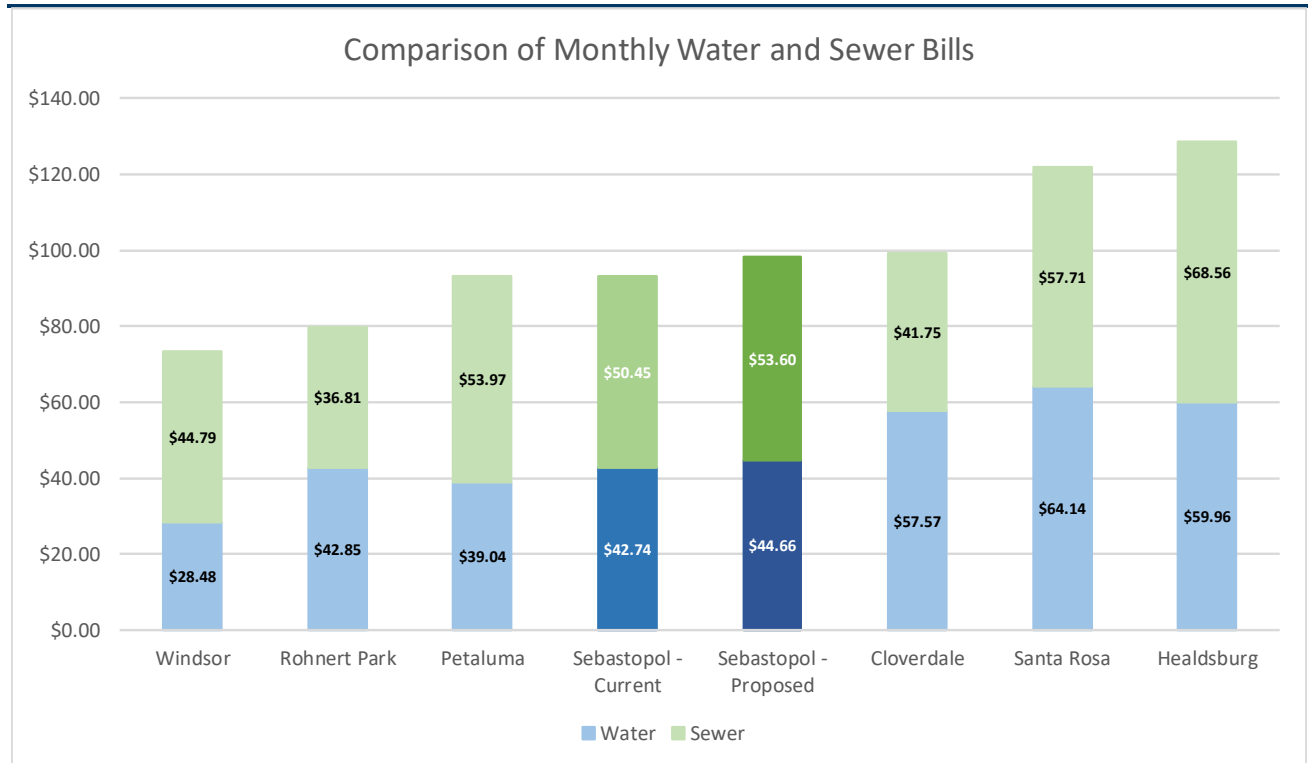


**Table 4-12**  
Proposed Sewer Rates  
Fiscal Years 2019-20 through FY 2022-23

Bi-Monthly Base Charge					
Bi-Monthly Charge - \$	Existing	19-20 <sup>(1)</sup>	20-21 <sup>(2)</sup>	21-22 <sup>(2)</sup>	22-23 <sup>(2)</sup>
5/8 x 3/4-inch	\$74.50	\$66.81	\$70.15	\$73.31	\$76.61
1-inch	124.28	111.60	117.18	122.46	127.97
1 ½-inch	247.84	222.27	233.38	243.88	254.86
2-inch	396.77	355.86	373.65	390.46	408.03
3-inch	868.30	779.19	818.15	854.97	893.44
4-inch	1,240.69	1,112.89	1,168.53	1,221.11	1,276.06
Flow Rate					
Residential 0 -100 CF	\$0.00	\$6.73	\$7.06	\$7.38	\$7.71
Residential > 100 CF	6.60	6.73	7.06	7.38	7.71
Dining Facility (Take Out) 0 – 100 CF	0.00	6.73	7.06	7.38	7.71
Dining Facility (Take Out) > 100 CF	7.42	6.73	7.06	7.38	7.71
Dining Facility (On Premise) 0 – 100 CF	0.00	6.73	7.06	7.38	7.71
Dining Facility (On Premise) > 100 CF	9.19	6.73	7.06	7.38	7.71
All Other 0 – 100 CF	0.00	6.73	7.06	7.38	7.71
All Other 100 – 50,000 CF	6.60	6.73	7.06	7.38	7.71
All Other > 50,000 CF	5.49	6.73	7.06	7.38	7.71
(1) Effective January 1, 2020					
(2) Effective July 1, 2020 and each July thereafter					

The full sewer cost of service can be found in Appendix D.

The City's current and proposed residential combined monthly water and sewer bill assuming 700 cubic feet of water and 300 cubic feet of sewer discharge is shown in Figure 4-1 below. The City's monthly bill falls within the mid-range of its neighbors.



**Figure 4-1 Combined Water (7 CCF) and Sewer (3 CCF) Monthly Bill**



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## Section 5 – Conclusions and Recommendations

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### 5.1 Conclusions

- Projected operating revenues and operating expenses for the forecast period were developed by, and/or in consultation with, City staff and are based upon reasonable projections;
- The projected capital project expenses have been developed by City staff, to address anticipated water and sewer system needs;
- Based on Conclusions 1 and 2 above, we are of the opinion that the financial projections presented herein address the water and sewer utilities' ability to meet its ongoing obligations with regard to:
  - Operating and maintenance expenses, including repair and replacement of aging system components;
  - Non-operating expenses;
  - Capital project expenses, and
  - Provision for key financial policies, including:
    - Maintenance of at least 90 days of operating reserve balances for both utilities;
    - Legal debt service coverage of at least 1.20.
- The proposed rates presented herein are in conformance with industry standard rate-making practices, Proposition 218 and/or the City's rate policies with respect to:
  - The fair and equitable recovery of costs through water and sewer rates;
  - Water and sewer rates based upon the proportionate cost of providing services, and
  - Generation of sufficient revenue to recover system revenue requirements and reserve requirements.

### 5.2 Recommendations

- It is recommended that the City implement the proposed rates and charges presented in this Report for FY 2019-20, beginning with the first adjustment in January 2020, followed by an adjustment in July 2020.
- It is recommended that the City update the revenue sufficiency analysis portion of this study each year to ensure projected revenue continues to be sufficient to fund projected expenses going forward as assumptions made during this analysis may change and have a material impact upon the analysis.
- It is recommended that the City update the cost of service analysis portion of this study every three to five years to ensure costs are recovered consistent with cost of service principles and customer characteristics.

# APPENDIX A

City of Sebastopol  
Projected Operating Results - Water System  
Fiscal Years 2019 - 2023

Line No.	Description	Estimates 2019		2020	2021	2022	2023
Sources of Funds							
1	Beginning-of-Year Cash	\$ 2,367,968	\$	1,778,614	\$1,765,337	\$1,877,439	\$2,026,219
Operating Revenues							
2	Operating Revenue	\$ 2,228,000	\$	2,272,560	\$ 2,426,805	\$ 2,512,110	\$ 2,575,103
Total Operating Revenues		\$ 2,228,000	\$	2,272,560	\$ 2,426,805	\$ 2,512,110	\$ 2,575,103
Non-Operating Revenue							
3	Non-Utility Income	37,000		35,520	34,099	32,735	31,426
4	Interest Income	14,000		4,253	4,279	4,510	4,416
Total Non-Operating Revenue		\$ 51,000	\$	39,773	\$ 38,378	\$ 37,245	\$ 35,841
Total Revenues		\$ 2,279,000	\$	2,312,333	\$ 2,465,183	\$ 2,549,355	\$ 2,610,944
Operating Expenses							
5	Administration <sup>(1)</sup>	\$ 1,514,474	\$	1,615,872	\$ 1,638,598	\$ 1,687,756	\$ 1,738,389
6	Treatment	278,800		304,900	314,047	323,468	333,172
7	Customer Service	21,000		21,000	21,630	22,279	22,947
8	Transmission & Distribution	95,100		76,050	78,332	80,681	83,102
9	Loans	188,812		-	-	-	-
Total Operating Expenses		\$ 2,098,186	\$	2,017,822	\$ 2,052,607	\$ 2,114,185	\$ 2,177,610
Net Result of Operations		\$ 180,814	\$	294,511	\$ 412,576	\$ 435,170	\$ 433,334
Non-Operating Expenses							
10	Capital Improvements	\$ -	\$	-	\$ -	\$ -	\$ -
12	Transfers Out to Capital Fund	478,190		46,350	-	-	298,260
13	Existing Debt Service	103,166		103,165	103,165	89,082	89,082
14	Loan Payments	188,812		158,273	197,309	197,309	197,309
Total Non-Operating Expenses		\$ 770,168	\$	307,788	\$ 300,474	\$ 286,391	\$ 584,650
Net Available After Non -Operating Expenses		\$ (589,354)	\$	(13,278)	\$ 112,102	\$ 148,780	\$ (151,317)
Other Uses							
15	New Debt Service	\$ -	\$	-	\$ -	\$ -	\$ -
Total Other Uses		\$ -	\$	-	\$ -	\$ -	\$ -
Net Available After Other Uses		\$ (589,354)	\$	(13,278)	\$ 112,102	\$ 148,780	\$ (151,317)
End-of-Year Cash							
16	Target Cash - Operations	517,361		497,545	506,122	521,306	536,945
17	Target Cash - Repair & Replacement	-		-	-	-	-
Target Cash		\$517,361		\$497,545	\$506,122	\$521,306	\$536,945
18	Debt Service Coverage Ratio (Operations)	1.26		2.47	3.63	4.47	4.46
19	Debt Service Coverage Ratio (All Debt)	1.26		2.47	3.63	4.47	4.46
20	Target Debt Service Coverage Ratio	1.20		1.20	1.20	1.20	1.20

(1) Includes costs such as salaries, supplies and General Fund allocations



City of Sebastopol  
Revenues - Water System  
Water Financial Model

Line No.	Description	Estimated 2019				
			2020	2021	2022	2023
<u>Operating Revenues</u>						
<u>Water</u>						
1	Operating Revenue	\$ 2,228,000	\$ 2,272,560	\$ 2,426,805	\$ 2,512,110	\$ 2,575,103
2	Other Revenues	37,000	35,520	34,099	32,735	31,426
3	Total Operating Revenues	\$ 2,265,000	\$ 2,308,080	\$ 2,460,904	\$ 2,544,845	\$ 2,606,529
<u>Non-Operating Revenue</u>						
4	Non-Utility Income	\$ -	\$ -	\$ -	\$ -	\$ -
5	Interest Income	14,000	4,253	4,279	4,510	4,416
6	Total Non-Operating Revenue	\$ 14,000	\$ 4,253	\$ 4,279	\$ 4,510	\$ 4,416
7	Total Revenues	\$ 2,279,000	\$ 2,312,333	\$ 2,465,183	\$ 2,549,355	\$ 2,610,944

<b><u>OPERATING REVENUES</u></b>						
<b><u>Charges for Services</u></b>						
9	Rate Revenue	\$ 2,228,000	\$ 2,228,000	\$ 2,317,120	\$ 2,426,805	\$ 2,512,110
10	<i>Growth</i>	0.00%	0.00%	1.68%	0.50%	0.50%
	<i>Revenues Adjusted for Growth</i>	\$ 2,228,000	\$ 2,228,000	\$ 2,356,122	\$ 2,438,942	\$ 2,524,611
11	<i>Revenue Increase</i>	0.00%	4.00%	3.00%	3.00%	2.00%
12	Percent of Year w/Rate Increase	0.0%	50.0%	100.0%	100.0%	100.0%
13	Revenues under old rates	\$ 2,228,000	\$ 1,114,000	\$ -	\$ -	\$ -
14	Revenues under new rates	-	1,158,560	2,426,805	2,512,110	2,575,103
15	Total Charges for Services - After Revenue Increase	\$ 2,228,000	\$ 2,272,560	\$ 2,426,805	\$ 2,512,110	\$ 2,575,103
16	Total Charges for Services - If Increase Effective for Full Year	\$ 2,228,000	\$ 2,317,120	\$ 2,426,805	\$ 2,512,110	\$ 2,575,103
17	<b><u>Other Water Revenue</u></b>					
26	Other Water Revenue	37,000	35,520	34,099	32,735	31,426
27		-	-	-	-	-
28		-	-	-	-	-
28	<b><u>Interest Income</u></b>					
29	Water-Interest Income	14,000	4,253	4,279	4,510	4,416
30		-	-	-	-	-
	<b>Total Operating Revenues</b>	<b>\$ 2,279,000</b>	<b>\$ 2,312,333</b>	<b>\$ 2,465,183</b>	<b>\$ 2,549,355</b>	<b>\$ 2,610,944</b>

## City of Sebastopol

### Estimated & Projected Uses of Funds - Water System

#### Water Financial Model

Line No.	Description	Estimated 2019				
			2020	2021	2022	2023
<u>OPERATING EXPENSES - SUMMARY</u>						
1	Administration	\$ 1,514,474	\$ 1,615,872	\$ 1,638,598	\$ 1,687,756	\$ 1,738,389
2	Treatment	278,800	304,900	314,047	323,468	333,172
3	Customer Service	21,000	21,000	21,630	22,279	22,947
4	Transmission & Distribution	95,100	76,050	78,332	80,681	83,102
5	Loans	188,812	158,273	197,309	197,309	197,309
6	Source of Supply	478,190	46,350	-	-	298,260
Total OPERATING EXPENSES - SUMMARY		\$ 2,576,376	\$ 2,222,445	\$ 2,249,915	\$ 2,311,494	\$ 2,673,179
<u>Debt Service</u>						
7	Existing Debt	\$103,166	\$103,165	\$103,165	\$89,082	\$89,082
Total Debt Service		\$ 103,166	\$ 103,165	\$ 103,165	\$ 89,082	\$ 89,082
Total Operating Expenses - Summary		\$ 2,679,542	\$ 2,325,610	\$ 2,353,081	\$ 2,400,575	\$ 2,762,261
<u>OPERATING EXPENSES - DETAIL</u>						
<u>Operations Division</u>						
8	Salaries	\$ 240,400	\$ 236,300	\$ 243,389	\$ 250,691	\$ 258,211
9	Salaries - Part Time	25,000	\$ 25,000	\$ -	\$ -	\$ -
10	Overtime	10,000	10,000	10,300	10,609	10,927
11	Standby	10,000	10,000	10,300	10,609	10,927
12	Benefits	112,200	123,100	126,793	130,597	134,515
13	Contract Services	116,800	108,900	112,167	115,532	118,998
14	Misc. Supplies / Services	136,250	136,100	140,183	144,388	148,720
15	Meter Replacement Program	21,000	21,000	21,630	22,279	22,947
16	Fire Hydrant Replacement Program	15,750	15,750	16,223	16,709	17,210
17	Backflow Prevention Program	3,150	4,500	4,635	4,774	4,917
18	Conference & Training	3,000	3,000	3,090	3,183	3,278
19	Meetings & Travel	6,000	6,000	6,180	6,365	6,556
20	Telecommunications	6,550	6,750	6,953	7,161	7,376
21	Utilites - Gas & Electric	162,000	196,000	201,880	207,936	214,174
22	Allocated Liability Insurance	24,350	28,500	29,355	30,236	31,143
23	Allocated Wrks Comp Insurance	15,000	17,700	18,231	18,778	19,341
24	Capital Outlay	76,200	55,800	57,474	59,198	60,974
25	Transfer to CIP	478,190	46,350	-	-	298,260

## City of Sebastopol

### Estimated & Projected Uses of Funds - Water System Water Financial Model

Line No.	Description	Estimated 2019				
			2020	2021	2022	2023
<b><u>Non-Operating Division</u></b>						
26	G & A Allocation - City Council	26,284	29,468	30,352	31,263	32,200
27	G & A Allocation - City Manager	43,640	44,960	46,309	47,698	49,129
28	G & A Allocation - City Attorney	7,168	7,375	7,596	7,824	8,059
29	G & A Allocation - City Clerk	23,290	25,794	26,568	27,365	28,186
30	G & A Allocation - Finance	349,763	381,834	393,289	405,088	417,240
31	G & A Allocation - Planning	25,555	26,593	27,391	28,213	29,059
32	G & A Allocation - Building	33,943	41,132	42,366	43,637	44,946
33	G & A Allocation - Engineering	96,815	106,998	110,208	113,514	116,920
34	G & A Allocation - Fire	61,451	75,891	78,168	80,513	82,928
35	G & A Allocation - PW Corp Yard	213,528	218,832	225,397	232,159	239,124
36	G & A Allocation - PW Govt Bldg	24,006	30,281	31,189	32,125	33,089
37	G & A Allocation - Non Departmental	20,281	24,264	24,992	25,742	26,514
38	CREBS - loan repayment	31,024	31,024	31,024	31,024	31,024
39	Infras Amort - loan repayment	70,802	69,560	79,299	79,299	79,299
40	Well 7 Amort - loan repayment	86,986	57,689	86,986	86,986	86,986
TOTAL OPERATING EXPENSES - DETAIL		\$ 2,679,542	\$ 2,325,610	\$ 2,353,081	\$ 2,400,575	\$ 2,762,261

## City of Sebastopol

### Capital Improvement Plan

Description					
	2019	2020	2021	2022	2023
<b>Water - Identified Needs</b>					
Well 6: Arsenic Treatment (Planning)	\$0	\$0	\$0	\$0	\$0
Well 6: Arsenic Treatment (Construction)	-	-	-	-	-
Hayden Main: Repl 4" Pine Crest to McFarlane	478,190	-	-	-	-
Well 6 Fence: Security Fence Surrounding Well	-	-	-	-	-
Florence: Water Line Replace South	-	-	-	-	165,000
Florence: Water Line Replace North	-	-	-	-	100,000
Maps: Update Water Line Maps	-	45,000	-	-	-
Well 4	-	-	-	-	-
<b>Total Capital Project Costs</b>	<b>\$ 478,190</b>	<b>\$ 45,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 265,000</b>
<b>Total Escalated Capital Project Costs</b>	<b>\$ 478,190</b>	<b>\$ 46,350</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 298,260</b>

**City of Sebastopol**  
Existing Debt

	2019	2020	2021	2022	2023
Vacuum Amort	\$14,084	\$14,084	\$14,084		
Well 6 Amort	\$89,082	\$89,082	\$89,082	\$89,082	\$89,082
<b>Total</b>	<b>\$103,166</b>	<b>\$103,165</b>	<b>\$103,165</b>	<b>\$89,082</b>	<b>\$89,082</b>

# APPENDIX B

# City of Sebastopol

## Projected Operating Results - Sewer System Fiscal Years 2019 - 2023

Line No.	Description	Estimates 2019	2020	2021	2022	2023
<b>Sources of Funds</b>						
1	<b>Beginning-of-Year Cash</b>	\$ 2,543,174	\$ 1,533,942	\$ 1,516,674	\$ 1,287,651	\$ 1,044,753
<b>Operating Revenues</b>						
2	Operating Revenue	\$ 3,015,000	\$ 3,120,525	\$ 3,444,368	\$ 3,617,365	\$ 3,798,957
3	Other Revenues	13,000	13,000	12,480	11,981	11,502
4	<b>Total Operating Revenues</b>	<b>\$ 3,028,000</b>	<b>\$ 3,133,525</b>	<b>\$ 3,456,848</b>	<b>\$ 3,629,346</b>	<b>\$ 3,810,459</b>
<b>Non-Operating Revenue</b>						
5	Non-Utility Income					
6	Interest Income	10,000	10,000	17,170	14,025	11,668
7	<b>Total Non-Operating Revenue</b>	<b>\$ 10,000</b>	<b>\$ 10,000</b>	<b>\$ 17,170</b>	<b>\$ 14,025</b>	<b>\$ 11,668</b>
8	<b>Total Revenues</b>	<b>\$ 3,038,000</b>	<b>\$ 3,143,525</b>	<b>\$ 3,474,018</b>	<b>\$ 3,643,371</b>	<b>\$ 3,822,126</b>
<b>Operating Expenses</b>						
9	Administration <sup>(1)</sup>	\$ 1,197,385	\$ 1,298,533	\$ 1,402,189	\$ 1,515,121	\$ 1,638,209
10	Subregional - O & M (pass through)	1,070,515	1,026,700	1,098,569	1,175,469	1,257,752
11	Collection	73,800	103,600	106,708	109,909	113,207
12	<b>Total Operating Expenses</b>	<b>\$ 2,341,700</b>	<b>\$ 2,428,833</b>	<b>\$ 2,607,466</b>	<b>\$ 2,800,499</b>	<b>\$ 3,009,167</b>
13	<b>Net Result of Operations</b>	<b>\$ 696,300</b>	<b>\$ 714,692</b>	<b>\$ 866,552</b>	<b>\$ 842,872</b>	<b>\$ 812,959</b>
<b>Non-Operating Expenses</b>						
14	Capital Improvements	\$ -	\$ -	\$ -	\$ -	\$ -
15	Existing Debt Service	28,169	28,169	28,169	0	0
16	Transfers Out to Capital Fund	1,010,522	46,350	371,315	368,795	168,826
17	Loans Payments	666,841	657,441	696,091	705,856	709,941
18	<b>Total Non-Operating Expenses</b>	<b>\$ 1,705,532</b>	<b>\$ 731,960</b>	<b>\$ 1,095,575</b>	<b>\$ 1,074,651</b>	<b>\$ 878,767</b>
19	<b>Net Available After Non-Operating Expenses</b>	<b>\$ (1,009,232)</b>	<b>\$ (17,268)</b>	<b>\$ (229,023)</b>	<b>\$ (231,779)</b>	<b>\$ (65,808)</b>
<b>Other Uses</b>						
20	New Debt Service	\$ -	\$ -	\$ -	\$ 11,119	\$ 42,834
21	<b>Total Other Uses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 11,119</b>	<b>\$ 42,834</b>
22	<b>Net Available After Other Uses</b>	<b>\$ (1,009,232)</b>	<b>\$ (17,268)</b>	<b>\$ (229,023)</b>	<b>\$ (242,898)</b>	<b>\$ (108,642)</b>
23	<b>End-of-Year Cash</b>	<b>\$ 1,533,942</b>	<b>\$ 1,516,674</b>	<b>\$ 1,287,651</b>	<b>\$ 1,044,753</b>	<b>\$ 936,111</b>
24	<b>Target Cash - Operations</b>	<b>577,405</b>	<b>598,890</b>	<b>642,937</b>	<b>690,534</b>	<b>741,986</b>
25	<b>Target Cash - Repair &amp; Replacement</b>					
26	<b>Target Cash</b>	<b>\$577,405</b>	<b>\$598,890</b>	<b>\$642,937</b>	<b>\$690,534</b>	<b>\$741,986</b>
27	<b>Debt Service Coverage Ratio (Operations)</b>	<b>24.36</b>	<b>25.02</b>	<b>30.15</b>	<b>74.54</b>	<b>18.71</b>
28	<b>Debt Service Coverage Ratio (All Debt)</b>	<b>24.36</b>	<b>25.02</b>	<b>30.15</b>	<b>74.54</b>	<b>18.71</b>
29	<b>Target Debt Service Coverage Ratio</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>

(1) Includes costs such as salaries, supplies and General Fund allocations

City of Sebastopol  
Revenues - Sewer System  
Sewer Financial Model

Line No.	Description	Estimated 2019	2020	2021	2022	2023
<b>Operating Revenues</b>						
<b><u>Sewer</u></b>						
1	Operating Revenue	\$ 3,015,000	\$ 3,120,525	\$ 3,444,368	\$ 3,617,365	\$ 3,798,957
2	Other Revenues	13,000	13,000	12,480	11,981	11,502
<b>Total Operating Revenues</b>		<b>\$ 3,028,000</b>	<b>\$ 3,133,525</b>	<b>\$ 3,456,848</b>	<b>\$ 3,629,346</b>	<b>\$ 3,810,459</b>
<b><u>Non-Operating Revenue</u></b>						
3	Non-Utility Income	\$ -	\$ -	\$ -	\$ -	\$ -
4	Interest Income	10,000	10,000	17,170	14,025	11,668
<b>Total Non-Operating Revenue</b>		<b>\$ 10,000</b>	<b>\$ 10,000</b>	<b>\$ 17,170</b>	<b>\$ 14,025</b>	<b>\$ 11,668</b>
<b>Total Revenues</b>		<b>\$ 3,038,000</b>	<b>\$ 3,143,525</b>	<b>\$ 3,474,018</b>	<b>\$ 3,643,371</b>	<b>\$ 3,822,126</b>
<b>OPERATING REVENUES</b>						
<b><u>Charges for Services</u></b>						
5	Rate Revenue	\$ 3,015,000	\$ 3,015,000	\$ 3,226,050	\$ 3,444,368	\$ 3,617,365
6	Growth	0.00%	0.00%	1.68%	0.50%	0.50%
Revenues Adjusted for Growth		\$ 3,015,000	\$ 3,015,000	\$ 3,280,351	\$ 3,461,593	\$ 3,635,366
7	Revenue Increase	0.00%	7.00%	5.00%	4.50%	4.50%
8	Percent of Year w/Rate Increase	0.0%	50.0%	100.0%	100.0%	100.0%
9	Revenues under old rates	\$ 3,015,000	\$ 1,507,500	\$ -	\$ -	\$ -
10	Revenues under new rates	-	1,613,025	3,444,368	3,617,365	3,798,957
11	Total Charges for Services - After Revenue Increase	\$ 3,015,000	\$ 3,120,525	\$ 3,444,368	\$ 3,617,365	\$ 3,798,957
12	Total Charges for Services - If Increase Effective for Full Year	\$ 3,015,000	\$ 3,226,050	\$ 3,444,368	\$ 3,617,365	\$ 3,798,957
<b><u>Other Sewer Revenue</u></b>						
13	Transfers In	-	-	-	-	-
14	Other Sewer Revenue	13,000	13,000	12,480	11,981	11,502
15		-	-	-	-	-
16		-	-	-	-	-
<b><u>Interest Income</u></b>						
17	Sewer-Interest Income	10,000	10,000	17,170	14,025	11,668
<b>Total Operating Revenues</b>		<b>\$ 3,038,000</b>	<b>\$ 3,143,525</b>	<b>\$ 3,474,018</b>	<b>\$ 3,643,371</b>	<b>\$ 3,822,126</b>



## City of Sebastopol

### Estimated & Projected Uses of Funds - Sewer System Sewer Financial Model

Line No.	Description	Estimated 2019	2020	2021	2022	2023
<u>OPERATING EXPENSES - SUMMARY</u>						
1	Administration	\$ 2,267,900	\$ 2,325,233	\$ 2,500,758	\$ 2,690,590	\$ 2,895,960
2	Collection	73,800	103,600	106,708	109,909	113,207
3	Transfers	1,010,522	46,350	371,315	368,795	168,826
4	Loans	666,841	657,441	696,091	705,856	709,941
Total OPERATING EXPENSES - SUMMARY		\$ 4,019,063	\$ 3,132,624	\$ 3,674,872	\$ 3,875,150	\$ 3,887,934
<u>Debt Service</u>						
5	Existing Debt	\$ 28,169	\$ 28,169	\$ 28,169	\$ -	\$ -
Total Debt Service		\$ 28,169	\$ 28,169	\$ 28,169	\$ -	\$ -
Total Operating Expenses - Summary		\$ 4,047,232	\$ 3,160,793	\$ 3,703,041	\$ 3,875,150	\$ 3,887,934
<u>OPERATING EXPENSES - DETAIL</u>						
<u>Operations Division</u>						
6	Salaries	\$ 157,950	167,700	\$ 176,085	\$ 184,889	\$ 194,134
7	Overtime	7,000	10,000	10,500	11,025	11,576
8	Standby	10,000	10,000	10,500	11,025	11,576
9	Benefits	72,800	84,500	88,725	93,161	97,819
10	Contract Services	70,600	63,850	65,766	67,738	69,771
11	Subregional - O & M	1,070,515	1,026,700	1,098,569	1,175,469	1,257,752
12	Misc. Supplies / Services	64,750	73,000	75,190	77,446	79,769
13	Conservation Rebate Program	5,000	5,000	5,150	5,305	5,464
14	Conference & Training	3,000	3,000	3,090	3,183	3,278
15	Meetings & Travel	8,500	8,500	8,755	9,018	9,288
16	Utilites - Gas & Electric	41,100	50,000	51,500	53,045	54,636
17	Utilites - City	-	7,200	7,416	7,638	7,868
18	Telccommunications	3,550	3,750	3,863	3,978	4,098
19	Allocated Liability Insurance	15,900	14,000	14,700	15,435	16,207
20	Allocated Wrks Comp Insurance	9,800	17,800	18,690	19,625	20,606
21	Capital Outlay	32,700	46,400	47,792	49,226	50,703
22	Transfer to Sewer CIP	1,010,522	46,350	371,315	368,795	168,826

## City of Sebastopol

### Estimated & Projected Uses of Funds - Sewer System Sewer Financial Model

Line No.	Description	Estimated 2019				
			2020	2021	2022	2023
<u>Non-Operating Division</u>						
23	G & A Allocation - City Council	30,665	34,379	37,817	41,599	45,758
24	G & A Allocation - City Manager	43,640	44,960	49,456	54,402	59,842
25	G & A Allocation - City Attorney	4,301	4,425	4,868	5,354	5,890
26	G & A Allocation - City Clerk	20,379	22,570	24,827	27,310	30,041
27	G & A Allocation - Finance	340,559	371,785	408,964	449,860	494,846
28	G & A Allocation - Planning	15,333	15,956	17,552	19,307	21,237
29	G & A Allocation - Building	33,943	41,132	45,245	49,770	54,747
30	G & A Allocation - Engineering	79,730	88,116	96,928	106,620	117,282
31	G & A Allocation - PW Corp Yard	155,698	159,565	175,522	193,074	212,381
32	G & A Allocation - PW Govt Bldg	24,006	30,281	33,309	36,640	40,304
33	G & A Allocation - Non Departmental	20,281	24,264	26,690	29,359	32,295
34	Infras Lease	62,941	62,941	62,941	62,941	62,941
35	Subregional - Debt Service	603,900	594,500	633,150	642,915	647,000
<u>Transfers Out</u>						
36	Transfers		-	-	-	-
TOTAL OPERATING EXPENSES - DETAIL		\$ 4,047,232	\$ 3,160,793	\$ 3,703,041	\$ 3,875,150	\$ 3,887,934

City of Sebastopol  
Capital Improvement Plan

Line	Proj	Description	Capital Fund	Existing Bonds	Operating Bonds					
No.	No.					2019	2020	2021	2022	2023
Sewer - Identified Needs										
1	0603-35.00	Zimpher Creek: Sewer Relocation Study	100.0%	0.0%	0.0%	-	-	-	-	-
2	0604-37.00	Zimpher Creek: Construction: Sewer Re-Route	100.0%	0.0%	0.0%	-	-	250,000	-	-
3	0608-41.42	Johnson Street: Replace a Sewer Main	100.0%	0.0%	0.0%	1,010,522	-	-	-	-
4	0610-70.00	Zimpher Creek: Construction: Sewer Reconstruction	50.0%	0.0%	50.0%	-	-	-	325,000	300,000
5	0611-80.00	Zimpher Creek: Construction: Sewer Repair East	100.0%	0.0%	0.0%	-	-	100,000	175,000	-
6	0612-81.00	Florence: Sewer Repair South	0.0%	0.0%	100.0%	-	-	-	-	200,000
7	0613-82.00	Florence: Sewer Repair North	0.0%	0.0%	100.0%	-	-	-	-	100,000
8	0614-90.00	Maps: Update Sewer Line Maps	100.0%	0.0%	0.0%	-	45,000	-	-	-
9	Total Capital Project Costs					\$ 1,010,522	\$ 45,000	\$ 350,000	\$ 500,000	\$ 600,000
10	Total Escalated Capital Project Costs					\$ 1,010,522	\$ 46,350	\$ 371,315	\$ 546,364	\$ 675,305

City of Sebastopol  
Existing Debt - Sewer

	2019	2020	2021	2022	2023
Vacuum Truck	28,169	28,169	28,169		
Total	\$28,169	\$28,169	\$28,169	\$0	\$0

## New Debt Service

### Operations Bond Debt Service (1)

							2019	2020	2021	2022	2023
Annual New Debt Required							\$ -	\$ -	\$ -	\$ 177,568	\$ 506,479
Fiscal Year	Term (Yrs)	Rate	Issuance Costs	Capital Project Proceeds Required	Issuance Costs	Total Debt Required	2019	2020	2021	2022	2023
2019	30	4.5%	2.0%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2020	30	4.5%	2.0%	-	-	-	-	-	-	-	-
2021	30	4.5%	2.0%	-	-	-	-	-	-	-	-
2022	30	4.5%	2.0%	177,568	3,551	181,120	-	-	-	11,119	11,119
2023	30	4.5%	2.0%	506,479	10,130	516,609	-	-	-	-	31,715
2024	30	4.5%	2.0%	776,714	15,534	792,248	-	-	-	-	-
2025	30	4.5%	2.0%	-	-	-	-	-	-	-	-
2026	30	4.5%	2.0%	-	-	-	-	-	-	-	-
2027	30	4.5%	2.0%	-	-	-	-	-	-	-	-
2028	30	4.5%	2.0%	-	-	-	-	-	-	-	-
Cumulative Annual New Operating Bond Debt Service							\$ -	\$ -	\$ -	\$ 11,119	\$ 42,834

(1) Interest rate and issuance costs are projected. Actual terms will result in a different annual debt service payment.

# APPENDIX C

**City of Sebastopol**  
Development of Rate Revenue Requirement

		A		B	
Line No:		Test Year for Rate Revenue Requirement			
		2020	% to Water	Water	
1	<b>Total Operating Revenue Requirement</b>	\$ 2,272,560	100%	\$	2,272,560
	Less:				
	<u>Other Operating Revenues</u>				
2	Other Water Revenue	\$ 35,520	100%	\$	35,520
3	Water-Interest Income	\$ 4,253	100%	\$	4,253
4	Change in Reserves	\$ (39,773)	100%	\$	(39,773)
				\$	-
	Total Other Operating Revenues	\$ -		\$	-
5	<b>Total Rate Revenue Requirement</b>	\$ 2,272,560	100%	\$	2,272,560

**City of Sebastopol**  
Allocation of Test Year Costs

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A

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Line No:	Expense Group	Water
1	Water - SOS	\$ 46,350
2	Water - Pump	-
3	Water - Treat	304,900
4	Water - T&D	76,050
5	Water - CS	21,000
6	Water - Admin	1,615,872
7	Water - Transfers	-
8	Water - Existing Bond DS	103,165
9	Water - Loans	158,273
<b>Total</b>		<b>\$ 2,325,610</b>



**City of Sebastopol**  
Allocation of Water Costs

**Allocation to Base Extra Capacity - Water**

Line No:	Water Costs	Extra Capacity				Meters & Services	Billing & Collection	Total	
		Base	Max Day	Max Hour					
1	Water - SOS	\$ 46,350	\$ 46,350	\$ -	\$ -	\$ -	\$ -	\$ 46,350	
2	Water - Pump	0	0	0	0	0	0	-	
3	Water - Treat	304,900	251,094	53,806	0	0	0	304,900	
4	Water - T&D	76,050	27,161	5,820	43,069	0	0	76,050	
5	Water - CS	21,000	0	0	0	10,500	10,500	21,000	
6	Water - Admin	1,615,872	807,936	0	0	403,968	403,968	1,615,872	
7	Water - Transfers	0	0	0	0	0	0	-	
8	Water - Existing Bond DS	103,165	103,165	0	0	0	0	103,165	
9	Water - Loans	158,273	158,273	0	0	0	0	158,273	
10	Addition/(Reduction) in Reserves	(53,050)	(31,799)	(1,360)	(982)	(9,455)	(9,455)	(53,050)	
11	<b>Total</b>	<b>\$ 2,272,560</b>	<b>\$ 1,362,181</b>	<b>\$ 58,266</b>	<b>\$ 42,087</b>	<b>\$ 405,013</b>	<b>\$ 405,013</b>	<b>\$ 2,272,560</b>	
12	Fixed Charge Component					\$ 405,013	\$ 405,013	\$ 810,027	35.64%
13	Flow Charge Component		\$ 1,362,181	\$ 58,266	\$ 42,087			\$ 1,462,533	64.36%
14	<b>Total</b>	<b>\$ 1,362,181</b>	<b>\$ 58,266</b>	<b>\$ 42,087</b>	<b>\$ 405,013</b>	<b>\$ 405,013</b>	<b>\$ 405,013</b>	<b>\$ 2,272,560</b>	<b>100.00%</b>
<b>Allocation to Customer Class - Water - Annual Basis</b>						\$ 16.58	\$ 19.70		
Customer Class	Total Annual Flow	Average Daily Flow	Maximum Day				Maximum Hour		
			Base	Capacity Factor	Total Capacity	Extra Capacity	Capacity Factor	Total Capacity	Extra Capacity
15	ALL	371,122	1,017	288%	2,930	1,913	664%	6,756	5,739
16	Total	371,122	1,017		2,930	1,913		6,756	5,739
17									
18	Allocated Costs		\$ 1,362,181		\$ 58,266			\$ 42,087	\$ 1,462,533
19	Billing Units		371,122		1,913			5,739	
20	Rate		\$ 3.67		\$ 30.46			\$ 7.33	

Customer Class	Total Annual Flow	Base Costs Allocated to Customer Class	Max Day Costs Allocated to Customer Class		Max Hour Costs Allocated to Customer Class		Meters & Services & Billing & Collection Costs	Total Base Extra Capacity Costs Allocated to Customer Class		Cost Distribution
			Extra Capacity	Customer Class	Extra Capacity	Class		Customer Class		
21	ALL	371,122	\$ 1,362,181	1,913	\$ 58,266	5,739	\$ 42,087	\$ 810,027	\$ 2,272,560	100%
22	Total	371,122	\$ 1,362,181	1,913	\$ 58,266	5,739	\$ 42,087	\$ 810,027	\$ 2,272,560	100%
23										

**City of Sebastopol**  
Calculation of Fixed Charge Rates/ Revenue - Water FY 2020

Line No:		
1	<b>Total Water Revenue Target</b>	<b>\$ 2,272,560</b>
2	Percent from Fixed Charge	49%
3	<b>Total Fixed Charge Revenue Requirement - Water</b>	<b>\$ 1,113,554</b>
4	Total Equivalent Meters	2,035
5	Bi-Monthly Water Fixed Charge per Equivalent Meter	\$ 45.59

**Water Fixed Charge - By Meter Size**

	Meter Size	Meter Equivalency	Monthly Water Fixed Charge
1	0.63	1.00	\$ 45.59
2	1	1.67	\$ 76.16
3	1 1/2	3.33	\$ 151.67
4	2	5.33	\$ 242.83
5	3	11.66	\$ 531.71
6	4	16.66	\$ 759.41
7	6	50.00	\$ 2,279.66
8	8	80.00	\$ 3,647.46

Water

I

Class -->

ALL

**Calculation of Equivalent Meters / Units - Inside**

Meter Size	Billing Basis-->	Bills	Total	Bills	Equiv. Factor	Inside / Outside Factor	Equivalent Meters
0.63		19,548	19,548	19,548	1.00	1.00	1,629
1		54	54	54	1.67	1.00	8
1 1/2		498	498	498	3.33	1.00	138
2		366	366	366	5.33	1.00	162
3		84	84	84	11.66	1.00	82
4		12	12	12	16.66	1.00	17
6		-	-	-	50.00	1.00	-
8		-	-	-	80.00	1.00	-
<b>Total</b>		<b>20,562</b>	<b>20,562</b>	<b>20,562</b>			<b>2,035</b>

Development of Proposed FY 2020 Rates

Cost of Service					\$2,272,560		
Service Charge, \$ per Bill (bi-monthly)	Rate	Bills	Revenue		FY 2021	FY 2022	FY 2023
0.63	\$ 45.59	19,548	\$891,193		46.96	48.37	49.33
1.00	76.16	54	4,112		78.44	80.79	82.41
1.50	151.67	498	75,532		156.22	160.91	164.13
2.00	242.83	366	88,876		250.11	257.62	262.77
3.00	531.71	84	44,663		547.66	564.09	575.37
4.00	759.41	12	9,113		782.20	805.66	821.78
Total Service Charge Revenue				\$1,113,490			
Volume Charge Revenue to be Recovered				\$1,159,070			
Block	% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate (100 CF)	Rate Revenue		
All Use	100.00%	371,122	1.00	\$3.12	\$1,159,070	3.22	3.31 3.38
<b>Total</b>	<b>100%</b>	<b>371,122</b>			<b>\$1,159,070</b>		
Annual Surplus/(Deficiency)					\$0		

# APPENDIX D

**City of Sebastopol**  
Development of Rate Revenue Requirement

		A		B	
Line No:		Test Year for Rate Revenue Requirement		% to Sewer	Sewer
		2020			
1	<b>Total Operating Revenue Requirement</b>	\$	3,120,525	100%	\$ 3,120,525
	Less:				
	<u>Other Operating Revenues</u>				
2	Transfers In	\$	13,000	100%	\$ 13,000
3	Other Sewer Revenue	\$	-	100%	\$ -
4	Sewer-Interest Income	\$	10,000	100%	\$ 10,000
5	Change in Reserves	\$	(23,000)	100%	\$ (23,000)
					\$ -
	<b>Total Other Operating Revenues</b>	\$	-		\$ -
6	<b>Total Rate Revenue Requirement</b>	\$	3,120,525	100%	\$ 3,120,525

**City of Sebastopol**  
Allocation of Test Year Costs

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A

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Line No:	Expense Group	Sewer
1	Sewer - Coll	\$ 103,600
2	Sewer - Treat	-
3	Sewer - Admin	1,298,533
4	Sewer - Santa Rosa Subregional O&M	1,026,700
5	Sewer - Loans	657,441
6	Sewer - Transfers	46,350
7	Sewer - Existing DS	28,169
<b>Total</b>		<b>\$ 3,160,793</b>

**City of Sebastopol**  
Allocation of Sewer Costs FY - 2020

**Allocation to Volume and Customer Service - Sewer FY 2019**

		<b>Sewer Costs</b>	<b>Volume</b>	<b>Billing &amp; Collection</b>	<b>Customer Service</b>	<b>Total</b>
1						
2	Collection	\$103,600	103,600	-	-	103,600
3	Treatment	-	-	-	-	-
4	Administration	1,298,533	649,267	324,633	324,633	1,298,533
5	Santa Rosa Subregional O&M	1,026,700	513,350	256,675	256,675	1,026,700
6	Loans	657,441	657,441	-	-	657,441
7	Transfers	46,350	46,350	-	-	46,350
8	Debt Service	28,169	14,085	7,042	7,042	28,169
9	Addition/(Reduction) in Reserves	(40,268)	(25,277)	(7,495)	(7,495)	(40,268)
10	<b>Total</b>	<b>\$ 3,120,525</b>	<b>\$ 1,958,815</b>	<b>\$ 580,855</b>	<b>\$ 580,855</b>	<b>\$ 3,120,525</b>
11						
12	Fixed Charge Component			\$ 580,855	\$ 580,855	\$ 1,161,710
13	Flow Charge Component		\$ 1,958,815			\$ 1,958,815
14	<b>Total</b>		<b>\$ 1,958,815</b>	<b>\$ 580,855</b>	<b>\$ 580,855</b>	<b>\$ 3,120,525</b>

**City of Sebastopol**  
Calculation of Fixed Charge Rates/ Revenue - Sewer FY 2020

Line No:		
1	<b>Total Sewer Revenue Target</b>	<b>\$ 3,120,525</b>
2	Percent from Fixed Charge	53%
3	<b>Total Fixed Charge Revenue Requirement - Sewer</b>	<b>\$ 1,638,276</b>
4	Total Equivalent Meters	24,520
5	Bi-Monthly Sewer Fixed Charge per Equivalent Meter	\$ 66.81

**Sewer Fixed Charge - By Meter Size**

	Meter Size	Meter Equivalency	Monthly Sewer Fixed Charge
1	0.625	1.00	\$ 66.81
2	1	1.67	\$ 111.60
3	1.5	3.33	\$ 222.27
4	2	5.33	\$ 355.86
5	3	11.66	\$ 779.19
6	4	16.66	\$ 1,112.89
7	6	50.00	\$ 3,340.74
8	8	80.00	\$ 5,345.18
9	10	145.00	\$ 9,688.15

Sewer
I

Class -->

ALL

**Calculation of Equivalent Meters / Units - Inside**

Meter Size	Billing Basis-->	Bills	Total	Bills	Equiv. Factor	Inside / Outside Factor	Equivalent Meters
0.625		19,644	19,644	19,644	1.00	1.00	19,644
1		54	54	54	1.67	1.00	90
1.5		498	498	498	3.33	1.00	1,657
2		366	366	366	5.33	1.00	1,949
3		84	84	84	11.66	1.00	980
4		12	12	12	16.66	1.00	200
6		-	-	-	50.00	1.00	-
8		-	-	-	80.00	1.00	-
10		-	-	-	145.00	1.00	-
Total		20,658	20,658	20,658			24,520



Development of Proposed FY 2020 Rates

<b>Cost of Service</b>					<b>\$3,120,525</b>		
Service Charge, \$ per Bill	Rate	Bills	Revenue		<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
0.625	\$ 66.81	19,644	\$1,312,416		70.15	73.31	76.61
1.00	111.60	54	6,027		117.18	122.46	127.97
1.50	222.27	498	110,689		233.38	243.88	254.86
2.00	355.86	366	130,243		373.65	390.46	408.03
3.00	779.19	84	65,452		818.15	854.97	893.44
4.00	1,112.89	12	13,355		1,168.53	1,221.11	1,276.06
Total Service Charge Revenue				\$1,638,181			
Flow Charge Revenue to be Recovered				\$1,482,344			
Block	% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue		
All Flows	100.0%	220,332	1.00	\$6.73	\$1,482,344	7.06	7.38 7.71
<b>Total</b>	<b>100%</b>	<b>220,332</b>			<b>\$1,482,344</b>		
<b>Annual Surplus/(Deficiency)</b>					<b>\$0</b>		



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