

Final Report



City of Solvang Comprehensive Water Rate Study June 2022





June 15, 2022

Ms. Xenia Bradford
City Manager
City of Solvang
1644 Oak Street
Solvang, California 93463

Subject: Water Rate Study Final Report

Dear Ms. Bradford:

HDR Engineering, Inc. (HDR) is pleased to present to the City of Solvang (City) the final report for the City's comprehensive water rate study (Study). The City's water rate study was developed using industry standard methodologies and approaches for water utilities. The technical analyses conducted as part of the Study for the City includes a revenue requirement, cost of service, and rate design analysis. The findings and conclusions from these analyses were used to develop proposed water rates that are proportional to the City's customers and intended to be sufficient to fund the operating and capital needs of the water utility. This report outlines the overall approach used to achieve these objectives, along with our findings, conclusions, and recommendations.

The City owns and operates a water supply, treatment, transmission, and distribution system. The costs associated with providing water service to the City's customers has been developed based on the information provided by the City and incorporated into and within the development of the proposed water rates. The water rate study provides the basis for developing and implementing water rates which are cost-based, proportional, and defensible for the City's customers.

We appreciate the assistance provided by the City's management team in the development of this water rate study. More importantly, HDR appreciates the opportunity to provide these technical and professional services to the City.

Sincerely yours,
HDR Engineering, Inc.

Shawn Koorn
Associate Vice President

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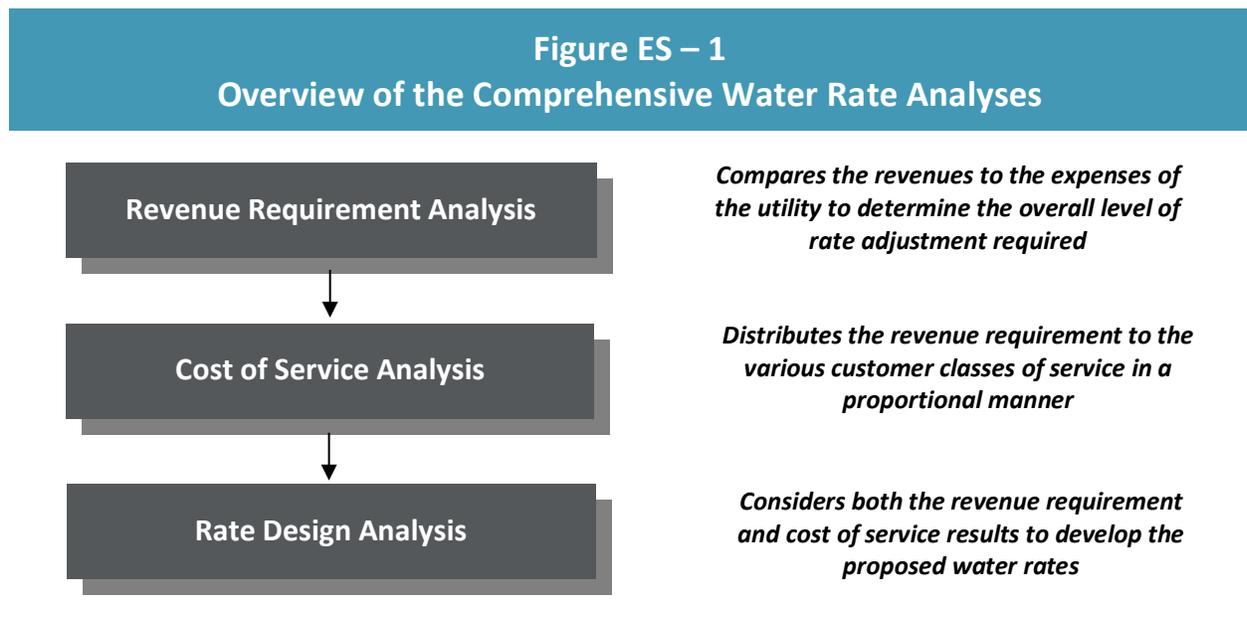
Introduction

HDR was retained by the City of Solvang (City) to conduct a comprehensive water rate study (Study). The objective of the Study was to review the City’s water utility operating and capital costs in order to develop proposed water rates which are proportional to the City’s various customers. The Study determined the adequacy of the existing water rates and provides the framework for cost-based and proportional proposed water rates.

The City owns and operates a water transmission and distribution system as well as production and treatment of water. The costs associated with providing water supply, plus the costs of distributing water to customers served by the system has been developed based on City provided information and included within the development of the proposed water rates.

Overview of the Rate Study Process

A comprehensive water rate study uses three interrelated analyses to address the adequacy and proportionality of a utility’s rates. These three analyses are a revenue requirement analysis, a cost of service analysis, and a rate design analysis. These three analyses are illustrated below in Figure ES - 1.



The above framework for reviewing and evaluating the City’s water rates was utilized in the development of the comprehensive water rate study.

Key Water Rate Study Results

The technical analysis for the City's water rate study was developed based on the operating and capital infrastructure costs necessary to provide water service to the City's customers. The City's comprehensive water rate study resulted in the following key findings, conclusions, and recommendations:

- A revenue requirement analysis was developed for the projected period of 2021-22 through 2031-32
- The focus of the Study was on the next five year period of 2022-23 through 2026-27 for the proposed rates
- The City's 2021-22 budget was used as the starting point of the analysis
- Operation and maintenance expenses are projected to increase at inflationary levels
 - ✓ Additional staffing was assumed in 2022-23
 - ✓ Repair and maintenance expenses were increased in 2022-23 to reflect recent increases in expenses
- Projected customer consumption levels have been adjusted based on recent data
 - ✓ Consumption is projected to decrease in 2022-23 by 1.7% in total, then remains flat for the remaining projected time period
- The proposed annual water rate (revenue) adjustments are 5.5% annually from 2022-23 through 2026-27
- A cost of service analysis was developed to proportionally distribute the revenue requirement between the City's customer classes of service (i.e., rate schedules)
- The results of the cost of service analysis provided average unit costs (i.e., cost-based rates) which were used to establish the final proposed water rates
- The Study has proposed proportional and cost-based water rates for the five year time period of 2022-23 through 2026-27, by customer class of service (rate schedules)

Summary of the Water Revenue Requirement Analysis

A revenue requirement analysis is the first analytical step in the development of the water rate study. This analysis determines the overall adequacy of the City's current water rate revenues. From this analysis, a determination can be made as to the overall level of water rate revenue adjustments needed to provide adequate and prudent funding for both operating and capital infrastructure needs.

For this study, the revenue requirement was developed for the ten year period of 2021-22 to 2031-32. For purposes of establishing proposed rates and the Proposition 218 process, the rate setting period was identified as 2022-23 through 2026-27. Reviewing a multi-year time frame is recommended to better anticipate future financial requirements and allow the City to begin planning for these impacts sooner, thereby minimizing short-term rate impacts and overall long-term rates. The revenue requirement analysis was developed on a "cash basis" methodology (i.e., approach). The cash basis approach is the most commonly used methodology by municipal utilities to set their revenue requirement and it includes the cost components of annual O&M

expenses, annual debt service payments, capital projects funded from rates (rate funded capital), and reserve funding. The primary financial inputs in the development of the City’s water revenue requirement analysis were the City’s 2021-22 budget, billed customer and consumption data, and the current water capital improvement plan. In addition to the O&M budget, changes and additions to budgetary levels were made to reflect known changes that will occur in the future. For example, in 2022-23 the repairs and maintenance budget is increased from \$80,000 to \$160,000 to reflect increases in costs being experienced by the water utility. In addition, new (additional) staff is assumed in 2022-23 at an initial annual cost of \$104,000.

Once the operating and maintenance (O&M) expenses have been projected over the ten year period, the next step is to develop the capital improvement funding plan. The proper and adequate funding of capital projects is important to maintain the City’s existing water infrastructure and service levels. At the same time, it is important to create a funding plan which maximizes the amount of funds available yet minimizes rates over time by using an appropriate blend of long-term borrowing and rate funding. A general financial guideline states that, at a minimum, a utility should fund from user rates an amount equal to or greater than the utility’s annual depreciation expense. However, this level of funding is typically not sufficient to fund all planned capital projects, but rather, is intended to provide a consistent annual funding source for maintaining and replacing the City’s existing infrastructure. Using annual depreciation expense as a financial guideline, the City’s annual water utility depreciation expense was approximately \$359,064 in 2019-20. Within the City’s proposed capital funding plan, the City is projected to annually fund \$800,00 in 2022-23 increasing to \$1.0 million by 2031-32 and averages \$863,000 per year. It is assumed that in addition to the rate funded capital improvements, the City will also need to utilize other funding sources (i.e., long-term debt, reserves), in order to fully fund the utility’s planned capital projects over this time period. Provided below in Table ES - 1 is a summary of the capital improvement funding plan over the five-year rate setting period (2022-23 through 2026-27).

Table ES – 1 Summary of the Capital Improvement Plan (\$000)						
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Total Capital Projects	\$646	\$1,017	\$1,247	\$3,634	\$3,205	\$3,552
<i>Less: Other Funding</i>	\$646	\$217	\$447	\$2,834	\$2,405	\$2,752
Total Rate Funded Capital	\$0	\$800	\$800	\$800	\$800	\$800

As can be seen, the difference between annual capital improvement needs and rate funded capital is being funded through other funding sources. The City’s capital plan reflects the capital projects needed to maintain the existing system, repair or replace deteriorating infrastructure, and projects related to growth or redundancy. A more detailed discussion of the development of the capital improvement funding plan is provided in Section 3. The detailed capital improvement plan can be found on Exhibit 4 of the Technical Appendix.

The revenue requirement analysis for the City’s customers was developed to determine the rate projections based on the specific costs of the City’s water utility. Provided below, in Table ES – 2, is a summary of the revenue requirement analysis (financial plan) developed for the water utility. A more detailed analysis of the revenue requirements can be found in Section 3 of this report as well as in the Technical Appendix in Exhibit 3.

Table ES - 2						
Summary of the Revenue Requirement Analysis (\$000)						
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Revenues						
Rate Revenues	\$4,970	\$4,950	\$4,966	\$4,981	\$4,997	\$5,012
Misc. Revenues	<u>58</u>	<u>80</u>	<u>84</u>	<u>87</u>	<u>83</u>	<u>78</u>
Total Revenues	\$5,028	\$5,030	\$5,050	\$5,068	\$5,080	\$5,090
Expenses						
O & M	\$5,089	\$4,338	\$4,565	\$4,804	\$5,132	\$5,404
Net Debt Service	0	0	0	162	315	469
Rate Funded Capital	0	800	800	800	800	800
Reserve Funding	<u>(61)</u>	<u>164</u>	<u>247</u>	<u>170</u>	<u>26</u>	<u>(44)</u>
Total Expenses	\$5,028	\$5,302	\$5,611	\$5,936	\$6,273	\$6,629
Bal./ (Def.) of Funds	\$0	(\$272)	(\$561)	(\$868)	(\$1,193)	(\$1,539)
<i>Bal. as a % of Rate Rev.</i>	0.0%	5.5%	11.3%	17.4%	23.9%	30.7%
Proposed Rate Adj.	0.0%	5.5%	5.5%	5.5%	5.5%	5.5%
Add'l Rev. from Rate Adj.	\$0	\$272	\$561	\$868	\$1,193	\$1,539
Total Bal./ (Def.) of Funds	0	0	0	0	0	0

As can be seen, the revenue requirement analysis has summed O&M, net debt service (debt service less funding through connection fees), rate funded capital, and reserve funding. The total revenue requirement (i.e., expenses) are then compared to the total revenues of the City’s water utility. Total revenues are comprised of rate revenues (at present rate levels), and other miscellaneous revenues. From this comparison, a balance (+) or deficiency (-) of funds in each year can be determined. This balance or deficiency of funds is then compared to the rate revenues to determine the percentage level of rate revenue adjustment necessary to meet the revenue requirement as developed in each year of the projected time period. It is important to note, the “Bal. / (Def.) of Funds” row is cumulative. Any adjustments in the initial years will reduce the deficiency in the later years. Over this projected five-year period, and assuming no rate adjustments in the prior years, the total deficiency of rates by 2026-27 is 30.7%. To meet the overall revenue needs of the five-year rate period, annual rate adjustments have been proposed (see blue band). The proposed rate adjustments are 5.5% annually in 2022-23 through 2026-27.

The above proposed annual rate adjustments, on a cumulative basis, meet the overall need for a 30.7% rate revenue adjustment over the period reviewed. Based on the revenue requirement analysis developed, HDR has concluded that the City will need to adjust the level of water rate

revenues as noted above to fund their projected operating and capital infrastructure needs and maintain cost-based rates. HDR has reached this conclusion for the following reasons:

- The revenue requirement analysis indicates an overall deficiency in rate revenues of 30.7% by 2026-27
- Given the projected revenue deficiencies, rate adjustments are necessary to fully fund the City's projected operating costs and fund the proposed capital improvement plan
- The proposed rate revenue adjustments maintain the City's financial health and integrity by providing consistent, long-term, and sustainable funding levels
- Prior to the implementation of the fifth (2026-27), and final proposed water rate adjustment, the City should complete a comprehensive review of the water rates

In reaching this conclusion, HDR would recommend that the City adopt the proposed rate revenue adjustments from 2022-23 to 2026-27 to provide sufficient funding for the projected operating and capital needs of the water utility. A detailed discussion of the development of the revenue requirement analysis can be found in Section 3. Technical exhibits of the revenue requirement analysis have been included within the Technical Appendix in Exhibits 1 - 7.

Summary of the Water Cost of Service Analysis

A cost of service analysis determines the proportional distribution of the revenue requirement to the City's water customer classes of service. The objective of the cost of service analysis is different from determining the revenue requirement analysis. A revenue requirement analysis determines the utility's overall financial needs whereas the cost of service analysis determines the proportional manner to collect the revenue requirement from each customer class of service. The cost of service analysis developed as a part of this Study utilized generally accepted cost of service principles and industry standard methodologies as defined by the American Water Works Association (AWWA) to meet the requirements of Proposition 218.

In summary form, the cost of service analysis began by functionalizing the City's revenue requirement. The functionalized revenue requirement was then allocated to the various cost components (e.g., commodity-related, capacity-related, customer-related, fire protection-related, etc.). The individual allocation totals were then proportionally distributed to the water customer classes of service (e.g., rate schedules) based on distribution factors. The distributed expenses for each customer class were then aggregated to determine each customer class's overall revenue responsibility. Table ES - 3 provides the summary of the cost of service analysis for the 2022-23 test year.

Table ES - 3
Summary of the Cost of Service Analysis (\$000)

Class of Service	Present Revenues (2022-23)	Distributed Costs	\$ Difference	% Difference
Single Family	\$2,741	\$2,946	(\$204)	7.4%
Multi-Family	726	745	(19)	2.6%
Commercial	920	922	(2)	0.2%
Irrigation	<u>562</u>	<u>610</u>	<u>(48)</u>	8.5%
Total	\$4,950	\$5,222	(\$272)	5.5%

The cost of service analysis distributes a proportional share of the revenue requirement to each customer class of service based on their respective usage characteristics (e.g., volumetric use, peak use, customer, etc.) on the water system and the facilities required to provide service. The results of the analysis indicate that minor cost differences exist between the various customer classes of service. It is important to understand that a cost of service analysis is based on a review of a specific point in time and that costs and customer usage characteristics changes over time, thus impacting the results.

The City’s cost of service analysis and resulting proposed water rates have been developed to meet the legal requirements of California constitution article XIII D, section 6 (Article XIII D), also known as Proposition 218. A major component of Article XIII D is the development of rates which reflect the cost of providing service and proportionally distribute costs among the various customer classes of service. A key outcome of the cost of service analysis are the cost-based average unit costs (e.g., \$/customer/month or \$/hundred cubic feet [CCF]). Average unit costs from the cost of service analysis provide the cost-basis for the development of the City’s proposed water rates based on the cost of service results. Provided below in Table ES - 4 is a summary of the average unit costs derived in the cost of service analysis that were used to develop the City’s proposed water rate designs by customer class (e.g., rate schedule).

Table ES – 4
Summary of the Average Unit Costs

	Single Family	Multi-Family	Commercial	Irrigation
Fixed - \$ / mtr / mo	\$75.08	\$75.08	\$75.08	\$75.08
Variable - \$/CCF				
Tier 1	\$4.08	N/A	N/A	N/A
Tier 2	4.62	N/A	N/A	N/A
Tier 3	5.35	N/A	N/A	N/A
All Use	N/A	\$4.13	\$4.14	\$4.45

Section 4 of this report provides a detailed discussion of the cost of service analysis conducted for the City’s water utility and the development of the average unit costs shown in Table ES – 4. The Technical Appendix to this report contains additional details associated with the cost of service analysis calculation and can be found on Exhibits 8 - 18.

Summary of the Water Rate Design

The final step of the comprehensive water rate study process is the design of the City’s proposed water rates to collect the required level of revenue, based on the results of the revenue requirement and cost of service analyses. The revenue requirement analysis provided a set of recommendations related to the level of annual rate revenue adjustments, or the level of total rate revenues necessary to provide sufficient funding. The cost of service analysis provided the basis for how those costs should be proportionally collected from each of the customer classes of service (e.g., rate schedules).

As discussed above, the City’s proposed water rates have been developed with the intent of meeting the legal requirements of California constitution article XIII D, section 6 (Article XIII D),. While Article XIII D requires the development of cost-based rates, it does not prescribe a specific approach or methodology to assure meeting this legal requirement. At the same time, HDR would point out that there is no single methodology for equitably assigning costs to the various customer groups. Consequently, HDR has developed this report, along with the City’s proposed water rates, based on the principles and methodologies contained in the AWWA M1 manual, while also tailoring the methodology to be reflective of the City’s specific and unique system and customer characteristics, and requirements of Proposition 218. HDR is of the opinion this approach meets the requirements of Article XIII D, and recent legal decisions, to provide an administrative record of the steps taken to establish the City’s water rates. HDR reaches this conclusion based upon the following:

- **The revenue derived from water rates does not exceed the funds required to provide the property related service (i.e., water service).** The proposed water rates are designed to collect the overall revenue requirement of the City’s water utility.
- **The revenues derived from water rates shall not be used for any purpose other than that for which the fee or charge is imposed.** The revenues derived from the City’s water rates are used exclusively to operate and maintain the City’s water system.
- **The amount of a fee or charge imposed upon a parcel or person as an incident of property ownership shall not exceed the proportional costs of the service attributable to the parcel.** Section 4 of this study, the cost of service analysis, focuses almost exclusively on the issue of the proportional assignment of costs to each customer class of service. The proposed rates have appropriately grouped customers into customer classes of service (single family, multi-family, commercial, irrigation) that reflect the varying consumption patterns and system requirements of each customer class of service. The grouping of customers and rates into these classes of service creates the proportionality required under Article XIII D by having differing rates by customer classes of service which reflect both the level of revenue to be collected by the utility, but also the manner in which these costs are incurred and

proportionally distributed to the customer classes of service based upon their proportional impacts and burdens on City's the water system and water resources.

Given the requirements to develop rates based on cost of service principles, the average unit costs in Table ES – 4 were used to design the proposed water rates for the City's customer classes of service.

The City currently has two customer classes of service: Single-Family Residential and All Other Users. The present single-family rate structure includes a fixed monthly meter charge which varies by meter size, and a two-tier increasing block consumption charge. The first tier is usage from 0 to 16 CCF¹ per month. All consumption over the first tier (i.e., > 16 CCF) is charged at a higher rate which reflects the increased costs associated with providing the additional capacity needed during peak use periods. As part of this study, the tier sizes (e.g., amount of consumption in each tier) and single family consumption characteristics were reviewed. Based on single-family customer characteristics, it is proposed that the number of tiers be increased to three tiers; 0 – 15 CCF; 15 CCF – 35 CCF; and all usage over 35 CCF. This change in the tiers and tier sizes is proposed to reflect current single-family consumption patterns. Section 5 of this report provides a more detailed discussion of the single family consumption analysis.

Currently, multi-family, non-residential, and irrigation customer groups utilize the same rate structure and rates. These customer classes have the same fixed monthly meter charge which varies by meter size. Unlike the single-family rate schedule which uses pricing tiers, the consumption charge for these non-single family residential customers are billed for all metered water use at a uniform rate. In discussion with City staff, and based on the cost of service analysis, it was determined that a separate consumption charge would be proposed for each customer class which will more closely represent the system demands of each particular customer class of service. The proposed rates for all customer classes are based on the results of the average unit costs shown in Table ES - 4. Provided below in Table ES - 5 is a summary of the present and proposed water rates for the five-year rate setting period.

¹ A hundred cubic feet of water, or a CCF of water, is equal to 748 gallons of water

Table ES - 5
Summary of the Present and Proposed Water Rates

	Present Rate	2022-23	2023-24	2024-25	2025-26	2026-27
Fixed Charge	\$/Meter/ Mo					
5/8"	\$75.43	\$75.08	\$79.21	\$83.57	\$88.17	\$93.02
3/4"	113.15	112.62	118.81	125.34	132.23	139.50
1"	188.58	187.70	198.02	208.91	220.40	232.52
1 1/2"	377.17	375.42	396.07	417.85	440.83	465.08
2"	603.47	600.67	633.71	668.56	705.33	744.12
3"	1,206.94	1,201.34	1,267.41	1,337.12	1,410.66	1,488.25
4"	1,885.84	1,877.09	1,980.33	2,089.25	2,204.16	2,325.39
6"	3,771.68	3,754.18	3,960.66	4,178.50	4,408.32	4,650.78
8"	6,034.69	6,006.69	6,337.06	6,685.60	7,053.31	7,441.24
Consumption Charge	\$/ CCF					
<i>Single Family</i>						
0 – 16 CCF	\$3.45	--	--	--	--	--
16 CCF +	4.05	--	--	--	--	--
0 – 15 CCF	--	\$4.08	\$4.30	\$4.54	\$4.79	\$5.05
15 – 35 CCF	--	4.62	4.87	5.14	5.42	5.72
35 CCF +	--	5.35	5.64	5.95	6.28	6.63
<i>Multi-Family</i>	\$3.75	\$4.13	\$4.36	\$4.60	\$4.85	\$5.12
<i>Non-Residential</i>	\$3.75	\$4.14	\$4.37	\$4.61	\$4.86	\$5.13
<i>Irrigation</i>	\$3.75	\$4.45	\$4.69	\$4.95	\$5.22	\$5.51

As can be seen, the proposed water rates contain minor rate structure changes. In addition, each customer class has a specific rate based on the results of the cost of service analysis. As noted, the cost of service average unit costs is the basis for both the fixed monthly meter charges and consumption charges. In this way, the proposed rates reflect the results of the revenue requirement analysis (overall system revenue needs) and cost of service analysis (proportional distribution / average unit costs).

Section 5 of this report provides a detailed discussion of the current and proposed water rates along with a component by component summary of the proposed water rates for 2022-23 through 2026-27.

Water Rate Study Recommendations

Based on the results of the water rate study, HDR recommends the following:

- Rate revenue adjustments are necessary to prudently fund operating expenses and necessary capital investment in renewal and replacement of the existing system

- Water rate revenues should be adjusted 5.5% annually in 2022-23 through 2026-27
- The City's proposed water rates reflect the results of the cost of service analysis. The average unit costs derived from the cost of service analysis, and the basis for the City's proposed water rates, reflect the proportional distribution of costs to the customer classes of service
- Prior to the implementation of the fifth, and final, proposed set of rate adjustments the City should complete an update to the water rate study

Summary of the Water Rate Study

This completes the summary discussion of the development of the comprehensive rate study conducted for the City's water utility. The focus of this study has been the prudent and adequate funding of the annual water utility operation and maintenance expenses and capital funding needs. Furthermore, to meet the requirements of Proposition 218, the proposed water rates were developed based on the proportional distribution of costs through the cost of service analysis. The results of the water rate study were presented to the City Council in March 2022 and a public hearing held on June 13, 2022. At the completion of the public hearing the City Council approved the rate study and projection of rates for the five year period as outlined in this report. A full and complete discussion of the development of the City's comprehensive water rate study can be found in following sections of this report.

1 Introduction and Overview

HDR Engineering, Inc. (HDR) was retained by the City of Solvang (City) to conduct a comprehensive water rate study. The objective of a comprehensive water rate study is to develop proportional and cost-based water rates which are compliant with the requirements of Proposition 218. This is accomplished by first reviewing and analyzing the City’s water operating and capital costs and developing a projection of the overall revenue requirement of the water utility. Next, the City’s revenue requirement is proportionally distributed to the City’s customer classes of service (e.g., single, multi-family, commercial, irrigation). The findings and conclusions from the cost of service analysis are then used to develop the City’s proposed water rates which are reflective of how the City incurs costs to provide the water service to each class of service. The result of the comprehensive water rate study process is proportional water rates reflective of the water utility specific costs (i.e., cost-based rates).

The City owns and operates a water supply, treatment, transmission, and distribution system. The determination of the total costs associated with providing water supply, treatment, transmission, and distribution of water to the City’s customers has been developed based on the City’s accounting, operating, and customer billing records along with other relevant information.

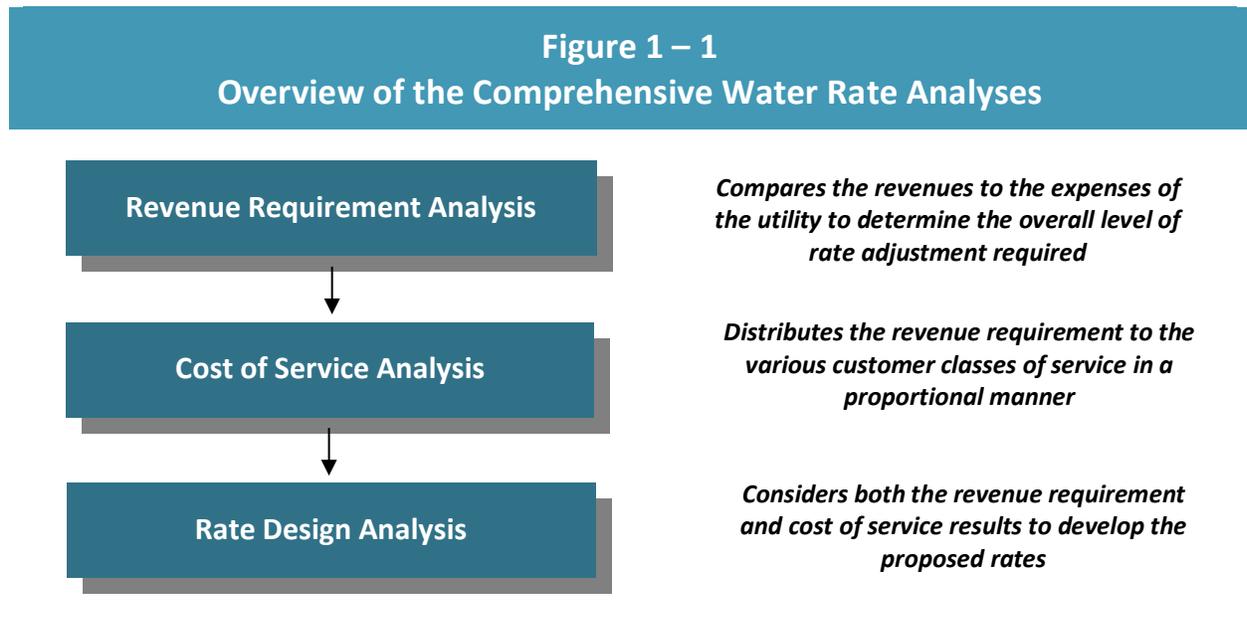
1.1 Goals and Objectives

The City had several key objectives in developing the water rate study. These key goals and objectives provide a framework for the technical analysis and policy decisions that are a part of this study. The City’s key goals and objectives for this study were as follows:

- Develop the study in a manner consistent with the principles and methodologies established by the American Water Works Association (AWWA), M1 Manual, Principles of Water Rates, Fees, and Charges to meet the requirement of Proposition 218
- In financial planning and establishing the City’s proposed rates, review and utilize best industry practices, while recognizing and acknowledging the specific and unique characteristics of the City’s system and customers
- Utilizing generally accepted rate making methodologies review the City’s costs to determine the adequacy and equity of the water utility’s rates
- Meet the City’s financial planning criteria as it relates to legally required debt service coverage (DSC) ratios, adequate funding of capital infrastructure, and maintenance of adequate and prudent reserve levels
- Develop a final proposed rate transition plan which adequately supports the utility’s funding requirements, while attempting to minimize overall impacts to rates
- Provide proposed water rates designed to meet the intent and legal requirements of California Constitution article XIII D, section 6 (commonly referred to as Proposition 218)

1.2 Overview of the Rate Study Process

The City’s water rates must be set at a level where the operating and capital expenses are met with the revenues received from customers. This is an important point, as failure to achieve this objective may lead to insufficient funds to maintain system integrity. To evaluate the adequacy of a utility’s existing rates, a comprehensive water rate study is often performed. A comprehensive water rate study consists of three interrelated analyses. Figure 1 - 1 below provides an overview of these analyses.



The above framework was utilized for reviewing and evaluating the City’s water rates.

1.3 Organization of the Study

This report is organized in a sequential manner that first provides an overview of utility rate setting principles, followed by sections that detail the specific technical and analytical steps used to develop the City’s proposed water rates. The following sections comprise the City’s water rate study report:

- **Section 2** – Overview of Water Rate Setting Principles
- **Section 3** – Revenue Requirement Analysis
- **Section 4** – Cost of Service Analysis
- **Section 5** – Rate Design Analysis

A Technical Appendix is attached at the end of this report, which details the various technical analyses that were undertaken in the preparation of the City’s water study.

1.4 Summary

This report will review and discuss the water rate analyses prepared for the City. This report has been prepared utilizing generally accepted water rate setting methodologies and techniques to meet the requirements of Proposition 218.

2 Overview of Water Rate Setting Principles

This section of the report provides background information about the water rate setting process, including descriptions of generally accepted principles, types of utilities, and the methodologies used to develop the revenue requirement, cost of service, and rate design analyses. This information is useful for gaining a better understanding of the details presented in Sections 3 through 5 of this report. The use of these principles and methodologies lead to cost-based and equitable water rates for the City’s water customers.

2.1 Generally Accepted Rate Setting Principles

As a practical matter, all utilities should consider setting their rates around some generally accepted or global principles and guidelines. That is, utility rates should be:

- Cost-based, proportional, and set at a level that meets the utility’s full revenue requirement
- Easy to understand and administer
- Designed to conform to generally accepted rate setting techniques and requirements of Proposition 218
- Stable in their ability to provide adequate revenues for meeting the utility’s financial, operating, and regulatory requirements
- Established at a level that is stable from year-to-year from a customer’s perspective

2.2 Determining the Revenue Requirement

Most public utilities use the “cash basis”² approach, or methodology, for establishing their revenue requirement and setting rates. This approach conforms to most public utility budgetary requirements and the calculation is easy to understand. A public utility totals its cash expenditures for a period to determine required revenues. The revenue requirement for a public utility is usually comprised of the following cost components or expenses:

- **Total Operating Expenses:** This includes a utility’s operation and maintenance (O&M) expenses, plus any applicable taxes or transfer payments. Operation and maintenance expenses include the materials, electricity, labor, supplies, etc., needed to keep the utility functioning.
- **Total Capital Expenses:** Capital expenses are calculated by adding annual debt service payments (principal and interest) to capital improvements financed with rate revenues. In lieu of including capital improvements financed with rate revenues, a utility sometimes includes annual depreciation expense to stabilize the annual revenue requirement.

² “Cash basis” as used in the context of rate setting is not the same as the terminology used for accounting purposes and recognition of revenues and expenses. As used for rate setting, “cash basis” simply refers to the specific cost components to be included within the revenue requirement analysis.

Under the cash basis approach, the sum of the total operating expenses plus the total capital expenses equals the utility’s revenue requirement during any selected time period (historical or projected).

Note that the two portions of the capital expense component (debt service and capital improvements funded from rate revenues) are necessary under the cash basis approach because utilities generally cannot finance all their capital facilities with long-term debt. At the same time, it is often difficult to pay for all capital expenditures on a “pay-as-you-go” basis given that some major capital projects may have significant rate impacts upon the utility, even when financed with long-term debt. Many utilities have found that a combination of “pay-as-you-go” funding and long-term debt financing will often lead to minimization of rate increases over time.

As noted, public utilities typically use the cash basis methodology or approach to establish their revenue requirements. An exception may occur if a public utility provides service to a wholesale or large contract customer. In this situation, a public utility could use the “utility basis” approach (see Table 2 - 1) to earn a “fair” rate of return on the investment needed to serve the wholesale or large contract customer.

Table 2 – 1 Cash versus Utility Basis Comparison			
Cash Basis		Utility Basis (Accrual)	
+	O&M Expenses	+	O&M Expenses
+	Taxes/Transfer Payments	+	Taxes/Transfer Payments
+	Capital Improv. Funded From Rates (≥ Depreciation Expense)	+	Depreciation Expense
+	<u>Debt Service (Principal + Interest)</u>	+	<u>Return on Investment</u>
=	Total Revenue Requirement	=	Total Revenue Requirement

2.3 Analyzing Cost of Service

After the total revenue requirement is determined, it is proportionally distributed to the users of the service. The allocation and distribution process, as analyzed through a cost of service analysis, reflects the cost relationships for producing and delivering water services. A cost of service analysis requires three analytical steps:

1. Costs are **functionalized**, or grouped, into the various cost categories related to providing service (supply, treatment, distribution, pumping, etc.). This step is largely accomplished by the utility’s accounting system.
2. The functionalized costs are then **allocated** to specific cost components. Allocation refers to the arrangement of the functionalized data into cost components. For example, a water utility’s costs – such as for the City - are typically allocated as commodity (average day), capacity (peak day), customer or fire-protection-related costs.

3. Once the total costs are allocated into the cost components, they are proportionally ***distributed*** to each of the customer classes of service (e.g., single family, multi-family, commercial, irrigation) or rate schedule. The proportional distribution is based on each customer class's relative contribution to the cost component (i.e., benefits received from, and burdens placed on the system and its resources). For example, customer-related costs are proportionally distributed to each class of service based on the total number of customers in that class of service, relative to all other customer classes of service. Once the total costs (i.e., revenue requirement) are proportionally distributed, the level or amount of revenues required from each customer class of service to achieve cost-based rates can be determined.

The City's cost of service analysis was developed based on generally accepted water cost of service methodologies and approaches, while at the same time, tailoring the analysis to take into consideration and reflect the City's unique customer and system characteristics. The water cost of service analysis developed for the City is discussed in more detail in Section 4 of this report.

2.4 Designing Water Rates

Water rates that meet the utility's cost-based and proportional objectives are designed based upon the findings and conclusions from the revenue requirement and cost of service analyses. Using the cost information from these two analyses provides rates that are strictly cost-based and proportional. The average unit costs (i.e., cost-based rates) from the cost of service analysis does not consider, or take into account, other non-cost based goals and objectives (e.g., conservation, economic development, ability to pay, revenue stability). In designing water rates, many utilities consider or incorporate other rate design objectives such as ability to pay, continuity of past rate philosophy, economic development, ease of administration, and customer understanding into their final water rate designs. However, unlike other water utilities, the City's proposed water rates must comply with the requirements of Proposition 218. They must take into consideration each customer class's proportional share of costs distributed through the cost of service analysis to meet the requirements of Proposition 218. The development of the City's proposed water rate designs is discussed in more detail in Section 5 of this report.

2.5 Economic Theory and Rate Setting

One of the major justifications for a comprehensive rate study is founded in economic theory. Economic theory suggests that the price of a commodity must roughly equal its cost if equity among customers is to be maintained. This statement's implications on utility rate designs are significant. For example, a water utility usually incurs capacity-related costs to meet summer outdoor or non-domestic watering needs. It is presumed, then, that the customers who create excessive peak demands on the system - and create the need for upsizing of the water system infrastructure - should pay their proportional share of the costs related to the over-sizing of facilities to meet peak use requirements. When costing and pricing techniques are refined, consumers have a more accurate understanding of what the commodity costs to produce and deliver. This price-equals-cost concept provides the basis for the subsequent analysis and comments. This basic pricing technique has been incorporated and used within this study.

2.6 Summary

This section of the report has provided a brief introduction to the general principles, techniques, and economic theory used to set water rates. These principles and techniques provide the theoretical and technical basis for the analysis used to develop the City's water rate study.

3 Development of the Revenue Requirement

The development of the revenue requirement analysis is the first analytical step in the three-step comprehensive water rate study process. This section of the report describes the development of the revenue requirement analysis for the City’s water utility. The City provided HDR with detailed revenue, expense, and customer data for the water system that allowed for the development of the revenue requirement analysis.

The revenue requirement analysis, as developed for the City’s water utility, determines the adequacy of water rates at current rate levels. From this analysis, a determination can be made as to the overall level of rate revenue adjustment needed to provide adequate and prudent funding for both operating and capital expenses. HDR has developed an independent analysis based on the data and information provided by the City.

3.1 Determining the Revenue Requirement

In developing the City’s water revenue requirement, the water utility, as an enterprise fund, must financially “stand on its own” and be properly funded. That is, no transfers from other City of Solvang funds or enterprise funds occur to support the water utility. As a result, the revenue requirement analysis assumes the full and proper funding needed to operate and maintain the City’s water system on a financially sound and prudent basis.

3.2 Establishing a Time Frame and Approach

The first step in developing the revenue requirement for the City’s water utility was to establish a time frame for the revenue requirement analysis. For this study, the revenue requirement was developed for a ten-year period (2021-22 through 2031-32). This time frame was composed of the 2021-22 budget which was then escalated and projected through 2031-32 based on inflationary assumptions. In addition to the budget, several items were updated or added for 2022-23 based on the City’s current projections. While the revenue requirement was developed for a ten-year period, the focus for rate setting purposes was the immediate five-year period of 2022-23 through 2026-27. Reviewing a multi-year time period is always recommended in order to aide in identifying any major financial impacts that may be on the horizon. By anticipating future financial requirements sooner, the City can begin planning for these changes, thereby minimizing short-term rate impacts and likely overall long-term rate levels.

The second step in determining the revenue requirement was to decide on a method to accumulate water costs. In this case, a cash basis revenue requirement was utilized. As noted in Section 2, the cash basis approach is the most common methodology used by municipal utilities to establish their revenue requirement. Table 3 - 1 provides a summary of the “cash basis” approach and details the cost components used to develop the City’s water revenue requirement.

Table 3 – 1 Overview of the City’s “Cash Basis” Revenue Requirements

+	Water Operation and Maintenance Expenses
+	Rate Funded Capital
+	Debt Service (Principal + Interest) – Existing and Future
<u>±</u>	<u>Reserve Funding</u>
=	Total Water Revenue Requirement
<u>-</u>	<u>Miscellaneous Revenues</u>
=	Net Revenue Requirement <i>(Balance Required from Water Rate Revenues)</i>

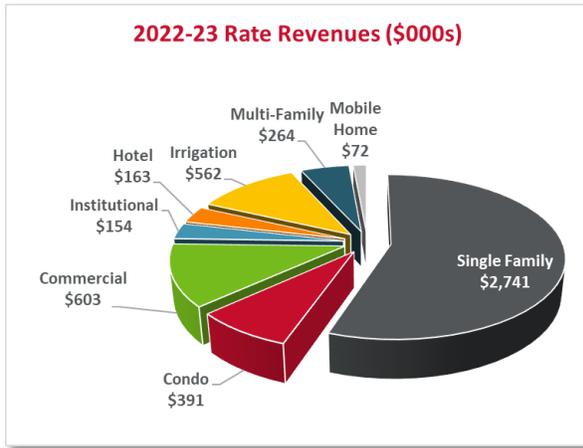
Given a time period around which to develop the revenue requirement and a method to accumulate the costs, the focus shifts to the development and projection of the revenues and expenses of the City.

The primary financial inputs in the development of the water revenue requirement were the City’s 2021-22 budget document, July 2020 through June 2021 customer and consumption data to develop a projection of customer billing data, and the current water capital improvement plan which was developed by the City. Presented below is a detailed discussion of the steps and key assumptions contained in the development of the City’s water revenue requirement analysis.

3.3 Projecting Rate and Other Miscellaneous Revenues

Once the method and time period for developing the revenue requirement was established, the next step is to develop a projection of the water rate revenues, at present rate levels. In general, this process involved developing projected billing units (i.e., meter size, metered consumption) for each customer group (e.g., single family, multi-family, commercial, irrigation) based on historical billing records as provided by the City. The billing units for each customer group were then multiplied by the current water rates for each customer group. This method of independently calculating revenues links the projected revenues used within the study to the projected billing units. It also helps to confirm that the billing units used within the analyses are reasonable for purposes of projecting future revenues, proportionally distributing costs, and developing the proposed water rates.

A key aspect of the projection of water rate revenues was to develop a projection of consumption levels. The consumption data from July 2020 through June 2021 was reviewed to develop a projection of customer consumption characteristics. Most the City’s water rate revenues are derived from the single family customer class which is approximately 55% of the total rate revenues. Including the other customer classes, and at current rate levels, the City is projected to receive approximately \$5.0 million in rate revenue in 2021-22. This Study has assumed a



conservative level of annual customer growth of 0.5%/year over the review period. In contrast to customer growth, consumptive use is assumed to decrease in 2022-23 for all customers and then to remain flat for the remaining projected time period. In 2026-27, the rate revenues, given assumed customer growth and at current rate levels, are projected to be approximately \$5.0 million.

In addition to water rate revenues, the water utility also receives miscellaneous revenues. There are various miscellaneous revenue sources which are related to fines and penalties, interest earnings, lease income, and other miscellaneous revenues. In total, the City is projected to receive approximately \$58,000 in miscellaneous revenues in 2021-22. This amount is projected to slightly increase over the projected five-year period and reach approximately \$78,000 by 2026-27.

On a combined basis, summing the water rate revenues at current rate levels and the miscellaneous revenues, the City's water utility has total projected revenues of approximately \$5.0 million in 2021-22, which is projected to increase to approximately \$5.1 million by 2026-27.

3.4 Projecting Operation and Maintenance Expenses

Operation and maintenance (O&M) expenses are incurred by the City to provide water service, that is the supply, treatment, transmission, and distribution of water. This includes the daily operation and maintenance of the existing infrastructure, as well as purchasing water. For the development of the revenue requirement, the City provided detailed historical and budgeted O&M expenses and capital improvement needs (discussed in Section 3.6) for the water utility. The budgeted 2021-22 O&M expenses were projected over the review period based on estimated annual inflationary (escalation) factors. These were developed based upon the recent experience of the City and the general economy, as well as known changes in City O&M. Shown below in Table 3 - 2 is a summary of the O&M escalation factors used to project the City's water O&M expenses within the revenue requirement analysis.

Table 3 – 2
Summary of the Escalation Factors

	2022-23	2023-24	2024-25	2025-26	2026-27
Labor	3.5%	3.5%	3.5%	3.5%	3.5%
Benefits - Medical	4.0%	4.0%	4.0%	4.0%	4.0%
Benefits - Other	3.5%	3.5%	3.5%	3.5%	3.5%
Prof. / Special Services	3.5%	3.5%	3.5%	3.5%	3.5%
Materials & Supplies	3.0%	3.0%	3.0%	3.0%	3.0%
Equipment	4.0%	4.0%	4.0%	4.0%	4.0%
Miscellaneous	2.5%	2.5%	2.5%	2.5%	2.5%
Utilities	4.0%	4.0%	4.0%	4.0%	4.0%
Insurance	3.0%	3.0%	3.0%	3.0%	3.0%
Flat	0.0%	0.0%	0.0%	0.0%	0.0%
Power	4.0%	4.0%	4.0%	4.0%	4.0%
Purchased Water	6.5%	6.5%	6.5%	6.5%	6.5%

The total 2021-22 O&M expenses for the City are budgeted at approximately \$5.1 million. For 2022-23, a number of changes were assumed for the O&M expenses. The repairs and maintenance line item was increased to \$160,000, the State Water Payments were decreased, and additional (i.e., new/incremental) staff is assumed at an initial annual cost of \$104,000/year. Over the planning horizon, the total O&M expenses for the City is projected to increase to approximately \$5.4 million by 2026-27, based on upon the estimated impacts of cost escalation (inflation) shown in Table 3 – 2 and the additional costs outlined above.

3.5 Projecting Capital Funding Needs and Transfer Payments

A key component in the development of the water revenue requirement was properly and adequately funding capital improvement needs related to the infrastructure of the City’s water system. One of the major issues facing utilities across the U.S. is the amount of deferred capital projects and the funding pressure from growth/expansion and regulatory-related improvements. The proper and adequate funding of capital projects is an important issue for all water utilities and is not just a local issue or concern of the City.

In general, there are three general types of capital projects that a utility may need to fund. These include the following types:

- **Renewal & Replacement** - A renewal and replacement project is essentially a project required for maintaining the existing system that is in place today. As the existing infrastructure becomes worn out, obsolete, etc., the utility should be making continuous (annual) investments to maintain the integrity of the facilities.
- **Growth / Capacity Expansion** - A utility may make capital investments to expand the capacity of facilities to accommodate future capacity needs (customers).
- **Regulatory-Related** - Another type of project may be a function of a regulatory (legal) requirement in which the Federal or State government mandates the need for an improvement to the system to meet a regulatory standard (e.g., water quality).

Understanding these different types of capital projects is important because it may aid in explaining any needed rate adjustments. As the need for capital investment increases, it often directly impacts needed rate revenue adjustments. In addition, and more importantly, the way in which projects are funded may vary by the type of capital project. For example, annual and on-going renewal and replacement projects may be paid for through rates and funded on a “pay-as-you-go” basis. In contrast to this, growth or capacity expansion projects may be funded through the collection of development or connection fees (i.e., growth-related charges) in which new development pays an equitable share of the cost of facilities necessary to serve their respective development (impact). Finally, regulatory projects may be funded by a variety of different means, which may include annual rate revenues, long-term borrowing, grants, etc.

While the above discussion appears to precisely divide capital projects into three clearly defined categories, the reality of working with specific capital projects may be more complex. For example, a water pipeline may be replaced, but while being replaced, it is up-sized to accommodate greater capacity to serve increasing demands or new development. There are many projects that share these “joint” characteristics. At the same time, projects may not be “replacement” related, but rather “improvement” related.

For purposes of developing the capital funding plan for the revenue requirement analysis, the City provided its long-term capital improvement plan (CIP) to HDR. The CIP provides a listing of long-term capital projects that address deficiencies and improvements needed on the water system.

Provided below in Table 3 - 3 is a summary of the capital funding plan based on the overall capital plan as developed by the City based on current needs. As noted, the focus of the City’s water rate study was on the next five-year period for rate setting purposes. The capital plan detail has been simplified to the main categories for ease of reading. Exhibit 4 in the Technical Appendix provides details of the individual capital projects and identified funding sources.

Table 3 – 3 Summary of the Capital Improvement Plan (\$000)						
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Capital Projects	\$646	\$1,017	\$1,247	\$3,634	\$3,205	\$3,552
To Capital Reserves	0	0	0	0	0	0
Future Unidentified Projects	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Capital Projects	\$646	\$1,017	\$1,247	\$3,634	\$3,205	\$3,552
Less: Outside Funding Sources						
Operating Fund	\$606	\$177	\$407	\$594	\$315	\$712
Capital Fund	40	40	40	40	40	40
New Revenue Bonds	<u>0</u>	<u>0</u>	<u>0</u>	<u>2,200</u>	<u>2,050</u>	<u>2,000</u>
Total Outside Funding Sources	\$646	\$217	\$447	\$2,834	\$2,405	\$2,752
Rate Funded Capital	\$0	\$800	\$800	\$800	\$800	\$800

As can be seen in Table 3 - 3, the total cost of the capital projects to be funded varies from year-to-year. While the total amount required to fund projects may vary from year-to-year, the rate study capital funding plan has attempted to provide a consistent funding source from rates for capital improvements. In this case, rates will annually fund, on average, \$800,000 per year (as highlighted in Table 3 - 3). As a point of reference, the City's annual depreciation expense was approximately \$359,000 for 2019-20. A desirable and recommended minimum funding target for rate funded capital is an amount equal to or greater than annual depreciation expense. It is important to understand that annual depreciation expense is not the same as replacement cost, which can be 1.5 to 2.0 times the original cost of the project. Thus, funding an amount which exceeds annual depreciation expense (i.e., \$359,000) is both prudent and appropriate.

This capital funding plan has assumed the need for additional long-term borrowing (debt financing) to fund a portion of the capital projects in 2024-25 through 2026-27. This new long-term borrowing allows the City to complete the projects, while minimizing the direct impact to rates. In developing the capital plan, and reviewing the current and anticipated debt service, HDR is not acting as a municipal advisor or providing municipal advice as it relates to bonds, terms, or structures of debt issuances. Rather, this rate study is a financial planning document which has identified projections of future funding needs and utilized general assumptions for long-term debt terms for modeling and projection purposes.

In summary, the capital funding analysis has established a level of annual rate funding which is greater than annual depreciation. Going forward, the City should continue to plan and monitor their annual renewal and replacement needs and, as appropriate, increase the level of rate funded capital over time to keep up with the cost escalation of these capital projects. In developing this financial plan, HDR and the City have attempted to minimize rate impacts while funding the planned capital improvement projects of the City's water utility.

3.6 Projection of Debt Service

The City currently has no outstanding debt issues for the water utility. As shown in Table 3 - 3, it is assumed that the City will need to issue long-term debt issues over the projected period. More specifically, the capital plan has assumed long-term borrowing in 2024-25 through 2026-27. The impact of the assumed borrowing of \$6.25 million over this time period translate to a projected annual debt service payment of approximately \$469,000 based on City estimates of long-term borrowing terms and conditions.

3.7 Reserve Funding

The final component of the revenue requirement analysis is the reserve funding. This relates to changes in working capital and the reserve funds. It includes transfers to, or from, reserve funds to maintain prudent ending fund balances or for future funding of capital projects. The City has a target minimum fund balance for the Operating (reserve) Fund of 180 days of O&M expenses, or approximately \$2.5 million. In addition, the rate study has included a capital reserve and minimum target equal to two times annual depreciation expense. Any additional balance of funds after the transfers are made is transferred to the operating or capital fund to maintain the

minimum fund balance. Funding from reserves may also be used to meet operating and capital needs in a deficient year.

3.8 Summary of the Revenue Requirement

Given the above projections of revenue and expense components, a summary of the City’s water revenue requirement analysis can be developed. In developing the revenue requirement analysis, consideration was given to the financial planning considerations of the City. More specifically, emphasis was placed on minimizing rates while adequately funding the operational and capital improvement needs throughout the review period. Presented below in Table 3 - 4 is a summary of the City’s water revenue requirement analysis based on projected expenses and current rates. Detailed exhibits of this analysis can be found in the Technical Appendices in Exhibits 1 - 7.

Table 3 - 4						
Summary of the Revenue Requirement Analysis (\$000)						
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Revenues						
Rate Revenues	\$4,970	\$4,950	\$4,966	\$4,981	\$4,997	\$5,012
Misc. Revenues	58	80	84	87	83	78
Total Revenues	\$5,028	\$5,030	\$5,050	\$5,068	\$5,080	\$5,090
Expenses						
O & M	\$5,089	\$4,338	\$4,565	\$4,804	\$5,132	\$5,404
Net Debt Service	0	0	0	162	315	469
Rate Funded Capital	0	800	800	800	800	800
Reserve Funding	(61)	164	247	170	26	(44)
Total Expenses	\$5,028	\$5,302	\$5,611	\$5,936	\$6,273	\$6,629
Bal. / (Def.) of Funds	\$0	(\$272)	(\$561)	(\$868)	(\$1,193)	(\$1,539)
Bal. as a % of Rate Rev.	0.0%	5.5%	11.3%	17.4%	23.9%	30.7%
Proposed Rate Adjustment	0.0%	5.5%	5.5%	5.5%	5.5%	5.5%
Add'l Rev. from Rate Adj.	\$0	\$272	\$561	\$868	\$1,193	\$1,539
Total Bal. / (Def.) of Funds	0	0	0	0	0	0

As can be seen, the revenue requirement has summed the O&M, rate funded capital, net debt service, and change in working capital (i.e., net funding to and from reserves). The City’s total revenue requirement is then compared to the total revenues which include the rate revenues - at present rate levels - and other miscellaneous revenues. From this comparison, a balance or deficiency of funds in each year can be determined. This balance or deficiency of funds is then compared to the present rate revenues to determine the level of rate adjustment needed to meet the revenue requirement. It is important to note the “Bal. / (Def.) of Funds” row is cumulative. That is, any adjustments in the initial years will reduce the deficiency in the later years. In 2022-23, a 5.5% rate adjustment is proposed, which would be implemented July of 2022 (the first month of the fiscal year). Over the five-year projected period, the total deficiency in current water rates is 30.7%.

The deficiencies shown in Table 3 - 4 are primarily a function of three factors. First, the O&M expenses assume inflation assumptions for the projected time period, and the projection of O&M expenses has also assumed additional expenses beyond existing/budgeted levels. Next, the capital funding analysis includes the annual rate funding of capital projects (\$800,000/year) along with the need for long-term borrowing, which translates into a new debt service payment. Taken together, the water utility's current rates are projected to be deficient over the five year time period.

Based on the revenue requirement analysis developed for the City's water utility, HDR has concluded that the rate revenues will need to be adjusted over the next five years (2022-23 through 2026-27) to maintain prudent funding of expenses and establish cost-based rates. Based on the rate transition plan (blue shaded line in Table 3 – 4), the proposed annual rate adjustments are designed and intended to meet the operating and capital needs of the City's water utility, as well as maintain strong financial metrics.

3.9 Reserve Levels

Another key element of determining the financial health and sustainability of the City's water utility is a review of the level of available reserve funds after the proposed rate adjustments. Utilities can establish and maintain several different reserves. Each reserve has a specific and different purpose. The typical types of reserves that utilities often maintain are generally referenced as an operating reserve, a capital reserve, a connection fee reserve, and in some cases an emergency or rate stabilization reserve. Certain funds may establish a minimum ending balance that, if reached or falls below, is a signal that the City should review the revenue sources associated with that fund and take appropriate action. The minimum ending balances will vary depending on the purpose of the fund and the expected revenue sources.

For the City, there are three primary funds for the water utility rate study. These are the Operating Fund, Capital Fund, and Table A Funding reserve. Each of these is discussed further below.

- **Operating Fund** – The operating reserve is in place to meet the City's fluctuating cash flow needs. The typical minimum ending balance for an operating reserve ranges from 90 – 365 days of annual O&M expenses. For the City, the minimum target was set at 180 days of O&M expenses. This target results in a minimum ending balance of approximately \$2.5 million in 2021-22. Over the five -year rate setting period, the operating reserve is projected to maintain an ending balance greater than the target minimum.
- **Capital Fund** – The capital fund is used to track the collection of connection fee revenues and provided funding for capital projects. For rate setting purposes, a target balance was set at 2 times annual depreciation expense which for 2021-22 equated to \$718,000. When capital reserve funds are available, this fund is used to pay for capital improvement projects.
- **Table A Funding** – This fund was established to reflect the City's prefunding of reserves to support future Table A water purchase expenses. In this case, the expenses are anticipated to occur in 2024-25 and so the funds are utilized in that year. No additions or uses of this reserve are anticipated over the review period.

3.10 Debt Service Coverage Ratios

When long-term debt is issued it may have certain rate covenants associated with the debt issue. Currently, the City does not have any outstanding long-term debt issuance or associated annual debt service. However, as mentioned previously, it is assumed within the capital funding plan that the City will need to issue long-term debt. The City will need to monitor the debt service coverage (DSC) as the debt is incurred and for planning purposes a minimum debt service coverage ratio of 1.30 is assumed. The City should strive for a coverage ratio which is greater than the minimum. Provided in Table 3 - 5 is a summary of the projected debt service coverage (DSC) ratio calculations for the City’s water utility before and after the proposed rate adjustments.

Table 3 - 5 Summary of the Debt Service Coverage Ratios						
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Before Rate Adjustment	N/A	N/A	N/A	1.63	0.00	0.00
After Rate Adjustment	N/A	N/A	N/A	6.99	3.62	2.61

As can be seen in Table 3 - 5, with the proposed rate adjustments, the City is maintaining a strong debt service coverage ratio. In contrast, should the City not implement the proposed rate revenue adjustments, the DSC ratio would fall to 1.63 in 2024-25 and then below 1.00, thereafter, which is below the assumed required minimum DSC. It is prudent financial practice to target at least 1.30 for the DSC ratio. The 1.30 DSC means that the utility, after meeting its O&M expenses has sufficient funds available to pay the debt service payment. More specifically, an amount of funding available which is 30% greater than the actual debt service payment. With this minimum financial planning target set, Table 3 – 5 demonstrates that the City is above this minimum threshold after the proposed rate adjustments. The City is advised to continue to monitor revenues and expenses to maintain sufficient debt service coverage ratios.

3.11 Consultant’s Conclusions

The revenue requirement developed above for the City’s water utility has indicated the need for annual revenue (rate) increases to adequately fund the City’s operating and capital needs for the water utility. The proposed rate revenue adjustments are 5.5% annually in 2022-23 through 2026-27. HDR has reached this conclusion for the following reasons:

- Rate adjustments are necessary to adequately fund the water utility’s operating and capital expenses
- The proposed rate adjustments maintain the City’s financial health and provide long-term sustainable funding levels
- The rate adjustments are needed to maintain, and exceed, the minimum debt service coverage ratio requirements

- Prior to the implementation of the fifth, and final, proposed rate adjustment the City should complete a review of the water rates

In reaching the above conclusions, HDR would recommend that the City adopt the proposed annual rate adjustments through 2026-27 to provide sufficient funding for the City's projected operating expenses and capital improvement program.

4 Development of the Cost of Service Analysis

In the previous section, the revenue requirement analysis focused on the total revenues required to adequately fund the City's water utility. This section will provide an overview of the second step in a comprehensive water rate study; the cost of service analysis developed for the City's water utility.

A water cost of service analysis determines the equitable and proportional distribution or assignment of the total revenue requirement to the customer classes of service (e.g., single family, multi-family, commercial, irrigation). The previously developed revenue requirement for 2022-23 was utilized in the development of the following cost of service analysis.

4.1 Objectives of a Cost of Service Study

There are two primary objectives in conducting a cost of service analysis:

- Equitably allocate and proportionally distribute the City's water revenue requirement among the customer classes of service, and
- Derive average unit costs (i.e., cost-based rates) for subsequent rate designs

The objectives of the cost of service analysis are different from determining a revenue requirement. As noted in the previous section, a revenue requirement analysis determines the utility's overall financial needs, while the cost of service analysis determines the proportional manner to collect the calculated revenue requirement from each customer class.

The results of the cost of service analysis determine the average unit costs which are used in the development of the final step of the rate study process, the rate design analysis. The cost of service analysis provides a per unit cost of water consumption based on each customer class's proportional share of costs. For example, a water utility incurs costs related to average day and peak day demands, fire protection, and customer-related cost components. A water utility must build sufficient capacity³ to meet summer peak capacity needs. Therefore, those customers contributing to those peak demands on the system should pay their proportionate (i.e., fair) share of the costs to provide the capacity in the system. The average unit costs derived from the cost of service analysis provides the relationship between these components which are then used to set cost-based rates. Similarly, the customer-related costs are totaled and distributed proportionately on an equivalent meter basis.

³ System capacity is the system's ability to supply water to all delivery points at the time when demanded. Coincident peaking factors are calculated for each customer class at the time of greatest system demand. The time of greatest demand is known as a peak demand. Both the operating costs and capital asset related costs incurred to accommodate the peak demands are generally allocated to each customer class based upon the class's contribution to the specific peak month, peak day or peak hour event.

4.2 Determining the Customer Classes of Service

The first step in a cost of service analysis is to determine the customer classes of service. Based on a review of the customer and billing information, the current rate schedules, and discussion with City staff, the classes of service used within the cost of service analysis were:

- Single Family
- Multi-Family
- Commercial
- Irrigation

In determining classes of service for cost of service purposes, the objective is to group customers together into similar or homogeneous groups based upon similar facility requirements and/or demand characteristics. HDR reviewed the current customer characteristics and facility requirements of each of the customer classes of service. In reviewing the customer classes of service, the City has appropriately grouped customers into customer classes of service. The grouping of customers and rates into these classes of service creates the proportionality expected under Proposition 218. This is accomplished by having differing rates, by customer classes of service, which reflect both the level of revenue to be collected by the utility, but also the manner in which these costs are incurred, and then assigning those costs to customer classes of service based upon their proportional impacts.

4.3 General Cost of Service Procedures

To determine the cost to serve each customer class of service on the City's water system, a cost of service analysis is conducted. A cost of service analysis utilizes a three-step approach to review costs. These steps take the form of *functionalization*, *allocation*, and *distribution*. Provided below is a detailed discussion of the water cost of service study conducted for the City, and the specific steps taken within the analysis. The approach used for the City's study conforms to generally accepted, and industry standard, cost of service methodologies which are outlined in the AWWA M1 Manual to meet the proportionality requirements of Proposition 218.

4.3.1 Functionalization of Costs

The first analytical step in the cost of service process is called "functionalization". Functionalization is the arrangement of expenses and asset (i.e., plant) data by major operating functions (e.g., supply, treatment, transmission, distribution, etc.). Within the City's Study there was a limited amount of functionalization of the cost data required since it was already largely accomplished within the City's system of accounts.

4.3.2 Allocation of Costs

The second analytical task performed in a water cost of service study is the allocation of costs. The allocation of costs examines why each expense identified in the revenue requirement was incurred or what type of need is being met. The following cost allocators were used to develop the City's water cost of service analysis:

- **Commodity-Related Costs:** Commodity costs are those costs which tend to vary with the total quantity of water consumed by a customer. Commodity costs are those incurred under average load (demand) conditions and are generally specified for a period such as a month or year. Chemicals or utilities (electricity) are general examples of commodity-related cost as these costs tend to vary based upon the total volumes of water consumed.
- **Capacity-Related Costs:** Capacity costs are those which vary with peak demand, or the maximum rates of flow to customers. System capacity is required when there are large demands for water placed upon the system (e.g., summer lawn watering). For water utilities, capacity-related costs are generally related to the sizing of facilities needed to meet a customer's maximum water demand at any point in time. For example, portions of distribution storage reservoirs and mains (pipes) must be adequately sized to meet this type requirement.
- **Customer-Related Costs:** Customer costs are those costs which vary with the number of customers on the water system. They do not vary with system output or consumption levels. These costs are also sometimes referred to as “readiness to serve” or availability costs. Customer costs may also sometimes be further allocated as either “actual” or “weighted”. Actual customer costs vary proportionally on a per customer basis, from customer to customer, with the addition or deletion of a customer regardless of the size of the customer. An example of an actual customer cost is postage for mailing bills. This cost does not vary from customer to customer, regardless of the size or consumption characteristics of the customer. In contrast, a weighted customer cost reflects a disproportionate cost, from customer to customer, with the addition or deletion of a customer. Examples of weighted customer costs are items such as meter maintenance expenses, where a large commercial customer requires a significantly more expensive meter than a typical residential customer.
- **Fire Protection-Related Costs:** Fire protection costs are those costs related to the public fire protection functions. Usually, such costs are those related to public fire hydrants and the over-sizing of mains and distribution storage reservoirs for fire protection purposes. Even with the largest peak demands on the system, there still must be sufficient capacity available to meet fire protection-related needs. These costs are related to water service on property because public fire hydrants are designed to deliver water to property served by the water utility in sufficient quantities and pressures to fight a fire on the property.
- **Revenue-Related Costs:** Some costs associated with the utility may vary with the amount of revenue received by the utility. An example of a revenue related cost would be a utility tax which is based on the gross utility revenue.

4.3.3 Development of Distribution Factors

Once the allocation process is complete, and the customer groups have been defined, the various allocated costs are proportionally distributed to each customer group. The City's allocated costs for the water utility were distributed to the previously identified customer groups using the following distribution factors.

- **Commodity Distribution Factor:** As noted previously, commodity-related costs vary with the total water consumption. Therefore, the commodity distribution factor was based on the projected total metered water consumption plus water losses for each class of service for the

projected test period 2022-23. For the City’s study the consumption for each customer class of service was developed based on historical metered consumption records.

- **Capacity Distribution Factor:** Capacity is related to peak usage. The capacity distribution factor was developed based on the estimated contribution to the water system peak day use of each customer class. Peak day use by customer class of service was estimated using peaking factors for each customer group. In this case, the peaking factor was defined as the relationship between peak day contribution and average day use and determined for each customer group based on a review of the metered average month to peak month usage. Given an estimated peaking factor, the estimated peak day contribution for each class of service was developed.
- **Customer Distribution Factor:** Customer costs vary with the number of customers on the system. Two basic types of customer distribution factors were identified – actual and weighted. The distribution factor for actual customer was based on the projection of the number of customers (accounts) developed within the revenue requirement. The weighted customer distribution factors are also broken down further into two factors which attempt to reflect the disproportionate costs associated with serving different types of customers. The first weighted customer factor is for customer service and accounting. This weighted customer distribution factor reflects the actual number of units as compared to the number of meters. The second weighted customer distribution factor is for meters and services. This factor reflects the capacity requirements of each customer class based on the sum of the equivalent meters. For example, a 2-inch meter has eight times the capacity of a 5/8” meter. Therefore, a larger proportion of the capacity costs of providing service is distributed to the larger meter sizes.
- **Fire Protection Distribution Factor:** The development of the distribution factor for fire protection expenses involved an analysis of each class of service and their corresponding fire flow requirements. The analysis

Water Cost of Service Analysis Terminology

Functionalization – The arrangement of the cost data by functional category (e.g., source of supply, treatment, etc.).

Allocation – The assignment of functionalized costs to cost components (e.g., commodity, capacity, customer and fire protection related).

Distribution – Equitably distributing the allocated costs to each class of service based upon each class’s proportional contribution to that specific cost component.

Commodity Costs – Costs that are allocated as commodity-related vary with the total volume of water consumed (e.g., chemical use at a treatment plant).

Capacity Costs – Costs allocated as capacity-related are related to meeting peak day or peak hour usage. Facilities are often designed and sized around meeting peak demands.

Fire Protection Costs – Costs that are related to fire protection services (e.g., hydrants, oversizing of storage and distribution mains).

Customer Costs – Costs allocated as customer-related vary with the number of customers on the system (e.g., metering costs).

Revenue Related Costs – Costs which vary with the amount of revenue received by the utility (e.g., income tax).

considered the gallon per minute (gpm) fire flow requirements in the event of a fire, along with the duration of the required flow. The fire flow rates used within the distribution factor were based on industry standards and similar experiences with other water cost of service studies. The minimum fire flow requirements are then multiplied by the number of customers in each class of service, and the assumed duration of the fire, to determine each class's prorated fire flow requirements.

- **Revenue Related Distribution Factor:** The revenue related distribution factor was developed from the projected rate revenues for 2022-23 for each customer class of service. These same revenues were used within the revenue requirement analysis discussed previously.

The distribution factors are developed for each customer class of service. At the same time, the distribution factors for commodity and capacity-related costs must be developed to also calculate the average unit cost pricing. For example, the single-family commodity and capacity distribution factor has distribution factors for each of the rate structure tiers, multi-family, commercial, and irrigation. This level of distribution was provided within the analysis in order to demonstrate (i.e., calculate) the cost basis for the City's tiered rates, and meet the requirements of Proposition 218. Further discussion related to the distribution of costs to a greater cost level is discussed in more detail in the rate design analysis provided in Section 5 of this report.

4.4 Functionalization and Allocation of Plant in Service

As noted above, the first steps of the cost of service analysis are the *functionalization* and *allocation* of plant (infrastructure) in service. In performing the functionalization of plant in service, HDR utilized the City's historical plant (asset) records. Once the plant assets were functionalized, the analysis shifted to the allocation of the asset. The allocation process included reviewing each group of assets and determining which cost allocators the assets were related to. For example, the City's assets were allocated as: commodity-related, capacity-related, customer-related, revenue-related, fire protection-related, or a direct assignment. Provided below is a summary overview of the allocation process used for the City's plant assets. The following approach is based on the methodology as described in the AWWA M1 Manual.

Source of Supply

Source of supply was allocated as both average day and peak day related. The City's water system statistics from July 2020 through June 2021 were utilized to develop the average day and peak day calculation. The City's source of supply assets was allocated on the basis of the relationship of system average day to peak day demands. This resulted in 70.9% of the source of supply plant assets allocated to commodity-related costs (average day) and 29.1% to capacity-related costs (peak day). These allocation percentages reflect the City's specific system peak demand (capacity needs) in relation to the system average day use (base needs).

Treatment

Treatment plant assets were allocated in the same manner as the source of supply assets; 70.9% to commodity-related and 29.1% to capacity-related. Treatment plant is often considered to be an extension of the source of supply and this allocation also reflects the operation of the treatment facilities either as meeting average day and peak day needs on the system.

Pumping

Pumping was allocated as 100% capacity. Pumps must be sized to meet peak use requirements and this allocation assumes pumping plant is sized to meet peak use needs.

Storage

Distribution storage reservoirs, or water tanks, are typically designed to meet at least two types of needs –peak use demands and fire protection. The total storage capacity of the City’s storage facilities was examined, while consideration is also given to the additional capacity required for fire protection under a fire event scenario. This additional amount of capacity, in relation to the total storage capacity, is considered fire protection-related. The balance of storage capacity is in place to meet peak use demands. This resulted in 92.8% of the storage plant assets being assigned to the capacity-related cost component and the remaining 7.2% assigned to the fire protection component.

Transmission and Distribution

Transmission and distribution lines (mains) are typically assumed to provide three types of costs. First, a distribution system must be in place to meet a customer’s minimum use requirements for water. This portion of the distribution main plant investment is a function of the number of customers on the system and, thus, a customer-related cost. Next, a portion of the distribution system mains is considered a function of meeting peak flow (use) requirements on the system. Distribution mains must be sized to adequately meet the maximum peak flows demanded by customers. This incremental portion of the distribution main plant investment is considered capacity related. Finally, even with sufficient capacity for meeting peak use demands, distribution mains must also be over-sized for fire flow demands. This final portion of over-sizing for distribution mains plant investment is classified as fire protection related. Based upon an analysis of the City’s distribution mains, the assignment of the distribution mains was allocated as 73.0% customer-related, 24.5% capacity (i.e., peak use)-related, and 2.5% fire protection related. The transmission and distribution category also includes assets related to meters, SCADA, and valves. These assets were allocated to 100% weighted customer services and meters, as mains, and as all above T&D assets respectively.

Table 4 - 1 provides a summary of the basic functionalization and allocation of the major water plant items. A more detailed exhibit of the City’s functionalization and allocation of plant investment can be found in the Technical Appendix Exhibit 13.1.

Table 4 - 1
Summary of the Allocation of Water Plant in Service

Category	Commodity Related	Capacity Related	Customer Related	Equivalent Meters	Fire Protection
Source of Supply	70.9%	29.1%	0.0%	0.0%	0.0%
Treatment	70.9%	29.1%	0.0%	0.0%	0.0%
Pumping	0.0%	100.0%	0.0%	0.0%	0.0%
Trans. & Distrib. (All T&D Plant)	0.0%	12.3%	36.7%	49.7%	1.3%
General Plant	53.5%	31.6%	13.0%	0.2%	1.6%
Total Net Plant in Service	43.8%	30.5%	9.6%	15.1%	1.0%

4.5 Functionalization and Allocation of Operating Expenses

As noted in the AWWA M1 Manual, operating expenses are generally functionalized and allocated in a manner similar to the corresponding plant account. For example, maintenance of distribution mains is typically allocated in the same manner (allocation percentages) as the plant account for distribution mains. This approach to allocation of the City’s water utility operating expenses was used for this analysis.

For the City’s water rate study, the revenue requirement for 2022-23 was functionalized, allocated, and distributed. As noted in Section 3, the City utilized a cash basis revenue requirement, which was comprised of operation and maintenance expenses, rate funded capital, net debt service, and reserve funding. A more detailed review of the functionalization and allocation of the revenue requirement can be found in the Technical Appendix in Exhibit 15.1.

4.6 Major Assumptions of the Cost of Service Study

Several key assumptions were used within the City’s water cost of service analysis. Below is a brief discussion of the major assumptions used.

- The test period used for the water cost of service analysis was 2022-23. The revenue and expense data were previously developed within the revenue requirement analysis
- A cash basis methodology was utilized which conforms to generally accepted water cost of service approaches and methodologies and is consistent with the City’s previous cost of service analyses
- The allocation of plant in service was developed based upon generally accepted cost allocation techniques.
- Consumption by cost or class of service used within this study were developed for each class of service from historical usage information provided by the City
- Peak day capacity distribution factors were estimated based upon each customer group’s average month to peak month relationship
- For single-family customers, costs were distributed to consumption tiers to specifically address the requirements of Proposition 218

4.7 Development of Cost-Based Water Rates

While there are various rate study goals and objectives, a key consideration in developing water rates, meeting the legal requirements - and documenting the steps taken to meet the requirements - has been in the forefront with the recent legal challenges in the State of California on water rates. Given this, the City's proposed water rates have been developed to meet the legal requirements of Article XIII D. A key component of Article XIII D is the development of rates which reflect the cost of providing service and which proportionally distributed such costs among the various customer classes of service. There is no single prescribed methodology for equitably assigning costs to the various customer groups. The AWWA M1 Manual clearly delineates various methodologies which may be used to establish cost-based rates. Article XIII D does not prescribe a particular methodology for establishing cost-based rates, consequently, HDR developed the City's proposed water rates based on the methodologies provided in the AWWA M1 Manual to meet the requirements of Article XIII D to provide an administrative record of the steps taken to establish the City's water rates.

HDR is of the opinion that the proposed rates comply with legal requirements of Article XIII D. HDR reaches this conclusion based upon the following:

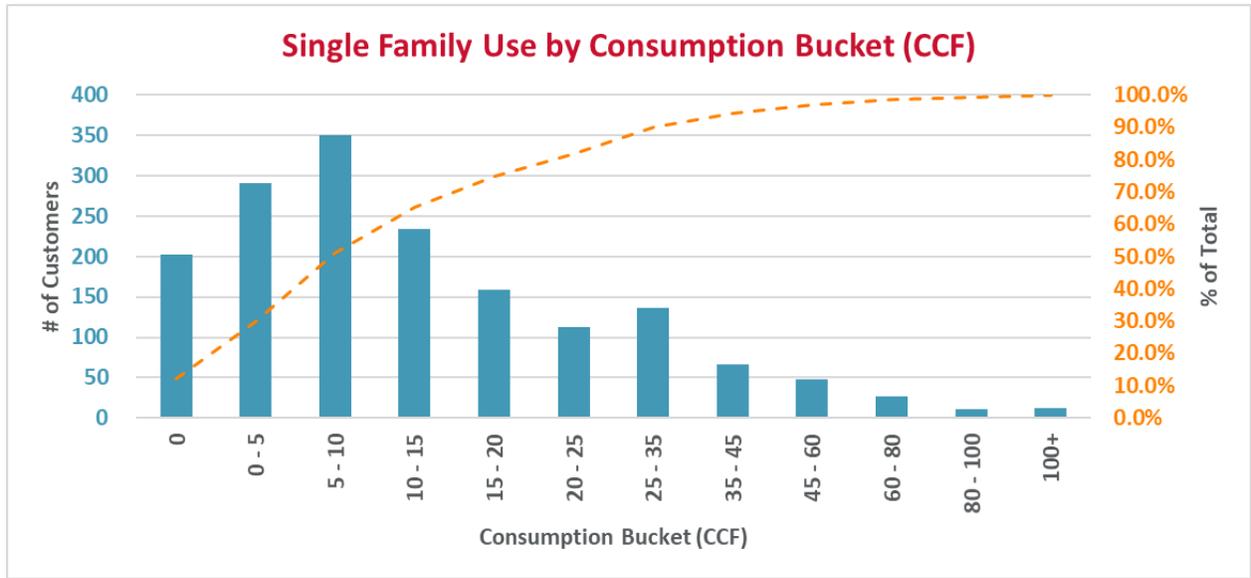
- **The revenue derived from water rates does not exceed the funds required to provide the property related service (i.e., water service).** The proposed rates are designed to collect the overall revenue requirement of the City's water utility.
- **The revenues derived from water rates shall not be used for any purpose other than that for which the fee or charge is imposed.** The revenues derived from the City's water rates are used exclusively to operate and maintain the City's water system.
- **The amount of a fee or charge imposed upon a parcel or person as an incident of property ownership shall not exceed the proportional costs of the service attributable to the parcel.** The cost of service analysis section of this study has focused exclusively on the issue of proportional assignment of costs to the customer classes of service. The proposed rates have appropriately grouped customers into customer classes of service (single-family, multi-family, etc.) that reflect the varying consumption patterns and system requirements of each customer class of service. The grouping of customers and rates into these classes of service creates the proportionality expected under Article XIII D by having differing rates by customer classes of service which reflect both the level of revenue to be collected by the utility, but also the manner in which these costs are incurred and distributed to customer classes of service based upon their proportional impacts and burdens placed on the City's the water system.

The above discussion provides an overview of the California legal requirements of setting rates. The cost of service developed herein has developed a set of average unit costs which provide the cost-basis for the development of the proposed water rates for the City.

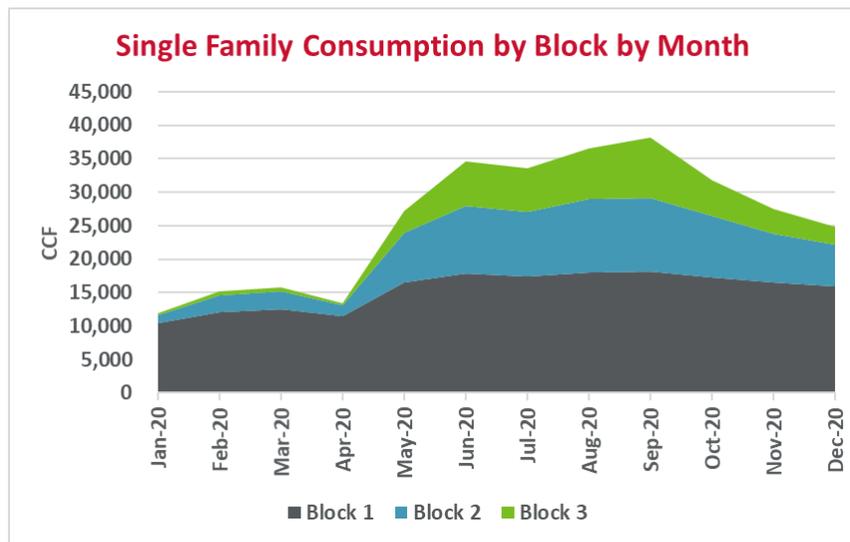
As a part of this study, HDR has developed a water rate design discussion to clearly demonstrate and support the proposed water rates. The following discussion provides a more detailed analysis of the costing techniques and methodologies used to support the City's proposed rate design.

4.7.1 Determination of Sizing and Number of Tiers

As a part of the City’s water rate study, the single-family customer class rate structure is proposed to change from a 2 block consumption charge structure to a 3 consumption charge structure. The City’s recent water consumption data was evaluated to aid in the evaluation of the current tiers and used as justification if any adjustments to tier sizes are appropriate. After reviewing the single family consumption profile, it was determined three rate tiers appeared to be appropriate. The goal of the tiers was to target typical monthly customer average annual consumption levels in



the first block. Under that basic premise, consumption in the range of 0 – 15 hundred cubic feet (CCF) would capture approximately 65.4% of the total annual use. While this is a significant amount of the customers, this would still miss an amount of average use as the single family annual monthly average is 17.8 CCF per month. Based upon that observation of the customer data, it was proposed block 2 would consist of consumption from 15 CCF to 35 CCF. This size of



second block usage would account for another 24.7% of consumption or 90.1% of the total water use and reflect average summer (peak) consumption. The remaining 9.9% or so of water consumption would then be captured in block 3. Shown in the graph above is the number of customers by consumption “buckets” for single family customers [blue bars] with the cumulative total of

customers on the secondary axis [yellow dashed line]. The graph to the left shows the single-family consumption, by month, based on the proposed three block rate structure. It is important to note that the proposed block sizes are based around the average single family customer consumption characteristics as the rates apply to all single family customers.

The current consumption rate structure for the multi-family, commercial, and irrigation customers is a uniform rate structure (i.e., all usage charged the same per unit rate). While the customer characteristics of each of these customer groups are similar, and a tiered rate structure may be used for these types of customers; the total consumptive use can vary significantly for these customers and it is difficult, if not impossible, to develop an equitable tier size that reflects the various types of customer consumption characteristics and needs.

After the number and size of tiers and rate structures have been identified, the pricing of the rate components is the next analytical step.

4.7.2 Establishing the Cost-Basis for Pricing Tiers

Given the requirements of Proposition 218, HDR has concluded that utilities have available to them at least three technical approaches to be able to justify tiered pricing of the rates. These technical approaches encompass the following areas:

1. Cost differences in water supply (i.e., stacking of water supply resources to tiers/seasons).
2. Cost differences from high peak use consumers (relationship of average use to peak use).
3. Direct assignment of costs to specific tiers/seasons (e.g., conservation program costs, etc.)

In certain cases, the cost differences may be related to the cost of water supply when a utility has more than one source of water supply. Additionally, this water supply approach may also include the cost of alternative water supplies (i.e., recycled or reuse water). For example, reuse water may be assigned to higher tiers to reflect outdoor use or the need for additional/alternative water supply to meet the demands of the high use customers.

The second possible source of cost differences for the pricing of tiers is related to high-peak use (peak demand) customers. Customers that use more water in peak periods create greater demands and costs on the system. A water supply and distribution system must be sized to meet these peak use requirements. In other words, on the hottest day of the year when everyone is watering their lawn, the supply and distribution system must be sized to meet those peak use demands. Economic theory clearly states that equity is achieved when those that create the peak demand event, pay for the peak demand event. In this case, this has implications upon the equitable distribution of capacity-related costs to the different usage tiers (low peak use vs. high peak use).

Finally, certain costs may be directly assigned to specific tiers. For example, a conservation program which focuses on outdoor water use may be directly assigned to the upper water tier, or summer season, which are most directly related to outdoor use. The direct assignment to a specific price tier will create a price differential for that tier.

For the City’s water rate study, the focus of the analysis was on the second method of determining the cost impacts and cost differences associated with high peak and seasonal use customers. The pricing of the consumption rate components was developed to provide the cost-basis and meet the proportionality requirements of Proposition 218.

4.8 Development of the Unit Costs for Rate Designs

To begin the assignment of costs related to rate components, the results of the cost of service analysis are utilized. The cost of service analysis allocated the revenue requirement between the various cost components of average use (commodity, peak use capacity), and customer (actual and weighted). Provided in Table 4 – 2 is a summary of the allocation of the 2022-23 revenue requirement from the cost of service analysis.

Table 4 - 2 Summary of the Allocation of the 2022-23 Revenue Requirement (\$000)							
	Total	Commodity Related	Capacity Related	Customer Related	Fire Prot.	Revenue Related	Direct Assign.
Revenue Requirement	\$5,222	\$1,489	\$841	\$2,893	\$0	\$0	\$0

The total allocation of the 2022-23 revenue requirement, approximately \$5.2 million, is then distributed to the various customer classes of service. Given the legal requirement to provide the cost-basis the rate structure components, the allocated costs are further distributed between the various rate structure components based on the appropriate distribution factors. The costs in Table 4 – 2 are taken from Exhibit 14 in the Water Technical Appendix.

Provided below is a discussion of the approach used to proportionally distribute the revenue requirement between the various customer classes of service to the various rate components for each customer class of service.

4.8.1 Commodity Distribution Factor

The commodity distribution factor is based on the average annual use for each of the customer classes of service, and more importantly by tier. For the development of the pricing of the proposed rates the following customer class distribution factors were used:

- Single Family – Block 1
- Single Family – Block 2
- Single Family – Block 3
- Multi-Family
- Commercial
- Irrigation

To develop the commodity distribution factor for each customer class, the usage for each class was divided by the total usage of the system. This produces the percent (proportion) of the system that each class is responsible for and, therefore, their contribution to commodity-related costs. After the responsibility of commodity-related costs have been identified, the total commodity-related costs can be distributed to each customer class tier based on the commodity distribution factor. The final step in developing the average unit commodity costs is to divide the distributed commodity costs for each customer class tier by the total amount of consumption used in determining their fair share of commodity-related costs. This produces an average unit commodity cost on a \$/CCF basis.

Provided in Table 4 – 3 is a summary of the commodity distribution factor and average unit cost development and is taken from Exhibit 8 in the Water Technical Analysis.

Table 4 - 3 Summary of the Commodity Distribution Factor				
Reference Calculation	A	B	C	D D = C / A
	2022-23 Consumption (CCF)	% of Total	Distributed Commodity Costs	Unit Cost (\$ / CCF)
Single Family				
0 – 15 CCF	182,006	33.8%	\$503,605	\$2.77
15 – 35 CCF	78,150	14.5%	216,239	2.77
35 + CCF	<u>45,455</u>	<u>8.4%</u>	<u>125,774</u>	2.77
Single Family Total	305,611	56.8%	\$845,618	
Multi-Family	66,550	12.4%	\$184,142	\$2.77
Non-Residential	92,018	17.1%	\$254,610	2.77
Irrigation	<u>73,844</u>	13.7%	<u>\$204,324</u>	2.77
Total	538,022		\$1,488,694	

As can be seen, the development of the commodity distribution factor is straightforward and based on metered consumption. As an example, consumption in block 1 of the single family class of service represents 33.8% of the total consumption on the system. As a result, 33.8% of the total commodity related costs (\$1.5 million in total) is distributed to block 1 of the single family customers which is approximately \$504,000. The total commodity-related costs in Column C are taken from Table 4 – 2. This approach then is used for each of the customer classes of service for each rate component and pricing tier. Finally, to develop the average unit cost for each component, the distributed costs in column C are divided by the consumption volumes shown in column A. The average unit costs are stated in \$ / CCF.

4.8.2 Capacity Distribution Factor

The capacity distribution factor utilizes the same customer classes of service as the commodity distribution factor. Whereas commodity costs are related to the volume of water consumed by each class of service by consumption tier, capacity is related to how the class uses that water in each tier. Customers use water in different ways and at different times, thus creating different usage patterns and resulting in different peaking factors. These usage patterns drive how the City must size the system to meet the peak demands of customers, regardless of when they occur. To determine the distribution by rate component, peaking factors needed to be developed for each customer class and tier. The peaking factors for each class of service and tier must be reasonably estimated due to a lack of specific metered data related to peak day usage by individual customer or class of service. The method used to estimate a class's peaking factor is to review the average monthly volume of water consumed and compare it to the maximum monthly usage of water. By dividing the maximum month by the average month, a reasonable surrogate for a peak day peaking factor is calculated. This factor also provides a seasonal surrogate for the difference between the average use and peak day use in each rate component. For example, if a customer used 10 CCF per month on average and in the peak month 15 CCF was used, the peaking factor would be 1.50 (15.0 / 10.0 = 1.50). In this example, the peaking factor is stating that the maximum usage in a month is 1.50 times higher than the average usage per month. Using this same calculation for each customer class rate and tier, the distribution factor for capacity can be developed. Table 4 – 4 provides a summary of the capacity distribution factor for each customer class and is taken from Exhibit 9 in the Water Technical Analysis.

Table 4 - 4 Summary of the Capacity Distribution Factor							
Reference Calculation	A	B	C	D	E	F	G
			C = A × B				G = E / F
	Average Use (MGD)	Peaking Factors	Peak Day Use (MGD)	% of Total	Distributed Capacity Costs	2022-23 Consumption (CCF)	Unit Cost (CCF)
Single Family							
0 – 15 CCF	0.41	1.18	0.48	38.5%	\$237,946	182,006	\$1.31
15 – 35 CCF	0.18	1.67	0.29	23.4%	144,596	78,150	1.85
35 + CCF	<u>0.10</u>	2.33	<u>0.24</u>	<u>19.0%</u>	<u>117,342</u>	45,455	2.58
SF Total	0.69		1.02	80.9%	\$499,884		
Multi-Family	0.05	1.10	0.06	4.4%	\$90,753	66,550	\$1.36
Non-Residential	0.12	1.20	0.15	11.7%	\$126,265	92,018	1.37
Irrigation	<u>0.03</u>	1.39	<u>0.04</u>	<u>3.0%</u>	<u>\$124,025</u>	73,844	1.68
Total	0.89		1.26	100.0%	\$840,927		

Table 4 – 4 provides the development of the capacity distribution factor. Like that of the commodity cost distribution to the tiers or seasons, the capacity-related costs are distributed in

the same manner. For example, 38.5% of the total capacity costs are distributed to block 1 of the single-family customers based on column D in Table 4 - 4. That translates to a cost distribution to tier 1 single-family of approximately \$238,000. This cost, when divided by the corresponding first tier consumption results in an average unit cost for capacity of \$1.31 / CCF. As can be seen in Table 4 - 4, the average unit costs for capacity vary by customer class of service and tier based upon the respective demands placed on the system by each class and/or tier.

Combining the calculated average unit costs from the commodity and capacity distribution factors provides the cost-basis of the consumption rate component. Table 4 – 5 below, shows the summation of the costs for each class and tier. This table sums the costs from Table 4 – 3 column D and Table 4 – 4 column G, along with the other additional costs.

Table 4 - 5					
Summary of the Rate Component Cost Basis					
Reference	A	B	C	D	E
	Commodity Costs (\$ / CCF)	Capacity Costs (\$ / CCF)	Other Costs (\$ / CCF) ^[2]	Total Average Unit Cost (\$ / CCF)	Differential (\$ / CCF)
Single Family					
0 – 15 CCF	\$2.77	\$1.31	\$0.00	\$4.08	
15 – 35 CCF	2.77	1.85	0.00	4.62	\$0.54
35 + CCF	2.77	2.58	0.00	5.35	\$0.73
Multi-Family	\$2.77	\$1.36	\$0.00	\$4.13	
Non-Residential	\$2.77	\$1.37	\$0.00	\$4.14	
Irrigation	\$2.77	\$1.68	\$0.00	\$4.45	

[2] – Includes revenue related, public fire protection, and direct assigned

The results shown in Table 4 – 5 above provide the cost-basis for the City’s consumption charges for the proposed rates. The analysis and average unit costs shown above have been developed to comply with the proportionality requirements of Proposition 218 when developing cost-based water rates.

The final average unit cost development is the customer-related costs which are used to establish the monthly fixed meter charge which varies by meter size. A similar exercise as conducted above for the consumption components was completed for the customer costs. The total customer costs were divided by the number of equivalent meters on the system. An equivalent meter uses the capacity ratio of a 5/8-inch meter to the capacity of larger meter sizes to determine the pricing for each meter size. In this way the meter charge reflects the equitable proportion of fixed costs on the system based on the capacity demands the customer can place on the system based on the size of the meter. Shown below in Table 4 – 6 is a summary of the fixed meter charge unit cost development which is taken from Exhibits 16 and 18 from the Water Technical Analysis.

Table 4 - 6
Summary of the Fixed Meter Charge Cost Basis

Cost Component	Rate Calculation
Total Customer Costs	\$2,892,839
# of Equivalent Meters	3,211
Average Unit Cost (\$ / equivalent meter / month)	\$75.08 (5/8" Meter)

4.9 Summary Results of the Cost of Service Analysis

In summary form, the cost of service analysis began by functionalizing the City’s revenue requirement for 2022-23, which is the first year of the rate setting period. The functionalized revenue requirement was then allocated into the appropriate cost components based on industry standard cost of service methodologies. The individual allocated totals were then proportionally distributed to the customer classes of service based on the appropriate distribution factors. The distributed expenses for each customer class were then aggregated to determine each customer class’s overall revenue responsibility (i.e., cost to provide service). Provided below in Table 4 - 7 is the summary results of the City’s water cost of service analysis and is found in Exhibit 18 in the Water Technical Appendix.

Table 4 - 7
Summary of the Water Cost of Service Analysis (\$000)

Class of Service	Present Rate Revenues	Distributed Costs	\$ Difference	% Difference
Residential	\$2,741	\$2,946	(\$204)	7.4%
Multi-Family	726	745	(19)	2.6%
Commercial	920	922	(2)	0.2%
Irrigation	<u>562</u>	<u>610</u>	<u>(48)</u>	8.5%
Total	\$4,950	\$5,222	(\$272)	5.5%

The rate study equitably allocated and proportionally distributed the operating and capital costs for 2022-23 to each customer class with their respective benefit received from and burdens placed on the water system (proportional distribution) based on the service requirements. The results of the analysis show that some cost differences exist between the various customer classes of service. It is important to understand that a cost of service analysis is based on one year’s O&M expense data and projected customer usage information. The analysis can be impacted by several variables such as budget structure changes or a change in consumption characteristics. Given this, the results of the cost of service analysis may change

from year to year. As the City continues to monitor water rates and cost of service results through future studies, future cost of service adjustments may be necessary to reflect changes in costs and consumption patterns at that time.

4.10 Consultant’s Conclusions and Recommendations

While some cost differences exist, the overall allocation of costs between customers appears to be reasonable and reflect the impacts each customer class of service places on the system. However, given the requirements of Article XIII D, section 6, the results of the cost of service will be used to establish the proposed rate designs for each of the City’s water customer classes of service. More specifically, it is recommended that the unit costs derived from the cost of service results be utilized as the basis for the rate design for each water customer class in Section 5.

4.11 Summary of the Cost of Service Analysis

This section of the report has provided the recommendations resulting from the cost of service analysis developed for the City’s water utility. This analysis was prepared using generally accepted cost of service techniques as provided in the AWWA M1 Manual to meet the proportionality requirements of Proposition 218. The Technical Appendix shows the detail of the cost of service analysis in Exhibits 8 – 18. The following section of the report will provide a summary of the present and proposed rates for the City’s water utility.

5 Development of the Rate Designs

The final step of the City's comprehensive water rate study is the design of proposed rates to collect the appropriate levels of revenues, based on the results of both the revenue requirement and the cost of service analyses. In developing the City's proposed water rates, consideration is given to the *level* of the rates as well as the *structure* of the rates. The level of rates reflects the amount of revenues that should be collected while the structure of the rates is how it is collected (i.e., component charges) from the customers.

The overall revenue level for the City's has been established in the revenue requirement analysis (Section 3) while the proportional distribution of costs between the customer classes has been developed in the cost of service analysis (Section 4) which provides the revenue levels to be collected from each class of service based on cost causation and the average unit costs for each rate component.

5.1 Rate Design Criteria and Considerations

Prudent rate administration dictates that several criteria must be considered when setting utility rates. Some of these rate design criteria are listed below:

- Rates which are easy to understand from the customer's perspective
- Rates which are easy for the City to administer
- Consideration of the customer's ability to pay
- Cost-based and equitable
- Continuity, over time, of the rate making philosophy
- Policy considerations (encourage efficient use, economic development, etc.)
- Provide revenue stability from month to month and year to year
- Promote efficient allocation of the resource
- Equitable and non-discriminatory (cost-based)
- Legally Defensible (Proposition 218 compliant)

It is important that the City provide its water customers with a proper and accurate price signal as to what their consumption and peaking (demand) requirements are costing. This goal may be approached through both rate level and structure. When developing the proposed rate designs, all the above listed criteria were taken into consideration. However, it should be noted that it is difficult - if not impossible - to design a rate that meets all the goals and objectives listed above. A good example of this is that it may be difficult to design a rate that takes into consideration the customer's ability to pay while also being cost-based. In designing rates, there are always trade-offs between these various goals and objectives.

5.2 Overview of the Proposed Rate Structures

In discussion with City staff several of the above goals and objectives were highlighted as key elements to be included within the proposed rate structure. These were:

- Equitable, proportional, and cost-based
- Revenue stability

The first goal was to provide the cost-basis, or justification, for the proposed rates to reflect the legal rate setting requirements in California. This was accomplished through the development of the cost of service analysis using industry standard approaches (AWWA M1 Manual). The cost of service analysis provided the equitable allocation and proportional distribution of costs to the classes of service and tiers, and then provided the average unit costs for purposes of final proposed rates.

The second goal was to maintain the revenue stability of the current rate structure. This was incorporated into the proposed rates by maintaining the current level of revenues collected through the monthly fixed meter charge and the consumption charge. In other words, the ratio of fixed revenue collected through the proposed rates would be based the results of the cost of service analysis and maintain a level of revenue stability as similar as possible to the current rate structure.

5.3 Summary of the Present and Proposed Water Rates

The proposed rates for the City's water utility were designed to meet the total system revenue needs discussed in Section 3 and reflect the cost of service results, including the average unit cost development, shown in Section 4. The proposed water rates have been developed for each customer class of service based on the development of the pricing through the cost of service analysis and specifically the average unit costs.

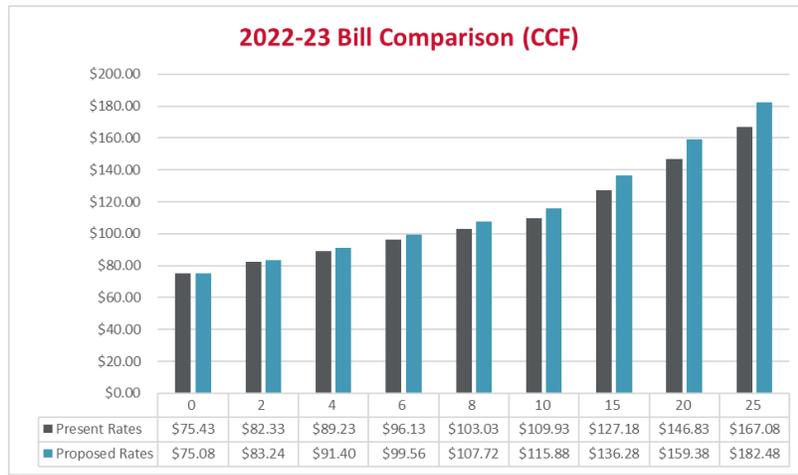
5.3.1 Review of the Present and Proposed Single-Family Water Rates

The City's proposed single-family customers' rate structure largely maintains the current structure, however, the consumption charge structure is altered slightly. The proposed rate structure consists of a monthly fixed charge by meter size and a consumption charge which is a three-tiered increasing block rate structure as compared to the current two-tiered structure. Provided below in Table 5 - 1 is a summary of the present and proposed water rates for the City's single-family residential customers. As noted in the cost of service section of this report, a review of single family consumption patterns was undertaken. Given the average customer consumption patterns, the proposed tier sizes were developed to reflect average consumption, average peak consumption, and all above peak consumption. In this way, the tier sizes tie to the consumption patterns of the single family customers as do the proposed rates given the average unit costs as developed based on the characteristics of the consumption, and customers, in each tier.

**Table 5 - 1
Summary of the Monthly Single-Family Water Rates**

	Present Rate	2022-23	2023-24	2024-25	2025-26	2026-27
Fixed Charge	\$ / Acct / Month					
1" & less	\$75.43	\$75.08	\$79.21	\$83.57	\$88.17	\$93.02
1 1/2"	113.15	112.62	118.81	125.34	132.23	139.50
2"	188.58	187.70	198.02	208.91	220.40	232.52
3"	377.17	375.42	396.07	417.85	440.83	465.08
4"	603.47	600.67	633.71	668.56	705.33	744.12
6"	1,206.94	1,201.34	1,267.41	1,337.12	1,410.66	1,488.25
8"	1,885.84	1,877.09	1,980.33	2,089.25	2,204.16	2,325.39
10"	3,771.68	3,754.18	3,960.66	4,178.50	4,408.32	4,650.78
12"	6,034.69	6,006.69	6,337.06	6,685.60	7,053.31	7,441.24
Consumption Charge	\$ / CCF					
0 - 16 CCF	\$3.45	--	--	--	--	--
16 + CCF	4.05	--	--	--	--	--
0 – 15 CCF	--	\$4.08	\$4.30	\$4.54	\$4.79	\$5.05
15 – 35 CCF	--	4.62	4.87	5.14	5.42	5.72
35 + CCF	--	5.35	5.64	5.95	6.28	6.63

The proposed rates in Table 5 – 1 for 2022-23 show the fixed meter charge for 5/8-inch of \$75.08/month. This is based on the results of the average unit costs developed in the cost of



service and previously summarized in Table 4 - 6. The subsequent meter sizes are adjusted by the AWWA 5/8" meter equivalencies. The AWWA meter equivalencies reflect the safe operating capacity of the larger meter sizes, and the fixed costs associated with providing that level of capacity. Also shown in the table are the proposed tiered rates for 2022-23 which is taken directly from column D

in Table 4 – 5, or the calculated average unit costs from the cost of service analysis. The bill comparison chart shows the bill impact to single-family residential customers, assuming a 5/8" meter, at varying levels of water usage.

5.3.2 Review of the Present and Proposed Multi-Family Water Rates

For multi-family customers, the existing rate structure is maintained. Multi-family has the same fixed charge by meter size as single-family customers. For multi-family, the proposed consumption charge is a uniform rate structure. The consumption charge was determined through the cost of service process whereby costs were distributed to the consumption charge based on the consumption characteristics for the multi-family customers (See Table 4 – 5). Table 5 – 2 provides a summary of the present and proposed multi-family rates.

Table 5 - 2 Summary of the Monthly Multi-Family Water Rates						
Rate Component	Present Rate	2022-23	2023-24	2024-25	2025-26	2026-27
Fixed Charge	\$ / Acct / Mth					
1" & less	\$75.43	\$75.08	\$79.21	\$83.57	\$88.17	\$93.02
1 1/2"	113.15	112.62	118.81	125.34	132.23	139.50
2"	188.58	187.70	198.02	208.91	220.40	232.52
3"	377.17	375.42	396.07	417.85	440.83	465.08
4"	603.47	600.67	633.71	668.56	705.33	744.12
6"	1,206.94	1,201.34	1,267.41	1,337.12	1,410.66	1,488.25
8"	1,885.84	1,877.09	1,980.33	2,089.25	2,204.16	2,325.39
10"	3,771.68	3,754.18	3,960.66	4,178.50	4,408.32	4,650.78
12"	6,034.69	6,006.69	6,337.06	6,685.60	7,053.31	7,441.24
Consumption Charge	\$ / CCF					
All Use	\$3.75	\$4.13	\$4.36	\$4.60	\$4.85	\$5.12

Similar to the single-family rates, the multi-family fixed and consumption rates are based on the average unit costs as calculated and developed in the cost of service analysis. The average unit costs for multi-family the fixed charge and consumption charge can be referenced in Table 4 – 6 and Table 4 – 5, respectively.

5.3.3 Review of the Present and Proposed Commercial Water Rates

Similar to the multi-family rates, the proposed commercial rates were adjusted to reflect the overall revenue needs from the revenue requirement analysis and the calculated average unit costs from the cost of service analysis. The current rate structure is the same as multi-family with a fixed meter charge based on the size of meter and a uniform consumption charge on a per CCF basis. The rates for the commercial customers are based on the specific costs distributed in the cost of service analysis for the commercial customer class of service. Presented below in Table 5 - 3 is a summary of the present and proposed non-residential water rates.

Table 5 - 3
Summary of the Monthly Commercial Water Rates

Rate Component	Present Rate	2022-23	2023-24	2024-25	2025-26	2026-27
Fixed Charge	<i>\$/Acct / Mth</i>					
1" & less	\$75.43	\$75.08	\$79.21	\$83.57	\$88.17	\$93.02
1 1/2"	113.15	112.62	118.81	125.34	132.23	139.50
2"	188.58	187.70	198.02	208.91	220.40	232.52
3"	377.17	375.42	396.07	417.85	440.83	465.08
4"	603.47	600.67	633.71	668.56	705.33	744.12
6"	1,206.94	1,201.34	1,267.41	1,337.12	1,410.66	1,488.25
8"	1,885.84	1,877.09	1,980.33	2,089.25	2,204.16	2,325.39
10"	3,771.68	3,754.18	3,960.66	4,178.50	4,408.32	4,650.78
12"	6,034.69	6,006.69	6,337.06	6,685.60	7,053.31	7,441.24
Consumption Charge	<i>\$/ CCF</i>					
All Use	\$3.75	\$4.14	\$4.37	\$4.61	\$4.86	\$5.13

As can be seen in Table 5 - 3, the commercial consumption charge is a uniform consumption charge. It should also be noted that the proposed fixed charge by meter size is identical to single family and multi-family customers and the consumption charges for 2022-23 are based on the average unit costs as developed in the cost of service analysis and previously shown in Table 4-6 and Table 4 - 5 respectively.

5.3.4 Review of the Present & Proposed Irrigation Water Rates

A similar approach was developed for the proposed irrigation rates as was used for multi-family and commercial. The current irrigation rate structure was maintained with a monthly meter charge on a 5/8-inch equivalency and the consumption charge is a uniform rate structure. It is important to note that the cost differences between the irrigation and all the other customers are due to the differing peak demands that are specific to irrigation customers and based on the best available and current data. Irrigation customers have higher peak demands with intermittent water requirements. Given these peak demands, the system must still be sized to provide that level of water availability at all times. Again, the proposed rates for this customer class of service are the direct output of the calculated average unit costs within the cost of service analysis as shown in Table 4 – 5 in column D and Table 4 - 6. Provided below in Table 5 - 4 is a summary of the present and proposed rates for the irrigation customers.

Table 5 - 4
Summary of the Monthly Irrigation Water Rates

Rate Component	Present Rate	2022-23	2023-24	2024-25	2025-26	2026-27
Fixed Charge	\$ / Acct/Mth					
1" & less	\$75.43	\$75.08	\$79.21	\$83.57	\$88.17	\$93.02
1 1/2"	113.15	112.62	118.81	125.34	132.23	139.50
2"	188.58	187.70	198.02	208.91	220.40	232.52
3"	377.17	375.42	396.07	417.85	440.83	465.08
4"	603.47	600.67	633.71	668.56	705.33	744.12
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8"	1,885.84	1,877.09	1,980.33	2,089.25	2,204.16	2,325.39
10"	3,771.68	3,754.18	3,960.66	4,178.50	4,408.32	4,650.78
12"	6,034.69	6,006.69	6,337.06	6,685.60	7,053.31	7,441.24
Consumption Charge	\$ / CCF					
All Use	\$3.75	\$4.45	\$4.69	\$4.95	\$5.22	\$5.51

5.4 Water Rate Study Recommendations

Based on the results of the City’s water rate study, HDR recommends the following:

- Rate revenues for the City’s water utility should be increased annually by 5.5% in 2022-23 through 2026-27
- The proposed rates should be implemented to reflect each customer class’s proportional distribution of costs
- The rates are proposed to be implemented and effective each year on July 1
- When funds are available, increase the level of annual replacement funding to transition towards funding an amount greater than the City’s annual depreciation expense levels
- Prior to the implementation of the fifth, and final, proposed rate adjustment the City should complete another comprehensive review of the water rates

5.5 Summary of the Water Rate Study

This completes the water rate analysis for the City of Solvang’s water utility. This study has provided a comprehensive review and development of proposed water rates for the City. The results of the water rate study were presented to the City Council in March 2022 and a public hearing held on June 13, 2022. At the completion of the public hearing the City Council approved the rate study and projection of rates for the five year period as outlined in this report. The adoption of the proposed water rates will allow the City to meet their current and projected water system financial obligations for the time period reviewed based on the assumed customer growth, capital plan, and projected increases in operating costs. Should these assumptions change, the proposed rate adjustments may also need to be revised to reflect the changed conditions.



Water Technical Appendix

**City of Solvang
Water Rate Study
Revenue Requirement Summary
Exhibit 1**

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Revenue											
Rate Revenues	\$4,969,549	\$4,950,200	\$4,965,635	\$4,981,166	\$4,996,728	\$5,012,349	\$5,028,011	\$5,043,737	\$5,059,525	\$5,075,364	\$5,091,252
Non-Operating Revenues	58,100	79,810	84,349	86,664	83,225	78,133	70,156	66,148	67,059	68,799	71,430
Total Revenues	\$5,027,649	\$5,030,009	\$5,049,984	\$5,067,830	\$5,079,953	\$5,090,483	\$5,098,167	\$5,109,885	\$5,126,584	\$5,144,162	\$5,162,682
Expenses											
Total Operations & Maintenance	\$5,089,020	\$4,338,427	\$4,564,636	\$4,803,746	\$5,131,537	\$5,403,711	\$5,691,589	\$5,996,126	\$6,318,338	\$6,659,301	\$7,020,163
Net Debt Service	0	0	0	161,880	315,406	469,158	469,158	469,158	469,158	469,158	469,158
Rate Funded Capital	0	800,000	800,000	800,000	800,000	800,000	850,000	900,000	925,000	950,000	1,000,000
Reserve Funding	(61,371)	163,844	246,589	170,129	26,352	(43,796)	(7,754)	37,882	119,349	207,832	278,703
Total Revenue Requirement	\$5,027,649	\$5,302,270	\$5,611,225	\$5,935,755	\$6,273,295	\$6,629,073	\$7,002,993	\$7,403,167	\$7,831,844	\$8,286,291	\$8,768,024
Bal. / Def.) of Funds	\$0	(\$272,261)	(\$561,241)	(\$867,925)	(\$1,193,342)	(\$1,538,591)	(\$1,904,826)	(\$2,293,282)	(\$2,705,260)	(\$3,142,129)	(\$3,605,342)
Bal. / (Def.) as a % of Rate Rev.	0.0%	5.5%	11.3%	17.4%	23.9%	30.7%	37.9%	45.5%	53.5%	61.9%	70.8%
Proposed Rate Adjustment	0.0%	5.5%									
Add'l Revenue from Adj.	\$0	\$272,261	\$561,241	\$867,925	\$1,193,342	\$1,538,591	\$1,904,826	\$2,293,282	\$2,705,260	\$3,142,129	\$3,605,342
Total Bal/(Def.) of Funds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Additional Rate Increase Needed	0.0%										
Avg Res Mo Bill (5/8" + 15 CCF)	\$127.18	\$134.17	\$141.55	\$149.34	\$157.55	\$166.22	\$175.36	\$185.01	\$195.18	\$205.92	\$217.24
Ending Balance	\$6,026,526	\$6,014,557	\$5,855,965	\$4,613,233	\$4,326,734	\$3,573,333	\$2,709,672	\$2,750,021	\$2,870,049	\$3,075,963	\$3,374,318
<i>Total Target (180 days of O&M)</i>	<i>\$2,509,654</i>	<i>\$2,139,498</i>	<i>\$2,251,053</i>	<i>\$2,368,971</i>	<i>\$2,530,621</i>	<i>\$2,664,844</i>	<i>\$2,806,811</i>	<i>\$2,956,994</i>	<i>\$3,115,893</i>	<i>\$3,284,039</i>	<i>\$3,461,998</i>

City of Solvang
Water Rate Study
Exhibit 2
Escalation Factors

	<i>Budgeted</i>	<i>Proposed</i>									
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Revenues											
Customer Growth	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
<i>Single Family - Cust Growth</i>	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
<i>Condo - Cust Growth</i>	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
<i>Commercial - Cust Growth</i>	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
<i>Institutional - Cust Growth</i>	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
<i>Hotel - Cust Growth</i>	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
<i>Irrigation - Cust Growth</i>	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
<i>Multi-Family - Cust Growth</i>	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
<i>Mobile Home - Cust Growth</i>	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Consump Growth											
<i>Single Family - Cons Growth</i>	0.0%	-2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Condo - Cons Growth</i>	0.0%	-1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Commercial - Cons Growth</i>	0.0%	-1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Institutional - Cons Growth</i>	0.0%	-1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Hotel - Cons Growth</i>	0.0%	-1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Irrigation - Cons Growth</i>	0.0%	-2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Multi-Family - Cons Growth</i>	0.0%	-1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Mobile Home - Cons Growth</i>	0.0%	-1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Misc Revenues	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Expenses											
Labor	Budgeted	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Benefits - Medical	Budgeted	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Benefits - Other	Budgeted	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Professional / Special Srvcs	Budgeted	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Materials & Supplies	Budgeted	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Equipment	Budgeted	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Miscellaneous	Budgeted	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Utilities	Budgeted	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Insurance	Budgeted	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Flat	Budgeted	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rate Revenue Adj	0.0%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
Power	Budgeted	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Purchased Water	Budgeted	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Interest	0.7%	0.8%	0.9%	1.0%							

	Budgeted	Proposed										Notes
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	
Revenues												
<i>Rate Revenues</i>												
Single Family	\$2,756,407	\$2,741,483	\$2,749,576	\$2,757,731	\$2,765,919	\$2,774,147	\$2,782,406	\$2,790,707	\$2,799,062	\$2,807,457	\$2,815,893	
Condo	390,173	390,901	392,480	394,069	395,658	397,255	398,862	400,478	402,093	403,718	405,352	
Commercial	602,734	602,776	604,919	607,085	609,251	611,425	613,600	615,788	617,986	620,183	622,380	
Institutional	154,087	154,275	154,958	155,641	156,325	157,008	157,692	158,375	159,059	159,742	160,425	
Hotel	163,882	163,286	163,662	164,037	164,413	164,789	165,164	165,540	165,916	166,291	166,667	
Irrigation	566,271	562,161	563,714	565,266	566,819	568,371	569,923	571,476	573,028	574,581	576,133	
Multi-Family	264,047	263,799	264,663	265,528	266,392	267,256	268,121	268,985	269,850	270,714	271,579	
Mobile Home	71,948	71,518	71,663	71,808	71,953	72,098	72,243	72,387	72,532	72,677	72,822	
Total Rate Revenues	\$4,969,549	\$4,950,200	\$4,965,635	\$4,981,166	\$4,996,728	\$5,012,349	\$5,028,011	\$5,043,737	\$5,059,525	\$5,075,364	\$5,091,252	
<i>Non-Operating Revenues</i>												
Interest	\$20,000	\$41,604	\$46,037	\$48,246	\$44,700	\$39,500	\$31,415	\$27,298	\$28,100	\$29,730	\$32,251	Calculated
Inspection Fees	100	101	101	102	102	103	103	104	104	105	105	As Misc Revenues
Lease Income	18,000	18,090	18,180	18,271	18,363	18,455	18,547	18,640	18,733	18,826	18,921	As Misc Revenues
Bulk Water	600	603	606	609	612	615	618	621	624	628	631	As Misc Revenues
Meter Change Fee	400	402	404	406	408	410	412	414	416	418	420	As Misc Revenues
Misc Income	2,000	2,010	2,020	2,030	2,040	2,051	2,061	2,071	2,081	2,092	2,102	As Misc Revenues
Fines & Penalties	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	As Flat
Sale of Surplus	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	As Flat
Insurance Refunds	0	0	0	0	0	0	0	0	0	0	0	As Flat
Collection Acct Recovery	500	500	500	500	500	500	500	500	500	500	500	As Flat
Total Non-Operating Revenues	\$58,100	\$79,810	\$84,349	\$86,664	\$83,225	\$78,133	\$70,156	\$66,148	\$67,059	\$68,799	\$71,430	
Total Revenues	\$5,027,649	\$5,030,009	\$5,049,984	\$5,067,830	\$5,079,953	\$5,090,483	\$5,098,167	\$5,109,885	\$5,126,584	\$5,144,162	\$5,162,682	

	Budgeted	Proposed										Notes
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	
Expenses												
Other Pose Emp Benefits	\$4,468	\$4,624	\$4,786	\$4,954	\$5,127	\$5,307	\$5,492	\$5,685	\$5,884	\$6,089	\$6,303	As Benefits - Other
Retiree Medical / Dental / Life	8,915	9,272	9,642	10,028	10,429	10,846	11,280	11,732	12,201	12,689	13,196	As Benefits - Medical
Salaries	393,194	406,956	421,199	435,941	451,199	466,991	483,336	500,253	517,761	535,883	554,639	As Labor
FICA	37,810	39,133	40,503	41,921	43,388	44,906	46,478	48,105	49,789	51,531	53,335	As Benefits - Other
Retirement	4,794	4,962	5,135	5,315	5,501	5,694	5,893	6,099	6,313	6,534	6,762	As Benefits - Other
Cafeteria Plan	52,907	54,759	56,675	58,659	60,712	62,837	65,036	67,312	69,668	72,107	74,631	As Benefits - Other
Workers' Comp Ins.	23,963	24,802	25,670	26,568	27,498	28,461	29,457	30,488	31,555	32,659	33,802	As Benefits - Other
Safety Gear	6,000	6,150	6,304	6,461	6,623	6,788	6,958	7,132	7,310	7,493	7,681	As Miscellaneous
Workers' Comp Ins - Retro Bal	1,200	1,242	1,285	1,330	1,377	1,425	1,475	1,527	1,580	1,635	1,693	As Labor
CalPERS Liability Reduction	(1,182)	0	0	0	0	0	0	0	0	0	0	As Flat
Long Term Disability	1,769	1,840	1,913	1,990	2,069	2,152	2,238	2,328	2,421	2,518	2,619	As Benefits - Medical
Retirement - ER Pd 8% EE Share	7,558	7,823	8,096	8,380	8,673	8,977	9,291	9,616	9,952	10,301	10,661	As Benefits - Other
Retirement - PERS UAL	34,316	35,517	36,760	38,047	39,378	40,757	42,183	43,660	45,188	46,769	48,406	As Benefits - Other
Retirement - PERS PEPRA ER Cost	21,705	22,465	23,251	24,065	24,907	25,779	26,681	27,615	28,581	29,582	30,617	As Benefits - Other
Housing Allowance	24,720	25,585	26,481	27,408	28,367	29,360	30,387	31,451	32,552	33,691	34,870	As Benefits - Other
Cell Phone Allowance	300	311	321	333	344	356	369	382	395	409	423	As Benefits - Other
Overtime	10,000	11,000	11,385	11,783	12,196	12,623	13,065	13,522	13,995	14,485	14,992	As Labor
Specialty Pays	16,909	17,501	18,113	18,747	19,403	20,083	20,785	21,513	22,266	23,045	23,852	As Labor
Membership Dues	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360	As Materials & Supplies
Supplies	20,000	20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095	26,878	As Materials & Supplies
Utility Bill Printing / Supplies	3,000	3,090	3,183	3,278	3,377	3,478	3,582	3,690	3,800	3,914	4,032	As Materials & Supplies
Postage	6,400	6,592	6,790	6,993	7,203	7,419	7,642	7,871	8,107	8,351	8,601	As Materials & Supplies
Small Equipment	3,000	3,090	3,183	3,278	3,377	3,478	3,582	3,690	3,800	3,914	4,032	As Materials & Supplies
Chlorination	21,500	22,145	22,809	23,494	24,198	24,924	25,672	26,442	27,236	28,053	28,894	As Materials & Supplies
Vehicle Fuel	7,500	7,800	8,112	8,436	8,774	9,125	9,490	9,869	10,264	10,675	11,102	As Utilities
Repairs and Maintenance	80,000	160,000	164,800	169,744	174,836	180,081	185,484	191,048	196,780	202,683	208,764	As Materials & Supplies
Vehicle Repairs & Maint.	9,500	9,785	10,079	10,381	10,692	11,013	11,343	11,684	12,034	12,395	12,767	As Materials & Supplies
Computer / Desktop Equip. Supplies	2,167	2,232	2,299	2,368	2,439	2,512	2,588	2,665	2,745	2,827	2,912	As Materials & Supplies
Well Repairs and Maintenance	30,000	30,900	31,827	32,782	33,765	34,778	35,822	36,896	38,003	39,143	40,317	As Materials & Supplies
Power for Pumping	150,000	156,000	162,240	168,730	175,479	182,498	189,798	197,390	205,285	213,497	222,037	As Power
Purchased Water	185,640	197,707	210,558	224,244	238,820	254,343	270,875	288,482	307,233	327,204	348,472	As Purchased Water
State Water Payments	2,990,000	2,394,350	2,549,983	2,715,732	2,892,254	3,080,251	3,280,467	3,493,697	3,720,788	3,962,639	4,220,210	As Purchased Water
State Water Payments - Delivery	0	0	0	0	75,000	79,875	85,067	90,596	96,485	102,756	109,436	As Purchased Water
Ground Water Charges	20,000	20,800	21,632	22,497	23,397	24,333	25,306	26,319	27,371	28,466	29,605	As Utilities
Cloud Seeding Program	3,500	3,605	3,713	3,825	3,939	4,057	4,179	4,305	4,434	4,567	4,704	As Materials & Supplies
Insurance	30,938	31,866	32,822	33,807	34,821	35,866	36,942	38,050	39,191	40,367	41,578	As Insurance
Lab Fees	8,000	8,240	8,487	8,742	9,004	9,274	9,552	9,839	10,134	10,438	10,751	As Materials & Supplies
Lease Payments	467	481	495	510	526	541	558	574	592	609	628	As Materials & Supplies
Legal Fees	40,000	41,400	42,849	44,349	45,901	47,507	49,170	50,891	52,672	54,516	56,424	As Professional / Special Svcs
Printing and Publishing	1,500	1,545	1,591	1,639	1,688	1,739	1,791	1,845	1,900	1,957	2,016	As Materials & Supplies
Professional Services	20,000	20,700	21,425	22,174	22,950	23,754	24,585	25,446	26,336	27,258	28,212	As Professional / Special Svcs
Underground Alert	200	206	212	219	225	232	239	246	253	261	269	As Materials & Supplies
Water Meter Replacement	10,000	10,400	10,816	11,249	11,699	12,167	12,653	13,159	13,686	14,233	14,802	As Equipment
Sustainable Groundwater Mngmnt	20,000	20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095	26,878	As Materials & Supplies
IT Expenses - Water Fund	31,665	32,773	33,920	35,108	36,336	37,608	38,924	40,287	41,697	43,156	44,667	As Professional / Special Svcs
Property Tax	90	93	95	98	101	104	107	111	114	117	121	As Materials & Supplies
Permit Fees	16,500	16,995	17,505	18,030	18,571	19,128	19,702	20,293	20,902	21,529	22,175	As Materials & Supplies
Credit Card Process Fee	6,000	6,180	6,365	6,556	6,753	6,956	7,164	7,379	7,601	7,829	8,063	As Materials & Supplies
Water Conservation Program	14,000	14,490	14,997	15,522	16,065	16,628	17,210	17,812	18,435	19,081	19,748	As Benefits - Other
Suspended Table A Water	0	0	0	820,000	0	0	0	0	0	0	0	As Purchased Water
Table A Funding	0	0	0	(820,000)	0	0	0	0	0	0	0	
Overhead Contribution	304,107	311,710	319,502	327,490	335,677	344,069	352,671	361,488	370,525	379,788	389,283	As Miscellaneous
Bad Debt Write Offs	1,500	1,538	1,576	1,615	1,656	1,697	1,740	1,783	1,828	1,873	1,920	As Miscellaneous
Total Expenses	\$4,689,020	\$4,234,427	\$4,456,476	\$4,691,260	\$5,014,551	\$5,282,046	\$5,565,057	\$5,864,533	\$6,181,481	\$6,516,970	\$6,872,139	

City of Solvang
Water Rate Study
Exhibit 3
Revenue Requirement

	Budgeted	Proposed										Notes
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	
Future O&M												
FTE	\$0	\$104,000	\$108,160	\$112,486	\$116,986	\$121,665	\$126,532	\$131,593	\$136,857	\$142,331	\$148,024	As Utilities
Supplemental Water	400,000	0	0	0	0	0	0	0	0	0	0	As Labor
Total Future O&M	\$400,000	\$104,000	\$108,160	\$112,486	\$116,986	\$121,665	\$126,532	\$131,593	\$136,857	\$142,331	\$148,024	
Total Operations & Maintenance	\$5,089,020	\$4,338,427	\$4,564,636	\$4,803,746	\$5,131,537	\$5,403,711	\$5,691,589	\$5,996,126	\$6,318,338	\$6,659,301	\$7,020,163	
Debt Service												
Existing Debt	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
New SRF Loans	0	0	0	0	0	0	0	0	0	0	0	Calc @ 2.4% for 20 Yrs
New Revenue Bonds	0	0	0	161,880	315,406	469,158	469,158	469,158	469,158	469,158	469,158	Calc @ 4.6% for 20 Yrs
Total Debt Service	\$0	\$0	\$0	\$161,880	\$315,406	\$469,158	\$469,158	\$469,158	\$469,158	\$469,158	\$469,158	
<i>Less Connection Fees Fund</i>	<i>\$0</i>											
Net Debt Service	\$0	\$0	\$0	\$161,880	\$315,406	\$469,158	\$469,158	\$469,158	\$469,158	\$469,158	\$469,158	
Rate Funded Capital	\$0	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000	\$850,000	\$900,000	\$925,000	\$950,000	\$1,000,000	\$359,064 2019-20 Dep. Exp.
Reserve Funding												
Operating Fund	(\$61,371)	\$163,844	\$246,589	\$170,129	\$26,352	(\$43,796)	(\$7,754)	\$37,882	\$119,349	\$207,832	\$278,703	
Capital Fund	0	0	0	0	0	0	0	0	0	0	0	
Total Reserve Funding	(\$61,371)	\$163,844	\$246,589	\$170,129	\$26,352	(\$43,796)	(\$7,754)	\$37,882	\$119,349	\$207,832	\$278,703	
Total Revenue Requirement	\$5,027,649	\$5,302,270	\$5,611,225	\$5,935,755	\$6,273,295	\$6,629,073	\$7,002,993	\$7,403,167	\$7,831,844	\$8,286,291	\$8,768,024	
Bal/(Def.) of Funds	\$0	(\$272,261)	(\$561,241)	(\$867,925)	(\$1,193,342)	(\$1,538,591)	(\$1,904,826)	(\$2,293,282)	(\$2,705,260)	(\$3,142,129)	(\$3,605,342)	
Rate Adj. as a % of Rate Rev.	0.0%	5.5%	11.3%	17.4%	23.9%	30.7%	37.9%	45.5%	53.5%	61.9%	70.8%	
Proposed Rate Adjustment	0.0%	5.5%										
<i>Effective Months</i>	<i>12</i>											
Add'l Revenue from Adj.	\$0	\$272,261	\$561,241	\$867,925	\$1,193,342	\$1,538,591	\$1,904,826	\$2,293,282	\$2,705,260	\$3,142,129	\$3,605,342	
Total Bal/(Def.) of Funds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Additional Rate Increase Needed	0.0%											

	Budgeted	Proposed										Notes
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	
Avg Res Mo Bill (5/8" + 15 CCF)	\$127.18											
After Proposed Rate Adjustment	\$127.18	\$134.17	\$141.55	\$149.34	\$157.55	\$166.22	\$175.36	\$185.01	\$195.18	\$205.92	\$217.24	
Annual \$ Change		6.99	7.38	7.79	8.21	8.67	9.14	9.64	10.18	10.73	11.33	
Cumulative Change		6.99	14.37	22.16	30.37	39.04	48.18	57.83	68.00	78.74	90.06	
Reserve Funds												
Beginning Balance	\$5,872,624	\$5,205,516	\$5,192,332	\$5,032,319	\$4,607,959	\$4,319,623	\$3,564,177	\$2,698,260	\$2,736,142	\$2,855,490	\$3,063,322	
Operating Fund												
Beginning Balance	\$5,872,624	\$5,205,516	\$5,192,332	\$5,032,319	\$4,607,959	\$4,319,623	\$3,564,177	\$2,698,260	\$2,736,142	\$2,855,490	\$3,063,322	
Plus: Additions	0	163,844	246,589	170,129	26,352	0	0	37,882	119,349	207,832	278,703	
Less: Uses of Funds	(667,108)	(177,027)	(406,602)	(594,489)	(314,688)	(755,446)	(865,917)	0	0	0	0	
Ending Balance	\$5,205,516	\$5,192,332	\$5,032,319	\$4,607,959	\$4,319,623	\$3,564,177	\$2,698,260	\$2,736,142	\$2,855,490	\$3,063,322	\$3,342,025	
Target: 180 days of O&M	\$2,509,654	\$2,139,498	\$2,251,053	\$2,368,971	\$2,530,621	\$2,664,844	\$2,806,811	\$2,956,994	\$3,115,893	\$3,284,039	\$3,461,998	
days of O&M	373	437	402	350	307	241	173	167	165	168	174	
Capital Fund												
Beginning Balance	\$0	\$1,010	\$2,225	\$3,646	\$5,274	\$7,111	\$9,156	\$11,412	\$13,879	\$14,559	\$12,641	
Plus: Connection Fees	41,010	41,215	41,421	41,628	41,836	42,046	42,256	42,467	42,679	42,893	43,107	As Customer Growth
Plus: Additions	0	0	0	0	0	0	0	0	0	0	0	
Less: Uses of Funds	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(42,000)	(44,810)	(23,455)	
Ending Balance	\$1,010	\$2,225	\$3,646	\$5,274	\$7,111	\$9,156	\$11,412	\$13,879	\$14,559	\$12,641	\$32,294	
Target: 2x Depreciation	\$718,128	\$737,517	\$757,430	\$777,881	\$798,884	\$820,454	\$842,606	\$865,356	\$888,721	\$912,716	\$937,360	
Table A Funding												
Beginning Balance	\$0	\$820,000	\$820,000	\$820,000	\$0							
Plus: Additions	820,000	0	0	0	0	0	0	0	0	0	0	
Less: Uses of Funds	0	0	0	(820,000)	0	0	0	0	0	0	0	
Ending Balance	\$820,000	\$820,000	\$820,000	\$0								
Ending Balance	\$6,026,526	\$6,014,557	\$5,855,965	\$4,613,233	\$4,326,734	\$3,573,333	\$2,709,672	\$2,750,021	\$2,870,049	\$3,075,963	\$3,374,318	
Total Target (180 days of O&M)	\$2,509,654	\$2,139,498	\$2,251,053	\$2,368,971	\$2,530,621	\$2,664,844	\$2,806,811	\$2,956,994	\$3,115,893	\$3,284,039	\$3,461,998	

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	Total
Capital Improvements												
Capital Equipment	\$5,000	\$5,135	\$5,416	\$5,867	\$6,526	\$7,456	\$8,749	\$10,542	\$13,047	\$16,582	\$21,644	\$105,965
Equipment Replacement	29,289	30,080	31,726	34,366	38,230	43,678	51,249	61,756	76,426	97,135	126,788	620,722
Pump-Motor-Impellor Maintenance	6,000	6,162	6,499	7,040	7,832	8,948	10,499	12,651	15,656	19,899	25,973	127,158
Valve & FH Replacement Program	20,000	20,540	21,664	23,467	26,106	29,825	34,995	42,170	52,187	66,328	86,577	423,860
Vehicle Replacement	60,448	0	0	0	0	0	0	0	0	0	0	60,448
Upland Well Development	10,000	0	0	0	0	0	0	0	0	0	0	10,000
SCADA Upgrades	15,000	0	0	0	0	0	0	0	0	0	0	15,000
River Well Development	20,000	0	0	0	0	0	0	0	0	0	0	20,000
Reservoir 2 Repair Program	0	0	0	0	0	0	0	0	0	0	0	0
Projects - Water	480,000	955,110	1,181,296	3,563,750	3,125,994	3,461,743	1,408,004	571,878	562,173	540,673	501,415	16,352,036
Meter Replacement Program	0	0	0	0	0	0	234,667	241,003	247,510	254,193	261,056	1,238,431
Total Capital Improvements	\$645,737	\$1,017,027	\$1,246,602	\$3,634,489	\$3,204,688	\$3,551,650	\$1,748,163	\$940,000	\$967,000	\$994,810	\$1,023,455	\$18,973,621
Future Unidentified Projects	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
To Capital Reserves	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Capital Improvement Projects	\$645,737	\$1,017,027	\$1,246,602	\$3,634,489	\$3,204,688	\$3,551,650	\$1,748,163	\$940,000	\$967,000	\$994,810	\$1,023,455	\$18,973,621
Less: Outside Funding Sources												
Operating Fund	\$605,737	\$177,027	\$406,602	\$594,489	\$314,688	\$711,650	\$858,163	\$0	\$0	\$0	\$0	\$3,668,356
Capital Fund	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	42,000	44,810	23,455	430,265
Developer Funded	0	0	0	0	0	0	0	0	0	0	0	0
New SRF Loans	0	0	0	0	0	0	0	0	0	0	0	0
New Revenue Bonds	0	0	0	2,200,000	2,050,000	2,000,000	0	0	0	0	0	6,250,000
Total Outside Funding Sources	\$645,737	\$217,027	\$446,602	\$2,834,489	\$2,404,688	\$2,751,650	\$898,163	\$40,000	\$42,000	\$44,810	\$23,455	\$10,348,621
Rate Funded Capital	\$0	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000	\$850,000	\$900,000	\$925,000	\$950,000	\$1,000,000	\$8,625,000

City of Solvang
Water Rate Study
Exhibit 5
Existing Debt Service

Year	Existing Debt	Total
2021-22	\$0	\$0
2022-23	0	0
2023-24	0	0
2024-25	0	0
2025-26	0	0
2026-27	0	0
2027-28	0	0
2028-29	0	0
2029-30	0	0
2030-31	0	0
2031-32	0	0
2032-33	0	0
2033-34	0	0
2034-35	0	0
2035-36	0	0
2036-37	0	0
2037-38	0	0
2038-39	0	0
2039-40	0	0
2040-41	0	0
2041-42	0	0
2042-43	0	0
2043-44	0	0
2044-45	0	0
2045-46	0	0
2046-47	0	0
2047-48	0	0
	----- \$0	----- \$0

		Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Total
Single Family														
Meter Fee	\$ / Acct.													
5/8"	\$75.43	1,008	1,003	1,010	1,009	1,009	1,004	1,007	1,004	1,005	1,007	1,009	1,009	1,007
3/4"	113.15	388	388	392	393	388	388	389	390	391	389	391	389	390
1"	188.58	70	71	70	71	70	70	70	71	71	70	72	71	71
1 1/2"	377.17	1	1	1	1	1	1	1	1	1	1	1	1	1
2"	603.47	0	0	0	0	0	0	0	0	0	0	0	0	0
3"	1,206.94	0	0	0	0	0	0	0	0	0	0	0	0	0
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	0	0
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	0	0
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	0	0
5/8" Out	113.15	1	1	1	1	1	1	1	1	1	1	1	1	1
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	0	0
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	0	0
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	0	0
2" Out	905.21	0	0	0	0	0	0	0	0	0	0	0	0	0
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	0	0
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	0	0
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	0	0
		1,468	1,464	1,474	1,475	1,469	1,464	1,468	1,467	1,469	1,468	1,474	1,471	1,469
Total Meter Fee Revenue		\$133,627	\$133,438	\$134,230	\$134,456	\$133,702	\$133,325	\$133,664	\$133,740	\$133,928	\$133,664	\$134,419	\$134,004	\$1,606,197
Water Use	\$ / CCF													
0 - 16 Units	\$3.45	18,249	18,866	18,954	17,979	17,170	16,465	10,562	12,386	12,826	11,655	17,219	18,638	190,969
16 + Units	4.05	15,313	17,626	19,244	13,855	10,292	8,291	1,438	2,733	2,927	1,707	9,944	15,902	119,272
0 - 16 Units (Out)	5.18	498	220	163	68	48	51	55	86	30	80	81	227	1,607
16 + Units (Out)	6.08													0
		34,060	36,712	38,361	31,902	27,510	24,807	12,055	15,205	15,783	13,442	27,244	34,767	311,848
Total Water Use Revenue		\$127,554	\$137,612	\$144,173	\$118,492	\$101,168	\$90,647	\$42,547	\$54,245	\$56,259	\$47,537	\$100,098	\$129,879	\$1,150,211
Total Single Family		\$261,180	\$271,049	\$278,403	\$252,949	\$234,869	\$223,972	\$176,212	\$187,985	\$190,188	\$181,201	\$234,517	\$263,883	\$2,756,407

		Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Total
Condo														
Meter Fee	\$ / Acct.													
5/8"	\$75.43	311	305	304	301	301	298	302	301	301	300	303	299	302
3/4"	113.15	1	1	1	1	1	1	1	1	1	1	1	1	1
1"	188.58	0	0	0	0	0	0	0	0	0	0	0	0	0
1 1/2"	377.17	2	2	2	2	2	2	2	2	2	2	2	2	2
2"	603.47	3	3	3	3	3	3	3	3	3	3	3	3	3
3"	1,206.94	0	0	0	0	0	0	0	0	0	0	0	0	0
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	0	0
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	0	0
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	0	0
5/8" Out	113.15	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	0	0
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	0	0
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	0	0
2" Out	905.21	0	0	0	0	0	0	0	0	0	0	0	0	0
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	0	0
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	0	0
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	0	0
		317	311	310	307	307	304	308	307	307	306	309	305	308
Total Meter Fee Revenue		\$26,137	\$25,684	\$25,609	\$25,382	\$25,382	\$25,156	\$25,458	\$25,382	\$25,382	\$25,307	\$25,533	\$25,231	\$305,644
Water Use	\$ / CCF													
All Use	\$3.75	1,878	1,971	2,058	1,855	1,924	1,952	1,795	1,720	1,825	1,776	1,786	2,001	22,541
All Use (Out)	5.63	0	0	0	0	0	0	0	0	0	0	0	0	0
		1,878	1,971	2,058	1,855	1,924	1,952	1,795	1,720	1,825	1,776	1,786	2,001	22,541
Total Water Use Revenue		\$7,043	\$7,391	\$7,718	\$6,956	\$7,215	\$7,320	\$6,731	\$6,450	\$6,844	\$6,660	\$6,698	\$7,504	\$84,529
Total Condo		\$33,179	\$33,075	\$33,326	\$32,339	\$32,597	\$32,476	\$32,189	\$31,832	\$32,226	\$31,967	\$32,231	\$32,735	\$390,173

		Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Total
Commercial														
Meter Fee	\$ / Acct.													
5/8"	\$75.43	116	115	114	116	114	115	115	115	117	115	114	115	115
3/4"	113.15	31	31	30	30	30	30	30	30	30	30	30	30	30
1"	188.58	16	16	16	16	17	17	17	17	17	17	18	18	17
1 1/2"	377.17	11	12	11	11	11	11	11	11	11	11	11	11	11
2"	603.47	11	11	11	11	11	11	11	11	11	11	11	11	11
3"	1,206.94	3	3	3	3	3	3	3	3	3	3	3	3	3
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	0	0
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	0	0
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	0	0
5/8" Out	113.15	3	3	3	3	3	3	3	3	3	3	3	3	3
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	0	0
1" Out	282.87	1	1	1	1	1	1	1	1	1	1	1	1	1
1 1/2" Out	565.76	1	1	1	1	1	1	1	1	1	1	1	1	1
2" Out	905.21	2	2	2	2	2	2	2	2	2	2	2	2	2
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	0	0
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	0	0
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	0	0
		195	195	192	194	193	194	194	194	196	194	194	195	194
Total Meter Fee Revenue		\$32,681	\$32,983	\$32,417	\$32,568	\$32,606	\$32,681	\$32,681	\$32,681	\$32,832	\$32,681	\$32,794	\$32,870	\$392,475
Water Use	\$ / CCF													
All Use	\$3.75	4,334	4,776	4,833	4,430	4,739	4,174	3,116	3,696	4,243	5,195	4,419	5,309	53,264
All Use (Out)	5.63	140	189	132	143	115	96	121	258	155	150	167	204	1,870
		4,474	4,965	4,965	4,573	4,854	4,270	3,237	3,954	4,398	5,345	4,586	5,513	55,134
Total Water Use Revenue		\$17,040	\$18,973	\$18,866	\$17,417	\$18,418	\$16,193	\$12,366	\$15,311	\$16,783	\$20,325	\$17,511	\$21,056	\$210,259
Total Commercial		\$49,721	\$51,956	\$51,283	\$49,985	\$51,024	\$48,874	\$45,047	\$47,992	\$49,615	\$53,006	\$50,305	\$53,926	\$602,734

		Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Total
Institutional														
Meter Fee	\$ / Acct.													
5/8"	\$75.43	3	3	3	3	3	3	3	3	3	3	3	3	3
3/4"	113.15	1	1	1	1	1	1	1	1	1	1	1	1	1
1"	188.58	4	4	4	4	4	4	4	4	4	4	4	4	4
1 1/2"	377.17	5	5	5	5	5	5	5	5	5	5	5	5	5
2"	603.47	6	6	6	6	6	6	6	6	6	6	6	6	6
3"	1,206.94	1	1	1	1	1	1	1	1	1	1	1	1	1
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	0	0
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	0	0
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	0	0
5/8" Out	113.15	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	0	0
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	0	0
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	0	0
2" Out	905.21	1	1	1	1	1	1	1	1	1	1	1	1	1
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	0	0
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	0	0
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	0	0
		21												
Total Meter Fee Revenue		\$8,713	\$8,713	\$8,713	\$8,713	\$8,713	\$8,713	\$8,713	\$8,713	\$8,713	\$8,713	\$8,713	\$8,713	\$104,551
Water Use	\$ / CCF													
All Use	\$3.75	1,045	1,174	986	962	742	677	489	487	485	763	723	1,030	9,563
All Use (Out)	5.63	187	213	205	202	212	215	212	198	220	205	150	212	2,431
		1,232	1,387	1,191	1,164	954	892	701	685	705	968	873	1,242	11,994
Total Water Use Revenue		\$4,971	\$5,601	\$4,851	\$4,744	\$3,975	\$3,748	\$3,026	\$2,940	\$3,056	\$4,014	\$3,555	\$5,055	\$49,536
Total Institutional		\$13,683	\$14,313	\$13,563	\$13,456	\$12,688	\$12,461	\$11,739	\$11,653	\$11,769	\$12,727	\$12,268	\$13,768	\$154,087

		Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Total
Hotel														
Meter Fee	\$ / Acct.													
5/8"	\$75.43	2	2	2	2	3	2	2	2	2	2	2	2	2
3/4"	113.15	1	1	1	1	1	1	1	1	1	1	1	1	1
1"	188.58	3	3	3	3	3	3	3	3	3	3	3	3	3
1 1/2"	377.17	3	3	3	3	3	3	3	3	3	3	3	3	3
2"	603.47	6	6	6	6	6	6	6	6	6	6	6	6	6
3"	1,206.94	0	0	0	0	0	0	0	0	0	0	0	0	0
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	0	0
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	0	0
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	0	0
5/8" Out	113.15	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	0	0
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	0	0
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	0	0
2" Out	905.21	0	0	0	0	0	0	0	0	0	0	0	0	0
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	0	0
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	0	0
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	0	0
		15	15	15	15	16	15	15	15	15	15	15	15	15
Total Meter Fee Revenue		\$5,582	\$5,582	\$5,582	\$5,582	\$5,658	\$5,582	\$5,582	\$5,582	\$5,582	\$5,582	\$5,582	\$5,582	\$67,060
Water Use	\$ / CCF													
All Use	\$3.75	2,424	2,681	2,693	2,435	2,615	1,915	1,081	1,261	1,851	2,242	2,071	2,550	25,819
All Use (Out)	5.63	0	0	0	0	0	0	0	0	0	0	0	0	0
		2,424	2,681	2,693	2,435	2,615	1,915	1,081	1,261	1,851	2,242	2,071	2,550	25,819
Total Water Use Revenue		\$9,090	\$10,054	\$10,099	\$9,131	\$9,806	\$7,181	\$4,054	\$4,729	\$6,941	\$8,408	\$7,766	\$9,563	\$96,821
Total Hotel		\$14,672	\$15,636	\$15,681	\$14,713	\$15,464	\$12,763	\$9,636	\$10,311	\$12,523	\$13,990	\$13,348	\$15,145	\$163,882

		Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Total
Irrigation														
Meter Fee	\$ / Acct.													
5/8"	\$75.43	25	25	25	25	25	25	25	25	25	25	25	25	25
3/4"	113.15	6	6	6	6	7	7	7	7	7	7	7	7	7
1"	188.58	16	16	16	16	16	16	16	16	16	16	16	16	16
1 1/2"	377.17	17	17	17	17	17	17	17	17	18	17	17	17	17
2"	603.47	16	16	16	16	16	16	16	16	16	16	16	16	16
3"	1,206.94	0	0	0	0	0	0	0	0	0	0	0	0	0
4"	1,885.84	1	1	1	1	1	1	1	1	1	1	1	1	1
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	0	0
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	0	0
5/8" Out	113.15	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	0	0
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	0	0
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	0	0
2" Out	905.21	0	0	0	0	0	0	0	0	0	0	0	0	0
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	0	0
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	0	0
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	0	0
		81	81	81	81	82	82	82	82	83	82	82	82	82
Total Meter Fee Revenue		\$23,535	\$23,535	\$23,535	\$23,535	\$23,648	\$23,648	\$23,648	\$23,648	\$24,026	\$23,648	\$23,648	\$23,648	\$283,705
Water Use	\$ / CCF													
All Use	\$3.75	8,127	9,519	9,237	7,502	6,795	5,985	4,059	2,618	3,931	4,579	5,689	7,310	75,351
All Use (Out)	5.63	0	0	0	0	0	0	0	0	0	0	0	0	0
		8,127	9,519	9,237	7,502	6,795	5,985	4,059	2,618	3,931	4,579	5,689	7,310	75,351
Total Water Use Revenue		\$30,476	\$35,696	\$34,639	\$28,133	\$25,481	\$22,444	\$15,221	\$9,818	\$14,741	\$17,171	\$21,334	\$27,413	\$282,566
Total Irrigation		\$54,011	\$59,231	\$58,174	\$51,668	\$49,130	\$46,092	\$38,870	\$33,466	\$38,767	\$40,820	\$44,982	\$51,061	\$566,271

		Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Total
Multi-Family														
Meter Fee	\$ / Acct.													
5/8"	\$75.43	35	35	35	36	35	35	35	35	35	34	34	34	35
3/4"	113.15	15	16	15	15	15	15	15	15	16	15	15	15	15
1"	188.58	5	5	5	5	5	5	5	5	5	5	5	5	5
1 1/2"	377.17	4	4	4	4	4	4	4	4	4	4	4	4	4
2"	603.47	8	8	8	8	8	8	8	8	8	8	8	8	8
3"	1,206.94	1	1	1	1	1	1	1	1	1	1	1	1	1
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	0	0
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	0	0
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	0	0
5/8" Out	113.15	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	0	0
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	0	0
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	0	0
2" Out	905.21	0	0	0	0	0	0	0	0	0	0	0	0	0
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	0	0
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	0	0
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	0	0
		68	69	68	69	68	68	68	68	69	67	67	67	68
Total Meter Fee Revenue		\$12,824	\$12,937	\$12,824	\$12,899	\$12,824	\$12,824	\$12,824	\$12,824	\$12,937	\$12,748	\$12,748	\$12,748	\$153,958
Water Use	\$ / CCF													
All Use	\$3.75	2,482	3,010	2,775	2,582	2,516	2,467	2,182	2,147	2,250	2,181	2,304	2,461	29,357
All Use (Out)	5.63	0	0	0	0	0	0	0	0	0	0	0	0	0
		2,482	3,010	2,775	2,582	2,516	2,467	2,182	2,147	2,250	2,181	2,304	2,461	29,357
Total Water Use Revenue		\$9,308	\$11,288	\$10,406	\$9,683	\$9,435	\$9,251	\$8,183	\$8,051	\$8,438	\$8,179	\$8,640	\$9,229	\$110,089
Total Multi-Family		\$22,131	\$24,224	\$23,230	\$22,582	\$22,259	\$22,075	\$21,006	\$20,875	\$21,374	\$20,927	\$21,388	\$21,977	\$264,047

		Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Total
Mobile Home														
Meter Fee	\$ / Acct.													
5/8"	\$75.43	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4"	113.15	0	0	0	0	0	0	0	0	0	0	0	0	0
1"	188.58	0	0	0	0	0	0	0	0	0	0	0	0	0
1 1/2"	377.17	0	0	0	0	0	0	0	0	0	0	0	0	0
2"	603.47	0	0	0	0	0	0	0	0	0	0	0	0	0
3"	1,206.94	1	1	1	1	1	1	1	1	1	1	1	1	1
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	0	0
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	0	0
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	0	0
5/8" Out	113.15	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	0	0
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	0	0
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	0	0
2" Out	905.21	0	0	0	0	0	0	0	0	0	0	0	0	0
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	0	0
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	0	0
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	0	0
		1												
Total Meter Fee Revenue		\$1,207	\$1,207	\$1,207	\$1,207	\$1,207	\$1,207	\$1,207	\$1,207	\$1,207	\$1,207	\$1,207	\$1,207	\$14,483
Water Use	\$ / CCF													
All Use	\$3.75	1,827	1,609	1,540	1,393	1,248	1,135	999	806	901	1,054	1,290	1,522	15,324
All Use (Out)	5.63	0	0	0	0	0	0	0	0	0	0	0	0	0
		1,827	1,609	1,540	1,393	1,248	1,135	999	806	901	1,054	1,290	1,522	15,324
Total Water Use Revenue		\$6,851	\$6,034	\$5,775	\$5,224	\$4,680	\$4,256	\$3,746	\$3,023	\$3,379	\$3,953	\$4,838	\$5,708	\$57,465
Total Mobile Home		\$8,058	\$7,241	\$6,982	\$6,431	\$5,887	\$5,463	\$4,953	\$4,229	\$4,586	\$5,159	\$6,044	\$6,914	\$71,948

	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Total
Summary													
Customer													
Single Family	1,468	1,464	1,474	1,475	1,469	1,464	1,468	1,467	1,469	1,468	1,474	1,471	1,469
Condo	317	311	310	307	307	304	308	307	307	306	309	305	308
Commercial	195	195	192	194	193	194	194	194	196	194	194	195	194
Institutional	21	21	21	21	21	21	21	21	21	21	21	21	21
Hotel	15	15	15	15	16	15	15	15	15	15	15	15	15
Irrigation	81	81	81	81	82	82	82	82	83	82	82	82	82
Multi-Family	68	69	68	69	68	68	68	68	69	67	67	67	68
Mobile Home	1	1	1	1	1	1	1	1	1	1	1	1	1
	2,166	2,157	2,162	2,163	2,157	2,149	2,157	2,155	2,161	2,154	2,163	2,157	2,158
Consumption													
Single Family	34,060	36,712	38,361	31,902	27,510	24,807	12,055	15,205	15,783	13,442	27,244	34,767	311,848
Condo	1,878	1,971	2,058	1,855	1,924	1,952	1,795	1,720	1,825	1,776	1,786	2,001	22,541
Commercial	4,474	4,965	4,965	4,573	4,854	4,270	3,237	3,954	4,398	5,345	4,586	5,513	55,134
Institutional	1,232	1,387	1,191	1,164	954	892	701	685	705	968	873	1,242	11,994
Hotel	2,424	2,681	2,693	2,435	2,615	1,915	1,081	1,261	1,851	2,242	2,071	2,550	25,819
Irrigation	8,127	9,519	9,237	7,502	6,795	5,985	4,059	2,618	3,931	4,579	5,689	7,310	75,351
Multi-Family	2,482	3,010	2,775	2,582	2,516	2,467	2,182	2,147	2,250	2,181	2,304	2,461	29,357
Mobile Home	1,827	1,609	1,540	1,393	1,248	1,135	999	806	901	1,054	1,290	1,522	15,324
	56,504	61,854	62,820	53,406	48,416	43,423	26,109	28,396	31,644	31,587	45,843	57,366	547,368
Total Revenue													
Single Family	\$261,180	\$271,049	\$278,403	\$252,949	\$234,869	\$223,972	\$176,212	\$187,985	\$190,188	\$181,201	\$234,517	\$263,883	\$2,756,407
Condo	33,179	33,075	33,326	32,339	32,597	32,476	32,189	31,832	32,226	31,967	32,231	32,735	390,173
Commercial	49,721	51,956	51,283	49,985	51,024	48,874	45,047	47,992	49,615	53,006	50,305	53,926	602,734
Institutional	13,683	14,313	13,563	13,456	12,688	12,461	11,739	11,653	11,769	12,727	12,268	13,768	154,087
Hotel	14,672	15,636	15,681	14,713	15,464	12,763	9,636	10,311	12,523	13,990	13,348	15,145	163,882
Irrigation	54,011	59,231	58,174	51,668	49,130	46,092	38,870	33,466	38,767	40,820	44,982	51,061	566,271
Multi-Family	22,131	24,224	23,230	22,582	22,259	22,075	21,006	20,875	21,374	20,927	21,388	21,977	264,047
Mobile Home	8,058	7,241	6,982	6,431	5,887	5,463	4,953	4,229	4,586	5,159	6,044	6,914	71,948
	\$456,637	\$476,726	\$480,642	\$444,121	\$423,917	\$404,175	\$339,651	\$348,343	\$361,048	\$359,797	\$415,083	\$459,408	\$4,969,549
											FY 2019 Actual		\$4,777,388
											<i>Difference</i>		\$192,161
											<i>Percent</i>		4.0%
											2020-21 Budgeted		\$4,378,000
											<i>Difference</i>		\$591,549
											<i>Percent</i>		13.5%
											2021-22 Budget		\$4,528,000
											<i>Difference</i>		\$441,549
											<i>Percent</i>		9.8%
Billing July 2020 - Jun 2021	\$453,842	\$474,036	\$479,920	\$444,269	\$425,525	\$406,731	\$365,431	\$346,284	\$374,725	\$399,474	\$419,167	\$457,361	\$5,046,766
	\$2,795	\$2,690	\$722	(\$148)	(\$1,608)	(\$2,555)	(\$25,780)	\$2,059	(\$13,678)	(\$39,677)	(\$4,084)	\$2,047	(\$77,217)
													-1.5%

		Exhibit 6 - RPR											
		Projected											
		2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	Notes
Single Family													
Meter Fee	\$ / Acct.												
5/8"	\$75.43	1,007	1,012	1,017	1,022	1,027	1,032	1,038	1,043	1,048	1,053	1,059	As Single Family - Cust Growth
3/4"	113.15	390	392	394	396	398	400	402	404	406	408	410	As Single Family - Cust Growth
1"	188.58	71	71	71	72	72	72	73	73	73	74	74	As Single Family - Cust Growth
1 1/2"	377.17	1	1	1	1	1	1	1	1	1	1	1	As Single Family - Cust Growth
2"	603.47	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cust Growth
3"	1,206.94	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cust Growth
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cust Growth
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cust Growth
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cust Growth
5/8" Out	113.15	1	1	1	1	1	1	1	1	1	1	1	As Single Family - Cust Growth
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cust Growth
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cust Growth
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cust Growth
2" Out	905.21	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cust Growth
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cust Growth
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cust Growth
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cust Growth
		1,469	1,477	1,484	1,491	1,499	1,506	1,514	1,522	1,529	1,537	1,545	
Revenue		\$1,606,197	\$1,614,277	\$1,622,369	\$1,630,525	\$1,638,712	\$1,646,940	\$1,655,200	\$1,663,500	\$1,671,855	\$1,680,250	\$1,688,687	
Water Use	\$ / CCF												
0 - 16 Units	\$3.45	190,969	187,150	187,150	187,150	187,150	187,150	187,150	187,150	187,150	187,150	187,150	As Single Family - Cons Growth
16 + Units	4.05	119,272	116,887	116,887	116,887	116,887	116,887	116,887	116,887	116,887	116,887	116,887	As Single Family - Cons Growth
0 - 15			180,431	180,431	180,431	180,431	180,431	180,431	180,431	180,431	180,431	180,431	As Single Family - Cons Growth
15 - 35			78,150	78,150	78,150	78,150	78,150	78,150	78,150	78,150	78,150	78,150	As Single Family - Cons Growth
35 +			45,455	45,455	45,455	45,455	45,455	45,455	45,455	45,455	45,455	45,455	As Single Family - Cons Growth
0 - 16 Units (Out)	5.18	1,607	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	As Single Family - Cons Growth
16 + Units (Out)	6.08	0	0	0	0	0	0	0	0	0	0	0	As Single Family - Cons Growth
0 - 15 (Out)			0	0	0	0	0	0	0	0	0	0	As Single Family - Cons Growth
15 - 35 (Out)			0	0	0	0	0	0	0	0	0	0	As Single Family - Cons Growth
35 + (Out)			0	0	0	0	0	0	0	0	0	0	As Single Family - Cons Growth
		311,848	305,611										
Revenue		\$1,150,211	\$1,127,207	\$1,127,207	\$1,127,207	\$1,127,207	\$1,127,207	\$1,127,207	\$1,127,207	\$1,127,207	\$1,127,207	\$1,127,207	
Total Revenue		\$2,756,407	\$2,741,483	\$2,749,576	\$2,757,731	\$2,765,919	\$2,774,147	\$2,782,406	\$2,790,707	\$2,799,062	\$2,807,457	\$2,815,893	

		Exhibit 6 - RPR											Notes
		2021-22	2022-23	2023-24	2024-25	2025-26	Projected					2031-32	
							2026-27	2027-28	2028-29	2029-30	2030-31		
Condo													
Meter Fee													
5/8"	\$75.43	302	304	305	307	308	310	311	313	314	316	318	As Condo - Cust Growth
3/4"	113.15	1	1	1	1	1	1	1	1	1	1	1	As Condo - Cust Growth
1"	188.58	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
1 1/2"	377.17	2	2	2	2	2	2	2	2	2	2	2	As Condo - Cust Growth
2"	603.47	3	3	3	3	3	3	3	3	3	3	3	As Condo - Cust Growth
3"	1,206.94	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
5/8" Out	113.15	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
2" Out	905.21	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cust Growth
		308	310	311	313	314	316	318	319	321	322	324	
Revenue		\$305,644	\$307,217	\$308,797	\$310,386	\$311,974	\$313,572	\$315,178	\$316,794	\$318,410	\$320,035	\$321,668	
Water Use													
All Use	\$3.75	22,541	22,316	22,316	22,316	22,316	22,316	22,316	22,316	22,316	22,316	22,316	As Condo - Cons Growth
All Use (Out)	\$5.63	0	0	0	0	0	0	0	0	0	0	0	As Condo - Cons Growth
		22,541	22,316										
Revenue		\$84,529	\$83,683	\$83,683	\$83,683	\$83,683	\$83,683	\$83,683	\$83,683	\$83,683	\$83,683	\$83,683	
Total Revenue		\$390,173	\$390,901	\$392,480	\$394,069	\$395,658	\$397,255	\$398,862	\$400,478	\$402,093	\$403,718	\$405,352	

		Exhibit 6 - RPR											
		Projected											
		2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	Notes
Commercial													
Meter Fee	\$/ Acct.												
5/8"	\$75.43	115	116	116	117	117	118	119	119	120	120	121	As Commercial - Cust Growth
3/4"	113.15	30	30	30	31	31	31	31	31	31	32	32	As Commercial - Cust Growth
1"	188.58	17	17	17	17	17	17	17	17	18	18	18	As Commercial - Cust Growth
1 1/2"	377.17	11	11	11	11	11	11	11	12	12	12	12	As Commercial - Cust Growth
2"	603.47	11	11	11	11	11	11	11	11	11	12	12	As Commercial - Cust Growth
3"	1,206.94	3	3	3	3	3	3	3	3	3	3	3	As Commercial - Cust Growth
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	As Commercial - Cust Growth
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	As Commercial - Cust Growth
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	As Commercial - Cust Growth
5/8" Out	113.15	3	3	3	3	3	3	3	3	3	3	3	As Commercial - Cust Growth
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	As Commercial - Cust Growth
1" Out	282.87	1	1	1	1	1	1	1	1	1	1	1	As Commercial - Cust Growth
1 1/2" Out	565.76	1	1	1	1	1	1	1	1	1	1	1	As Commercial - Cust Growth
2" Out	905.21	2	2	2	2	2	2	2	2	2	2	2	As Commercial - Cust Growth
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	As Commercial - Cust Growth
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	As Commercial - Cust Growth
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	As Commercial - Cust Growth
		194	195	196	197	198	199	200	201	202	203	204	
Revenue		\$392,475	\$394,620	\$396,763	\$398,929	\$401,094	\$403,269	\$405,444	\$407,632	\$409,829	\$412,027	\$414,224	
Water Use	\$/ CCF												
All Use	\$3.75	53,264	52,731	52,731	52,731	52,731	52,731	52,731	52,731	52,731	52,731	52,731	As Commercial - Cons Growth
All Use (Out)	\$5.63	1,870	1,851	1,851	1,851	1,851	1,851	1,851	1,851	1,851	1,851	1,851	As Commercial - Cons Growth
		55,134	54,583										
		\$210,259	\$208,156	\$208,156	\$208,156	\$208,156	\$208,156	\$208,156	\$208,156	\$208,156	\$208,156	\$208,156	
Total Revenue		\$602,734	\$602,776	\$604,919	\$607,085	\$609,251	\$611,425	\$613,600	\$615,788	\$617,986	\$620,183	\$622,380	

		Exhibit 6 - RPR	Projected										
		2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	Notes
Institutional													
Meter Fee	\$ / Acct.												
5/8"	\$75.43	3	3	3	3	3	3	3	3	3	3	3	As Institutional - Cust Growth
3/4"	113.15	1	1	1	1	1	1	1	1	1	1	1	As Institutional - Cust Growth
1"	188.58	4	4	4	4	4	4	4	4	4	4	4	As Institutional - Cust Growth
1 1/2"	377.17	5	5	5	5	5	5	5	5	5	5	5	As Institutional - Cust Growth
2"	603.47	6	6	6	6	6	6	6	6	6	6	6	As Institutional - Cust Growth
3"	1,206.94	1	1	1	1	1	1	1	1	1	1	1	As Institutional - Cust Growth
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	As Institutional - Cust Growth
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	As Institutional - Cust Growth
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	As Institutional - Cust Growth
5/8" Out	113.15	0	0	0	0	0	0	0	0	0	0	0	As Institutional - Cust Growth
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	As Institutional - Cust Growth
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	As Institutional - Cust Growth
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	As Institutional - Cust Growth
2" Out	905.21	1	1	1	1	1	1	1	1	1	1	1	As Institutional - Cust Growth
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	As Institutional - Cust Growth
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	As Institutional - Cust Growth
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	As Institutional - Cust Growth
		21	21	21	21	22							
Revenue		\$104,551	\$105,234	\$105,918	\$106,601	\$107,285	\$107,968	\$108,651	\$109,335	\$110,018	\$110,702	\$111,385	
Water Use	\$ / CCF												
All Use	\$3.75	9,563	9,467	9,467	9,467	9,467	9,467	9,467	9,467	9,467	9,467	9,467	As Institutional - Cons Growth
All Use (Out)	5.63	2,431	2,407	2,407	2,407	2,407	2,407	2,407	2,407	2,407	2,407	2,407	As Institutional - Cons Growth
		11,994	11,874										
Revenue		\$49,536	\$49,040	\$49,040	\$49,040	\$49,040	\$49,040	\$49,040	\$49,040	\$49,040	\$49,040	\$49,040	
Total Revenue		\$154,087	\$154,275	\$154,958	\$155,641	\$156,325	\$157,008	\$157,692	\$158,375	\$159,059	\$159,742	\$160,425	

		Exhibit 6 - RPR	Projected										Notes
		2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	
Hotel													
Meter Fee													
5/8"	\$75.43	2	2	2	2	2	2	2	2	2	2	2	As Hotel - Cust Growth
3/4"	113.15	1	1	1	1	1	1	1	1	1	1	1	As Hotel - Cust Growth
1"	188.58	3	3	3	3	3	3	3	3	3	3	3	As Hotel - Cust Growth
1 1/2"	377.17	3	3	3	3	3	3	3	3	3	3	3	As Hotel - Cust Growth
2"	603.47	6	6	6	6	6	6	6	6	6	6	6	As Hotel - Cust Growth
3"	1,206.94	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cust Growth
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cust Growth
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cust Growth
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cust Growth
5/8" Out	113.15	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cust Growth
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cust Growth
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cust Growth
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cust Growth
2" Out	905.21	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cust Growth
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cust Growth
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cust Growth
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cust Growth
		15	15	15	15	15	16	16	16	16	16	16	
		\$67,060	\$67,433	\$67,809	\$68,184	\$68,560	\$68,936	\$69,311	\$69,687	\$70,063	\$70,438	\$70,814	
Water Use													
	\$ / CCF												
All Use	3.75	25,819	25,561	25,561	25,561	25,561	25,561	25,561	25,561	25,561	25,561	25,561	As Hotel - Cons Growth
All Use (Out)	5.625	0	0	0	0	0	0	0	0	0	0	0	As Hotel - Cons Growth
		25,819	25,561	25,561	25,561	25,561	25,561	25,561	25,561	25,561	25,561	25,561	
Revenue		\$96,821	\$95,853	\$95,853	\$95,853	\$95,853	\$95,853	\$95,853	\$95,853	\$95,853	\$95,853	\$95,853	
Total Revenue		\$163,882	\$163,286	\$163,662	\$164,037	\$164,413	\$164,789	\$165,164	\$165,540	\$165,916	\$166,291	\$166,667	

		Exhibit 6 - RPR	Projected										
		2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	Notes
Irrigation													
Meter Fee													
5/8"	\$75.43	25	25	25	25	26	26	26	26	26	26	26	As Irrigation - Cust Growth
3/4"	113.15	7	7	7	7	7	7	7	7	7	7	7	As Irrigation - Cust Growth
1"	188.58	16	16	16	16	16	16	16	17	17	17	17	As Irrigation - Cust Growth
1 1/2"	377.17	17	17	17	17	17	18	18	18	18	18	18	As Irrigation - Cust Growth
2"	603.47	16	16	16	16	16	16	16	17	17	17	17	As Irrigation - Cust Growth
3"	1,206.94	0	0	0	0	0	0	0	0	0	0	0	As Irrigation - Cust Growth
4"	1,885.84	1	1	1	1	1	1	1	1	1	1	1	As Irrigation - Cust Growth
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	As Irrigation - Cust Growth
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	As Irrigation - Cust Growth
5/8" Out	113.15	0	0	0	0	0	0	0	0	0	0	0	As Irrigation - Cust Growth
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	As Irrigation - Cust Growth
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	As Irrigation - Cust Growth
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	As Irrigation - Cust Growth
2" Out	905.21	0	0	0	0	0	0	0	0	0	0	0	As Irrigation - Cust Growth
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	As Irrigation - Cust Growth
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	As Irrigation - Cust Growth
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	As Irrigation - Cust Growth
		82	82	83	83	83	84	84	85	85	86	86	
		\$283,705	\$285,246	\$286,799	\$288,351	\$289,904	\$291,456	\$293,008	\$294,561	\$296,113	\$297,666	\$299,218	
Water Use													
	\$ / CCF												
All Use	\$3.75	75,351	73,844	73,844	73,844	73,844	73,844	73,844	73,844	73,844	73,844	73,844	As Irrigation - Cons Growth
All Use (Out)	5.625	0	0	0	0	0	0	0	0	0	0	0	As Irrigation - Cons Growth
		75,351	73,844	73,844	73,844	73,844	73,844	73,844	73,844	73,844	73,844	73,844	
Revenue		\$282,566	\$276,915	\$276,915	\$276,915	\$276,915	\$276,915	\$276,915	\$276,915	\$276,915	\$276,915	\$276,915	
Total Revenue		\$566,271	\$562,161	\$563,714	\$565,266	\$566,819	\$568,371	\$569,923	\$571,476	\$573,028	\$574,581	\$576,133	

		Exhibit 6 - RPR	Projected										Notes
		2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	
Multi-Family													
Meter Fee													
5/8"	\$75.43	35	35	35	35	36	36	36	36	36	36	37	As Multi-Family - Cust Growth
3/4"	113.15	15	15	15	15	15	16	16	16	16	16	16	As Multi-Family - Cust Growth
1"	188.58	5	5	5	5	5	5	5	5	5	5	5	As Multi-Family - Cust Growth
1 1/2"	377.17	4	4	4	4	4	4	4	4	4	4	4	As Multi-Family - Cust Growth
2"	603.47	8	8	8	8	8	8	8	8	8	8	8	As Multi-Family - Cust Growth
3"	1,206.94	1	1	1	1	1	1	1	1	1	1	1	As Multi-Family - Cust Growth
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	As Multi-Family - Cust Growth
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	As Multi-Family - Cust Growth
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	As Multi-Family - Cust Growth
5/8" Out	113.15	0	0	0	0	0	0	0	0	0	0	0	As Multi-Family - Cust Growth
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	As Multi-Family - Cust Growth
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	As Multi-Family - Cust Growth
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	As Multi-Family - Cust Growth
2" Out	905.21	0	0	0	0	0	0	0	0	0	0	0	As Multi-Family - Cust Growth
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	As Multi-Family - Cust Growth
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	As Multi-Family - Cust Growth
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	As Multi-Family - Cust Growth
		68	68	69	69	69	70	70	71	71	71	72	
		\$153,958	\$154,811	\$155,675	\$156,540	\$157,404	\$158,269	\$159,133	\$159,998	\$160,862	\$161,726	\$162,591	
Water Use													
	\$ / CCF												
All Use	\$3.75	29,357	29,063	29,063	29,063	29,063	29,063	29,063	29,063	29,063	29,063	29,063	As Multi-Family - Cons Growth
All Use (Out)	5.63	0	0	0	0	0	0	0	0	0	0	0	As Multi-Family - Cons Growth
		29,357	29,063	29,063	29,063	29,063	29,063	29,063	29,063	29,063	29,063	29,063	
Revenue		\$110,089	\$108,988	\$108,988	\$108,988	\$108,988	\$108,988	\$108,988	\$108,988	\$108,988	\$108,988	\$108,988	
Total Revenue		\$264,047	\$263,799	\$264,663	\$265,528	\$266,392	\$267,256	\$268,121	\$268,985	\$269,850	\$270,714	\$271,579	

		Exhibit 6 - RPR	Projected										
		2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	Notes
Mobile Home													
Meter Fee													
5/8"	\$75.43	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
3/4"	113.15	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
1"	188.58	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
1 1/2"	377.17	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
2"	603.47	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
3"	1,206.94	1	1	1	1	1	1	1	1	1	1	1	As Mobile Home - Cust Growth
4"	1,885.84	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
6"	3,771.68	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
8"	6,034.69	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
5/8" Out	113.15	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
3/4" Out	169.73	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
1" Out	282.87	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
1 1/2" Out	565.76	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
2" Out	905.21	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
3" Out	1,810.41	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
4" Out	2,828.76	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
6" Out	5,657.52	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cust Growth
		1	1	1	1	1	1	1	1	1	1	1	
		\$14,483	\$14,628	\$14,773	\$14,918	\$15,063	\$15,207	\$15,352	\$15,497	\$15,642	\$15,787	\$15,932	
Water Use													
	\$ / CCF												
All Use	\$3.75	15,324	15,171	15,171	15,171	15,171	15,171	15,171	15,171	15,171	15,171	15,171	As Mobile Home - Cons Growth
All Use (Out)	5.63	0	0	0	0	0	0	0	0	0	0	0	As Mobile Home - Cons Growth
		15,324	15,171	15,171	15,171	15,171	15,171	15,171	15,171	15,171	15,171	15,171	
Revenue		\$57,465	\$56,890	\$56,890	\$56,890	\$56,890	\$56,890	\$56,890	\$56,890	\$56,890	\$56,890	\$56,890	
Total Revenue		\$71,948	\$71,518	\$71,663	\$71,808	\$71,953	\$72,098	\$72,243	\$72,387	\$72,532	\$72,677	\$72,822	

City of Solvang
 Water Rate Study
 Exhibit 8a
 Commodity Distribution Factor

	2022-23 Consumption (CCF)	10.0% Unaccounted ^[1]	Net Water Delivered (Flow + Losses)	Total Consumption (MGD)	Component % of Total	Class Total % of Total
Single Family						56.8%
0 - 15	182,006	18,201	200,206	0.41	33.8%	
15 - 35	78,150	7,815	85,965	0.18	14.5%	
35 +	45,455	4,546	50,001	0.10	8.4%	
Condo	22,316	2,232	24,547	0.05	4.1%	4.1%
Commercial	54,583	5,458	60,041	0.12	10.1%	10.1%
Institutional	11,874	1,187	13,061	0.03	2.2%	2.2%
Hotel	25,561	2,556	28,117	0.06	4.8%	4.8%
Irrigation	73,844	7,384	81,228	0.17	13.7%	13.7%
Multi-Family	29,063	2,906	31,970	0.07	5.4%	5.4%
Mobile Home	15,171	1,517	16,688	0.03	2.8%	2.8%
	----- 538,022	----- 53,802	----- 591,825	----- 1.21	----- 100.0%	----- 100.0%

Notes

[1] - Estimated to tie to actual production reports

Factor

(COM)

City of Solvang
 Water Rate Study
 Exhibit 9a
 Capacity Distribution Factor

	Average Consumption (MGD)	Peaking Factors ^[1]	Peak Day Use (MGD)	Component % of Total	Class % of Total
Single Family					59.4%
0 - 15	0.41	1.18	0.48	28.3%	
15 - 35	0.18	1.67	0.29	17.2%	
35 +	0.10	2.33	0.24	14.0%	
Condo	0.05	1.10	0.06	3.2%	3.2%
Commercial	0.12	1.20	0.15	8.6%	8.6%
Institutional	0.03	1.39	0.04	2.2%	2.2%
Hotel	0.06	1.25	0.07	4.2%	4.2%
Irrigation	0.17	1.52	0.25	14.7%	14.7%
Multi-Family	0.07	1.23	0.08	4.7%	4.7%
Mobile Home	0.03	1.43	0.05	2.9%	2.9%
	----- 1.21		----- 1.71	----- 100.0%	----- 100.0%

Notes

[1] - Peak factors based on peak to average month usage

Factor

(CAP)

City of Solvang
Water Rate Study
Exhibit 10
Customer Distribution Factors

	<i>Actual Customer</i>		<i>Customer Service & Acctng.</i>		<i>Meters & Services</i>		
	Number of Meters	% of Total	Number of Living Units	% of Total	Weighting Factor ^[1]	Weighted Customer	% of Total
Single Family	1,469	68.1%	1,469	63.3%	1.21	1,774	55.2%
Condo	308	14.3%	308	13.3%	1.10	338	10.5%
Commercial	194	9.0%	194	8.4%	2.15	417	13.0%
Institutional	21	1.0%	21	0.9%	5.26	111	3.4%
Hotel	15	0.7%	15	0.7%	4.91	74	2.3%
Irrigation	82	3.8%	82	3.5%	3.83	313	9.8%
Multi-Family	68	3.2%	68	2.9%	2.49	169	5.3%
Mobile Home	1	0.0%	162	7.0%	15.00	15	0.5%
Total	2,158	100.0%	2,319	100.0%		3,211	100.0%

Notes

[1] - Based on number of equivalent meters using AWWA meter equivalency factors for 1" meter

Factor (AC) (WCA) (WCMS)

Development of Equivalent Meter Distribution Factor

	<i>Number of Meters</i>										Total	% of Total
	5/8"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"			
Single Family	1,008	390	71	1	0	0	0	0	0	0	1,469	68.1%
Condo	302	1	0	2	3	0	0	0	0	0	308	14.3%
Commercial	118	30	18	12	13	3	0	0	0	0	194	9.0%
Institutional	3	1	4	5	7	1	0	0	0	0	21	1.0%
Hotel	2	1	3	3	6	0	0	0	0	0	15	0.7%
Irrigation	25	7	16	17	16	0	1	0	0	0	82	3.8%
Multi-Family	35	15	5	4	8	1	0	0	0	0	68	3.2%
Mobile Home	0	0	0	0	0	1	0	0	0	0	1	0.0%
Total Meters	1,493	445	116	44	53	6	1	0	0	0	2,158	
<i>Equiv. Meters (5/8")</i> ^[1]	<i>1.00</i>	<i>1.50</i>	<i>2.50</i>	<i>5.00</i>	<i>8.00</i>	<i>15.00</i>	<i>25.00</i>	<i>50.00</i>	<i>80.00</i>			
	<i>Equivalent Meters</i>										Total	% of Total
	5/8"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"			
Single Family	1,008	585	176	5	0	0	0	0	0	0	1,774	1.21
Condo	302	2	0	10	24	0	0	0	0	0	338	1.10
Commercial	118	45	45	60	104	45	0	0	0	0	417	2.15
Institutional	3	2	10	25	56	15	0	0	0	0	111	5.26
Hotel	2	2	8	15	48	0	0	0	0	0	74	4.91
Irrigation	25	10	40	85	128	0	25	0	0	0	313	3.83
Multi-Family	35	23	13	20	64	15	0	0	0	0	169	2.49
Mobile Home	0	0	0	0	0	15	0	0	0	0	15	15.00
Total Equiv. Meters	1,493	667	291	221	424	90	25	0	0	0	3,211	

[1] - Based on AWWA meter equivalencies which are based on the safe operating capacity of water meters

City of Solvang
 Water Rate Study
 Exhibit 11
 Public Fire Distribution Factor

	Number of Meters	Fire Prot. Requirements (gals/min)	Duration (minutes)	Total FP Requirements (1,000 g/min)	% of Total
Single Family	1,469	1,000	90	132,233	43.0%
Condo	308	1,500	90	41,603	13.5%
Commercial	194	3,000	180	104,850	34.1%
Institutional	21	3,000	180	11,340	3.7%
Hotel	15	3,000	180	8,145	2.6%
Irrigation	82	0	0	0	0.0%
Multi-Family	68	1,500	90	9,180	3.0%
Mobile Home	1	1,500	90	135	0.0%
Total	2,158			307,485	100.0%
Factor					(FP)

City of Solvang
Water Rate Study
Exhibit 12
Revenue Related Distribution Factor

	Projected 2022-23	% of Total
Single Family	\$2,741,483	55.4%
Condo	390,901	7.9%
Commercial	602,776	12.2%
Institutional	154,275	3.1%
Hotel	163,286	3.3%
Irrigation	562,161	11.4%
Multi-Family	263,799	5.3%
Mobile Home	71,518	1.4%
Total Rate Revenues	\$4,950,200	100.0%
Factor		(RR)

City of Solvang
Water Rate Study
Exhibit 13
Net Plant In Service

	Net Plant	Customer Related					Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Classification
		Commodity (COM)	Capacity (CAP)	Actual Customer (AC)	Cust. Acctg. (WCA)	Meters & Services (WCMS)				
Land	\$64,099	\$0	\$0	\$0	\$0	\$64,099	\$0	\$0	\$0	100.0% WCMS
Source of Supply	\$3,678,348	\$2,607,213	\$1,071,135	\$0	\$0	\$0	\$0	\$0	\$0	70.9% COM 29.1% CAP
Treatment	\$327	\$232	\$95	\$0	\$0	\$0	\$0	\$0	\$0	70.9% COM 29.1% CAP
Pumping	\$9,775	\$0	\$9,775	\$0	\$0	\$0	\$0	\$0	\$0	100.0% CAP
Storage	\$583,072	\$0	\$541,091	\$0	\$0	\$0	\$41,981	\$0	\$0	92.8% CAP 7.2% FP
Transmission & Distribution										
Mains	\$538,806	\$0	\$131,787	\$393,328	\$0	\$0	\$13,691	\$0	\$0	73.0% AC 24.5% CAP 2.5% FP
Meter	\$657,071	\$0	\$0	\$0	\$0	\$657,071	\$0	\$0	\$0	100.0% WCMS
SCADA	\$126,161	\$0	\$30,858	\$92,098	\$0	\$0	\$3,206	\$0	\$0	73.0% AC 24.5% CAP 2.5% FP
Valves	\$231,371	\$0	\$28,465	\$84,955	\$0	\$114,995	\$2,957	\$0	\$0	As All Other T&D
Total Transmission & Distribution	\$1,553,409	\$0	\$191,109	\$570,381	\$0	\$772,065	\$19,853	\$0	\$0	
Plant Before General Plant	\$5,889,030	\$2,607,445	\$1,813,205	\$570,381	\$0	\$836,164	\$61,835	\$0	\$0	
<i>Percent Plant Before General Plant</i>	<i>100.0%</i>	<i>44.3%</i>	<i>30.8%</i>	<i>9.7%</i>	<i>0.0%</i>	<i>14.2%</i>	<i>1.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>Factor PBG</i>
General Plant										
General	\$6,533	\$0	\$0	\$0	\$0	\$6,533	\$0	\$0	\$0	100.0% WCMS
General - Equip	\$42,443	\$0	\$0	\$0	\$0	\$42,443	\$0	\$0	\$0	100.0% WCMS
General - Office	\$12,471	\$0	\$0	\$0	\$0	\$12,471	\$0	\$0	\$0	100.0% WCMS
Total General Plant	\$61,447	\$0	\$0	\$0	\$0	\$61,447	\$0	\$0	\$0	
Total Net Plant in Service	\$5,950,477	\$2,607,445	\$1,813,205	\$570,381	\$0	\$897,611	\$61,835	\$0	\$0	

City of Solvang
 Water Rate Study
 Exhibit 14
 Distribution System Analysis

Fire Protection			
	hrs	gal/min	Total
Fire Flow Requirements	1.5	1,000	90,000
Storage Capacity		1,250,000	1,250,000
% Public Fire Protection			7.2%
% Capacity			92.8%

Source of Supply (avg of 2018 & 2019)			
Average Day	1.21	COM	70.9%
Peak Day	1.71	(1-COM) = CAP	29.1%

Distribution Main Analysis				
	Main Size	Length (ft)	Replcmt \$	Total
Distribution	2"	1,137	76.00	\$86,412
	4"	3,021	86.00	259,806
	6"	88,854	96.00	8,529,984
	8"	87,840	106.00	9,311,040
	10"	14,007	116.00	1,624,812
	12"	13,223	126.00	1,666,098
	16"	740	156.00	115,440
Total 1" - 14"		208,822		\$21,593,592

Customer		Adjusted
(1) Total @ 2" Equiv	\$15,870,472	
/ Total Cost	73.0%	73.0%
Capacity		
(2) Cost for 1" - 8"	\$18,187,242	
(3) Equiv 8" - 16"	\$2,964,820	
(2+3-1) / 4	24.5%	24.0%
Fire Protection		
1-cust-cap	2.5%	3.0%

	2022-23	Customer Related					Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Allocation
		Commodity (COM)	Capacity (CAP)	Actual Customer (AC)	Weighted for					
				Cust. Acctg. (WCA)	Meters & Services (WCMS)					
Expenses										
Other Pose Emp Benefits	\$4,624	\$0	\$0	\$0	\$0	\$4,624	\$0	\$0	100.0% WCMS	
Retiree Medical / Dental / Life	9,272	0	0	0	0	9,272	0	0	100.0% WCMS	
Salaries	406,956	0	0	0	0	406,956	0	0	100.0% WCMS	
FICA	39,133	0	0	0	0	39,133	0	0	100.0% WCMS	
Retirement	4,962	0	0	0	0	4,962	0	0	100.0% WCMS	
Cafeteria Plan	54,759	0	0	0	0	54,759	0	0	100.0% WCMS	
Workers' Comp Ins.	24,802	0	0	0	0	24,802	0	0	100.0% WCMS	
Employee Medical Exams	0	0	0	0	0	0	0	0	100.0% WCMS	
Employee Screenings	0	0	0	0	0	0	0	0	100.0% WCMS	
Education	0	0	0	0	0	0	0	0	100.0% WCMS	
Safety Gear	6,150	0	0	0	0	6,150	0	0	100.0% WCMS	
Workers' Comp Ins - Retro Bal	1,242	0	0	0	0	1,242	0	0	100.0% WCMS	
CalPERS Liability Reduction	0	0	0	0	0	0	0	0	100.0% WCMS	
Long Term Disability	1,840	0	0	0	0	1,840	0	0	100.0% WCMS	
Retirement - ER Pd 8% EE Share	7,823	0	0	0	0	7,823	0	0	100.0% WCMS	
Retirement - PERS UAL	35,517	0	0	0	0	35,517	0	0	100.0% WCMS	
Retirement - PERS PEPRA ER Cost	22,465	0	0	0	0	22,465	0	0	100.0% WCMS	
Housing Allowance	25,585	0	0	0	0	25,585	0	0	100.0% WCMS	
Cell Phone Allowance	311	0	0	0	0	311	0	0	100.0% WCMS	
Overtime	11,000	0	0	0	0	11,000	0	0	100.0% WCMS	
Specialty Pays	17,501	0	0	0	0	17,501	0	0	100.0% WCMS	
Membership Dues	2,575	0	0	0	0	2,575	0	0	100.0% WCMS	
Supplies	20,600	0	0	0	0	20,600	0	0	100.0% WCMS	
Utility Bill Printing / Supplies	3,090	0	0	3,090	0	0	0	0	100.0% AC	
Postage	6,592	0	0	6,592	0	0	0	0	100.0% AC	
Small Equipment	3,090	0	0	0	0	3,090	0	0	100.0% WCMS	
Chlorination	22,145	15,696	6,449	0	0	0	0	0	As Treatment	
Vehicle Fuel	7,800	0	0	0	0	7,800	0	0	100.0% WCMS	
Repairs and Maintenance	160,000	0	0	0	0	160,000	0	0	100.0% WCMS	
Vehicle Repairs & Maint.	9,785	0	0	0	0	9,785	0	0	100.0% WCMS	
Computer / Desktop Equip. Supplies	2,232	0	0	0	0	2,232	0	0	100.0% WCMS	
Well Repairs and Maintenance	30,900	21,902	8,998	0	0	0	0	0	70.9% COM 29.1% CAP	
Office Equip / Computer Rep	0	0	0	0	0	0	0	0	100.0% WCMS	
Communications	0	0	0	0	0	0	0	0	100.0% WCMS	
Power for Pumping	156,000	110,573	45,427	0	0	0	0	0	70.9% COM 29.1% CAP	
Purchased Water	197,707	0	197,707	0	0	0	0	0	100.0% CAP	
State Water Payments	2,394,350	1,357,692	557,788	0	0	478,870	0	0	70.9% COM 29.1% CAP	
Ground Water Charges	20,800	0	0	0	0	20,800	0	0	100.0% WCMS	
Cloud Seeding Program	3,605	0	0	0	0	3,605	0	0	100.0% WCMS	
Computer Support	0	0	0	0	0	0	0	0	100.0% WCMS	
Insurance	31,866	0	0	0	0	31,866	0	0	100.0% WCMS	
Lab Fees	8,240	5,841	2,399	0	0	0	0	0	70.9% COM 29.1% CAP	
Lease Payments	481	0	0	0	0	481	0	0	100.0% WCMS	
Legal Fees	41,400	0	0	0	0	41,400	0	0	100.0% WCMS	
Printing and Publishing	1,545	0	0	0	0	1,545	0	0	100.0% WCMS	
Professional Services	20,700	0	0	0	0	20,700	0	0	100.0% WCMS	
Special Legal	0	0	0	0	0	0	0	0	100.0% WCMS	
Studies	0	0	0	0	0	0	0	0	100.0% WCMS	
Underground Alert	206	0	0	0	0	206	0	0	100.0% WCMS	
Water Meter Replacement	10,400	0	0	0	0	10,400	0	0	100.0% WCMS	
Temp Agency Service	0	0	0	0	0	0	0	0	100.0% WCMS	
Software / Website	0	0	0	0	0	0	0	0	100.0% WCMS	
Sustainable Groundwater Mngmnt	20,600	0	20,600	0	0	0	0	0	100.0% CAP	
IT Expenses - Water Fund	32,773	0	0	0	0	32,773	0	0	100.0% WCMS	
Property Tax	93	0	0	0	0	93	0	0	100.0% WCMS	
Permit Fees	16,995	0	0	0	0	16,995	0	0	100.0% WCMS	
Credit Card Process Fee	6,180	0	0	6,180	0	0	0	0	100.0% AC	
Water Conservation Program	14,490	0	14,490	0	0	0	0	0	100.0% CAP	
Suspended Table A Water	0	0	0	0	0	0	0	0	70.9% COM 29.1% CAP	
Table A Funding	0	0	0	0	0	0	0	0	70.9% COM 29.1% CAP	
Overhead Contribution	311,710	0	0	0	0	311,710	0	0	100.0% WCMS	
Bad Debt Write Offs	1,538	0	0	0	0	1,538	0	0	100.0% WCMS	
Total Expenses	\$4,234,427	\$1,511,704	\$853,858	\$15,862	\$0	\$1,853,003	\$0	\$0	\$0	

City of Solvang
Water Rate Study
Exhibit 14
Functionalization and Allocation
of the Revenue Requirement

	2022-23	Commodity (COM)	Capacity (CAP)	Customer Related			Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Allocation
				Actual Customer (AC)	Cust. Acctg. (WCA)	Meters & Services (WCMS)				
Future O&M										
FTE	\$104,000	\$0	\$0	\$0	\$0	\$104,000	\$0	\$0	\$0	100.0% WCMS
Supplemental Water	0	0	0	0	0	0	0	0	0	As Net Plant in Service
Total Future O&M	\$104,000	\$0	\$0	\$0	\$0	\$104,000	\$0	\$0	\$0	
Total Operations & Maintenance	\$4,338,427	\$1,511,704	\$853,858	\$15,862	\$0	\$1,957,003	\$0	\$0	\$0	
Debt Service										
Existing Debt	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	100.0% WCMS
New SRF Loans	0	0	0	0	0	0	0	0	0	100.0% WCMS
New Revenue Bonds	0	0	0	0	0	0	0	0	0	100.0% WCMS
Total Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<i>Less Connection Fees Fund</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	As Debt Service
Net Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Rate Funded Capital	\$800,000	\$0	\$0	\$0	\$0	\$800,000	\$0	\$0	\$0	100.0% WCMS
Reserve Funding										
Operating Fund	\$163,844	\$0	\$0	\$0	\$0	\$163,844	\$0	\$0	\$0	100.0% WCMS
Capital Fund	0	0	0	0	0	0	0	0	0	100.0% WCMS
Total Reserve Funding	\$163,844	\$0	\$0	\$0	\$0	\$163,844	\$0	\$0	\$0	
Total Revenue Requirement	\$5,302,270	\$1,511,704	\$853,858	\$15,862	\$0	\$2,920,847	\$0	\$0	\$0	
Less: Non-Operating Revenues										
Interest	\$41,604	\$11,862	\$6,700	\$124	\$0	\$22,918	\$0	\$0	\$0	As Total Rev Req
Inspection Fees	101	29	16	0	0	55	0	0	0	As Total Rev Req
Lease Income	18,090	5,158	2,913	54	0	9,965	0	0	0	As Total Rev Req
Bulk Water	603	427	176	0	0	0	0	0	0	70.9% COM 29.1% CAP
Meter Change Fee	402	115	65	1	0	221	0	0	0	As Total Rev Req
Misc Income	2,010	573	324	6	0	1,107	0	0	0	As Total Rev Req
Fines & Penalties	15,000	4,277	2,416	45	0	8,263	0	0	0	As Total Rev Req
Sale of Surplus	1,500	428	242	4	0	826	0	0	0	As Total Rev Req
Insurance Refunds	0	0	0	0	0	0	0	0	0	As Total Rev Req
Collection Acct Recovery	500	143	81	1	0	275	0	0	0	As Total Rev Req
Total Non-Operating Revenues	\$79,810	\$23,010	\$12,931	\$237	\$0	\$43,632	\$0	\$0	\$0	
Net Revenue Requirement	\$5,222,461	\$1,488,694	\$840,927	\$15,625	\$0	\$2,877,214	\$0	\$0	\$0	

City of Solvang
 Water Rate Study
 Exhibit 15a
 Distribution of Revenue Requirement - COM, CAP, & DA

		Single Family			Condo	Commercial	Institutional	Hotel	Irrigation	Multi-Family	Mobile Home	Factor
		0 - 15	15 - 35	35 +								
Commodity	\$1,488,694	\$503,605	\$216,239	\$125,774	\$61,747	\$151,029	\$32,855	\$70,726	\$204,324	\$80,418	\$41,977	COM
Capacity	\$840,927	\$237,946	\$144,596	\$117,342	\$27,088	\$72,563	\$18,256	\$35,446	\$124,025	\$39,618	\$24,047	CAP
Direct Assign.	\$0	\$0			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Net Revenue Requirement	\$2,329,621	\$741,551	\$360,836	\$243,115	\$88,834	\$223,592	\$51,111	\$106,172	\$328,350	\$120,036	\$66,024	

City of Solvang
Water Rate Study
Exhibit 16
Distribution of Revenue Requirement

	Total	Single Family	Multi-Family	Commercial	Irrigation	Factor
Commodity	\$1,488,694	\$845,618	\$184,142	\$254,610	\$204,324	<i>From Exhibit 14</i>
Capacity	\$840,927	\$499,884	\$90,753	\$126,265	\$124,025	<i>From Exhibit 14</i>
Customer						
Actual Customer	\$15,625	\$10,636	\$2,730	\$1,667	\$592	<i>(AC)</i>
Cust. Acctg.	0	0	0	0	0	<i>(WCA)</i>
Meters & Services	2,877,214	1,589,534	467,508	539,340	280,833	<i>(WCMS)</i>
Total Customer	\$2,892,839	\$1,600,170	\$470,238	\$541,007	\$281,425	
Public Fire Protection	\$0	\$0	\$0	\$0	\$0	<i>(FP)</i>
Revenue Related	\$0	\$0	\$0	\$0	\$0	<i>(RR)</i>
Direct Assign.	\$0	\$0	\$0	\$0	\$0	<i>0</i>
Net Revenue Requirement	\$5,222,461	\$2,945,671	\$745,133	\$921,882	\$609,775	

City of Solvang
 Water Rate Study
 Exhibit 17
 Summary of Cost of Service

	2022-23 Expenses	Single Family	Multi-Family	Commercial	Irrigation	Notes
Revenues at Present Rates	\$4,950,200	\$2,741,483	\$726,218	\$920,337	\$562,161	
Net Revenue Requirement	\$5,222,461	\$2,945,671	\$745,133	\$921,882	\$609,775	
Bal. / (Def.) of Funds	(\$272,261)	(\$204,188)	(\$18,915)	(\$1,545)	(\$47,613)	
Required % Change in Rates	5.5%	7.4%	2.6%	0.2%	8.5%	

City of Solvang
Water Rate Study
Exhibit 18a
Summary of Unit Costs

		Single Family			Condo	Commercial	Institutional	Hotel	Irrigation	Multi-Family	Mobile Home
		0 - 15	15 - 35	35 +							
Consumption Related	\$ / CCF										
Commodity	\$2.77	\$2.77	\$2.77	\$2.77	\$2.77	\$2.77	\$2.77	\$2.77	\$2.77	\$2.77	\$2.77
Capacity	1.56	1.31	1.85	2.58	1.21	1.33	1.54	1.39	1.68	1.36	1.59
RR/FP/DA - \$/CCF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	\$4.33	\$4.08	\$4.62	\$5.35	\$3.98	\$4.10	\$4.31	\$4.16	\$4.45	\$4.13	\$4.36
Customer Related	\$ / Equiv. Mtr. / Mo										
Actual Customer	\$0.41										
Cust. Acctg.	0.00										
Meters & Services	74.67										
	\$75.08										

City of Solvang
Water Rate Study
Rate Schedule - Alternative 1

	Present Rates	Proposed				
		2022-23	2023-24	2024-25	2025-26	2026-27
Meter Fee						
5/8"	\$75.43	\$75.08	\$79.21	\$83.57	\$88.17	\$93.02
3/4"	113.15	112.62	118.81	125.34	132.23	139.50
1"	188.58	187.70	198.02	208.91	220.40	232.52
1 1/2"	377.17	375.42	396.07	417.85	440.83	465.08
2"	603.47	600.67	633.71	668.56	705.33	744.12
3"	1,206.94	1,201.34	1,267.41	1,337.12	1,410.66	1,488.25
4"	1,885.84	1,877.09	1,980.33	2,089.25	2,204.16	2,325.39
6"	3,771.68	3,754.18	3,960.66	4,178.50	4,408.32	4,650.78
8"	6,034.69	6,006.69	6,337.06	6,685.60	7,053.31	7,441.24
Water Use						
<i>Single Family</i>						
0 - 16 Units	\$3.45	--	--	--	--	--
16 + Units	4.05	--	--	--	--	--
0 - 16 Units (Out)	5.18	--	--	--	--	--
16 + Units (Out)	6.08	--	--	--	--	--
0 - 15	--	\$4.08	\$4.30	\$4.54	\$4.79	\$5.05
15 - 35	--	4.62	4.87	5.14	5.42	5.72
35 +	--	5.35	5.64	5.95	6.28	6.63
<i>Multi-Family</i>						
All Use	\$3.75	\$4.13	\$4.36	\$4.60	\$4.85	\$5.12
All Use (Out)	5.63	--	--	--	--	--
<i>Commercial</i>						
All Use	\$3.75	\$4.14	\$4.37	\$4.61	\$4.86	\$5.13
All Use (Out)	5.63	--	--	--	--	--
<i>Irrigation</i>						
All Use	\$3.75	\$4.45	\$4.69	\$4.95	\$5.22	\$5.51
All Use (Out)	5.63	--	--	--	--	--