

# FINAL REPORT



## South Tahoe Public Utility District *Comprehensive Water Rate Study*

May 2019



May 21, 2019

Mr. John Thiel  
General Manager  
South Tahoe Public Utility District  
1275 Meadow Crest Drive  
South Lake Tahoe, California 96150

**Subject: Final Comprehensive Water Rate Study Report**

Dear Mr. Thiel:

HDR Engineering, Inc. (HDR) is pleased to present the final report on the comprehensive water rate study conducted for South Tahoe Public Utility District (District). A key objective in developing the District's comprehensive water rate study was to develop a financial plan and rates that generate adequate revenues to fund the operating and capital needs of the water utility. Another objective of this study was to determine the equity or fairness of the current rates by conducting a cost of service analysis. This report outlines the approach, methodology, findings, and conclusions of the comprehensive water rate study.

This report was developed utilizing the District's accounting, operating, and customer records. HDR has relied on this information to develop our analyses that form our findings, conclusions and recommendations. At the same time, this study was developed utilizing generally accepted rate setting principles, and methodologies. The conclusions and recommendations contained within this report are intended to provide a financial plan that meets the operating and capital needs of the utility. Finally, this report provides the basis for developing and implementing rates that are cost-based, defensible, and equitable to the District's customers.

We appreciate the assistance provided by District staff in the development of this study. More importantly, we appreciate the opportunity to work with the District's staff, management, and Board of Directors on this project.

Sincerely,  
HDR Engineering, Inc.

A handwritten signature in black ink, appearing to read "Shawn Koorn".

Shawn Koorn  
Associate Vice President



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# Executive Summary

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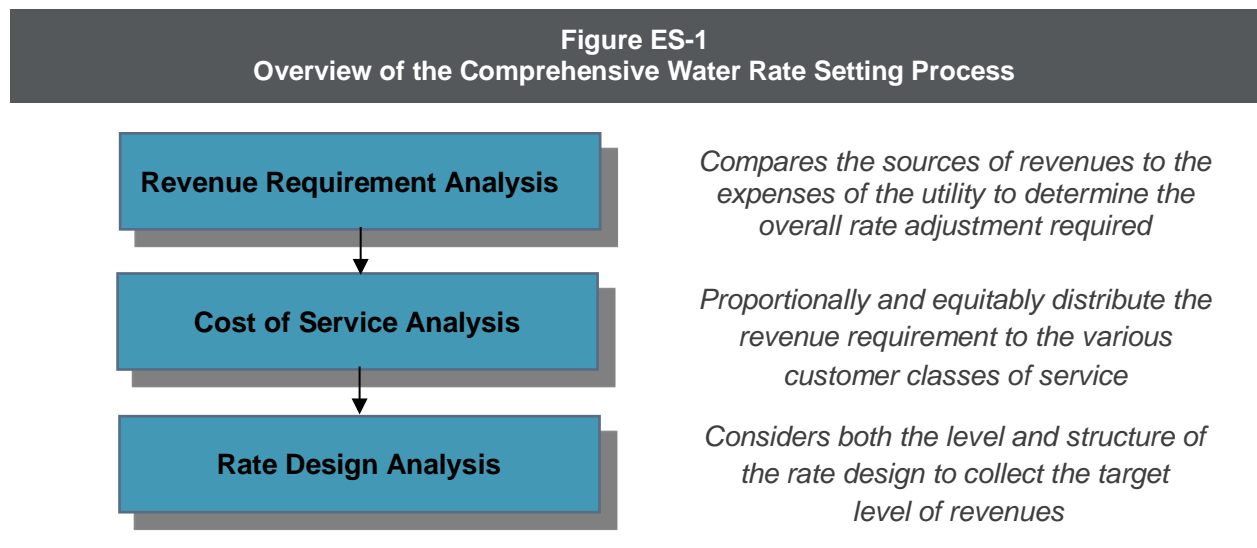
South Tahoe Public Utility District (District) retained HDR Engineering, Inc. (HDR) to perform a comprehensive rate study for its water utility. A comprehensive rate study determines the adequacy of the existing water rates and provides the basis to maintain cost-based and equitable rates. This report will describe the methodology, findings, and conclusions and recommendations from the comprehensive water rate study undertaken for the District. The main objectives of the study were to:

- Review the District's previously adopted water rates.
- Develop a financial plan for projecting operating and capital costs for the water utility for planning purposes.
- Provide the framework and methodology, based on generally accepted industry best practices, for the development of cost-based water rates.
- Adopt rates through the Proposition 218 process that adequately fund the Districts operational and capital expenses over the study time period.

The Districts System has approximately 250 miles of water lines 1,900 fire hydrants and treats on average approximately 5 million gallons a day. The District is located in the Tahoe basin and borders the California and Nevada state line serving approximately 14,000 customers in the City of South Lake Tahoe and the surrounding communities of Cascade Lakes, Luther Pass, and Echo Lake. The District owns and operates the treatment and distribution systems that serve these customers.

## Overview of the Rate Study Process

This comprehensive rate study consists of three interrelated analyses performed for the Water utility. Figure 1-1 provides an overview of these analyses.



A revenue requirement analysis is a comparison of the overall revenues and expenses, both operating and capital, of the utility. From this analysis, a determination can be made as to the overall level of adjustment to revenues necessary to meet annual needs. Next, a cost of service analysis is performed to proportionally and equitably allocate the revenue requirement to the various types of customers served (e.g., single-family, multi-family, commercial). Finally, once an overall level of revenue adjustment is determined and a proportional and equitable allocation of those costs, the last step of the rate study process is the design of rates to collect the appropriate level of revenues while considering the other rate design goals and objectives of the utility (e.g., revenue stability, cost-based, continuity in philosophy) as developed as part of the cost of service analysis.

## Key Water Rate Study Results

- A revenue requirement analysis was developed for the projected time period of FY 2019 through FY 2029 for the water utility.
- The Department's FY 2019 adopted budget for the water utility was used as the starting point of the analysis along with the current capital improvement plan.
- Operation and maintenance (O&M) expenses are projected to increase at inflationary levels with no assumed changes to levels of service or anticipated extraordinary expenses.
- A cost of service analysis was developed to review the equity of the existing rates and to proportionately allocate the revenue requirement among the various customer classes of service for the water utility and customers within each class.
- The results of the cost of service analyses provided the unit costs (i.e., cost basis) which were used to establish the proposed water rates.
- The Study has developed proposed rates for the FY 2020 – FY 2024 time period, by customer class of service.
- The proposed water revenue adjustments average 6.0% annually from FY 2020 through FY 2024, effective July 1 of each year.

## Summary of the Revenue Requirement Analysis

A revenue requirement analysis is the first analytical step in the comprehensive water rate study process. This analysis determines the adequacy of the current rates to fund annual operating expenses and capital improvement needs. 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 the District's water system.

As a practical matter, a multi-year time frame is recommended in an attempt to identify and plan for any major expenses that may be on the horizon. By anticipating future financial requirements, the District can begin planning for these changes sooner, thereby minimizing short-term rate impacts while also stabilizing long-term rates. For the District's study, a 10-year projected time period was developed (FY 2020 – FY 2029) with a focus on the next 5-year period (FY 2020 – FY 2024) for rate setting purposes.

For the revenue requirement analysis a "cash basis" approach was utilized. The "cash basis" approach is the most commonly methodology used by municipal and district utilities to set their revenue requirement and in its most basic form, it is composed of O&M expenses, taxes / transfer payments, annual debt service payments, and rate funded capital projects. The inputs for the

District's revenue requirement analysis were the District's adopted budget for the water utility, actual and historical billed customer data, and the current water capital improvement plan. Budgeted O&M expenses were projected using inflationary factors for the District's various expenses to provide water collection and treatment services over the projected time period.

A capital funding plan is developed as part of the revenue requirement which serves as an input to the revenue requirement establishing how capital projects will be funded. The proper and adequate funding of capital projects is important to help maintain existing facilities, provide consistent levels of service and minimize rate impacts over time. A general financial guideline states that, at a minimum, a utility should fund an amount equal to or greater than annual depreciation expense through current rate revenue (Rate Funded Capital). Annual depreciation expense reflects the current investment in plant being depreciated or "losing" its useful life. Therefore, this portion of plant investment needs to be replaced or repaired to maintain the existing level of infrastructure (and service levels). However, it must be kept in mind that, in theory, annual depreciation expense reflects an investment in infrastructure that was placed in service an average of 15 years ago, assuming a 30-year useful (i.e., depreciable life). It is important to note and understand that depreciation expense is not the same as replacement cost. Thus, a Rate Funded Capital component amount which exceeds the water utilities' share of depreciation expense is reasonable and appropriate target to aspire to as the utility becomes more fiscally sound. In developing this financial plan, HDR and the District have attempted to minimize rate impacts while funding the planned capital improvement projects.

HDR and District staff worked with the District Board to review various capital funding scenarios. These included various levels of renewal and replacement funding and prioritization of system specific improvements. Based on these discussions with the Board, the final capital improvement funding plan was developed. In developing this financial plan, HDR and the District have attempted to minimize rate impacts while funding the planned capital improvement projects through a mix of long-term borrowing and rate funding. Provided in Table ES-1 is a summary of the proposed capital improvement funding plan.

**Table ES-1**  
**Overview of the Water Capital Improvement Plan (000's)**

	Budget	Projected									
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Capitalized Engineering Costs</b>	\$2,181	\$1,852	\$1,905	\$1,960	\$2,016	\$2,075	\$2,135	\$2,196	\$2,260	\$2,326	\$2,394
<b>Capital Improvement Projects</b>											
Budgeted Capital	\$6,081	\$7,120	\$4,340	\$680	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fire Flow - 6% Capital Projects	<u>2,297</u>	<u>1,141</u>	<u>3,817</u>	<u>7,521</u>	<u>7,967</u>	<u>8,103</u>	<u>7,888</u>	<u>7,993</u>	<u>7,800</u>	<u>7,876</u>	<u>7,987</u>
Capital Project Spending	<b>\$10,560</b>	<b>\$10,113</b>	<b>\$10,063</b>	<b>\$10,160</b>	<b>\$9,983</b>	<b>\$10,177</b>	<b>\$10,023</b>	<b>\$10,189</b>	<b>\$10,060</b>	<b>\$10,201</b>	<b>\$10,380</b>
Debt Service	\$819	\$782	\$714	\$1,029	\$1,260	\$1,467	\$1,726	\$1,854	\$2,083	\$2,303	\$2,328
Transfer to (From) Capital Reserve	\$864	\$1,918	(\$848)	\$186	\$639	\$175	(\$1,335)	\$2,160	\$755	\$846	(\$1,511)
<b>Total Capital Investment</b>	<b>\$12,243</b>	<b>\$12,813</b>	<b>\$9,928</b>	<b>\$11,375</b>	<b>\$11,881</b>	<b>\$11,820</b>	<b>\$10,414</b>	<b>\$14,203</b>	<b>\$12,898</b>	<b>\$13,350</b>	<b>\$11,198</b>
<b>Capital Plan Funding</b>											
Assumed Debt Issuance / Proceeds	\$6,081	\$7,120	\$6,840	\$4,499	\$5,670	\$4,604	\$2,500	\$5,500	\$3,500	\$3,000	\$0
Rate Funded Capital:											
Operating Reserve Transfer	4,396	3,927	1,322	5,110	4,446	5,450	6,148	6,937	7,632	8,584	9,432
Capital Improvement Charge	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766
<b>Total Capital Funding</b>	<b>\$12,243</b>	<b>\$12,813</b>	<b>\$9,928</b>	<b>\$11,375</b>	<b>\$11,881</b>	<b>\$11,820</b>	<b>\$10,414</b>	<b>\$14,203</b>	<b>\$12,898</b>	<b>\$13,350</b>	<b>\$11,198</b>



The District's capital funding plan includes, three funding sources, revenue collected from the current year's rates (Rate Funded Capital), reserve funds, and debt. The District's budget has two line items that would be considered rate funded capital, Capital Improvement Charge, which is a specific distribution from rates for capital projects, as well as a transfer of current rate revenue from operations. As a point of reference, the District's annual depreciation for the water assets is approximately \$3 million. As can be seen in Table ES-1, the District's funding approach exceeds the minimum funding level of annual depreciation expense. However, this is a critical funding source for maintaining infrastructure and should be reviewed and updated on an annual basis during the budgeting process.

As noted, the revenue requirement is comprised of O&M expenses, transfers/taxes, annual debt service payments, and rate funded capital. As outlined above, the O&M expenses were based on the most recent adopted budget for the District, in this case FY 2019. Future year projections were based on historical inflationary factors and known changes in costs during the 10-year period. Transfers were made to the capital fund to meet future capital improvement funding in combination with projected long-term borrowing. Annual debt service payments, both principal and interest, were funded annually based on the existing amortization schedules, and District developed projections for future long-term borrowing. Finally, rate funded capital was developed to meet future capital funding needs and industry standard approaches.

These components are summed to develop the total revenue requirement for the District's water utility. The results of the revenue requirement are presented in Table ES-2 and provide the basis for future revenue adjustments to meet operating and capital funding needs.

**Table ES-2**  
**Summary of the Revenue Requirement Analysis (000's)**

	Budget	Projected									
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Sources of Funds</b>											
Rates	\$12,703	\$12,862	\$12,941	\$12,957	\$12,973	\$12,988	\$13,003	\$13,019	\$13,034	\$13,051	\$13,068
Other Revenues	<u>2,494</u>	<u>1,205</u>	<u>1,238</u>	<u>1,229</u>	<u>1,240</u>	<u>1,250</u>	<u>1,260</u>	<u>1,247</u>	<u>1,285</u>	<u>1,304</u>	<u>1,325</u>
<b>Total Sources of Funds</b>	<b>\$15,197</b>	<b>\$14,067</b>	<b>\$14,180</b>	<b>\$14,186</b>	<b>\$14,212</b>	<b>\$14,238</b>	<b>\$14,263</b>	<b>\$14,265</b>	<b>\$14,319</b>	<b>\$14,355</b>	<b>\$14,393</b>
<b>Applications of Funds</b>											
Operations & Maintenance Expenses	\$8,823	\$9,198	\$9,482	\$9,731	\$10,031	\$10,297	\$10,593	\$10,898	\$11,212	\$11,536	\$11,870
Rate Funded Capital:											
Capital Improvement Charge	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766
Transfer from Operations	4,396	3,927	1,322	5,110	4,446	5,450	6,148	6,937	7,632	8,584	9,432
Debt Service	966	974	827	1,454	2,125	2,560	2,914	3,097	3,520	3,789	4,020
To / (From) Reserves	<u>(831)</u>	<u>(1,027)</u>	<u>2,351</u>	<u>(1,552)</u>	<u>(919)</u>	<u>(1,568)</u>	<u>(1,832)</u>	<u>(1,967)</u>	<u>(2,203)</u>	<u>(2,430)</u>	<u>(2,464)</u>
<b>Total Revenue Requirement</b>	<b>\$15,119</b>	<b>\$14,838</b>	<b>\$15,748</b>	<b>\$16,508</b>	<b>\$17,449</b>	<b>\$18,506</b>	<b>\$19,589</b>	<b>\$20,731</b>	<b>\$21,928</b>	<b>\$23,245</b>	<b>\$24,623</b>
Bal./(Def.) of Funds	\$78	(\$772)	(\$1,568)	(\$2,322)	(\$3,236)	(\$4,268)	(\$5,325)	(\$6,466)	(\$7,608)	(\$8,890)	(\$10,231)
Bal./(Def.) of Funds as % of Rates	-0.6%	6.0%	12.1%	17.9%	24.9%	32.9%	41.0%	49.7%	58.4%	68.1%	78.3%
<b>Proposed Rate Adjustment</b>	<b>0.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>

As shown in Table ES-2, revenues are insufficient to prudently fund the District's water O&M and capital needs. It is important to note the annual deficiencies in the Table ES-2 are cumulative. That is, any adjustments in the initial years will reduce the deficiency in the later years. Over the projected time period, rates need to be adjusted by approximately 33% over the five year rate setting period (FY 2020 – FY 2024) in order to adequately and properly fund the District's water utility O&M and capital infrastructure needs.

Based on the revenue requirement analysis developed, HDR recommends the District increase the overall revenue levels of the water utility. Based on the plan developed in this report, the recommended annual adjustments of 6% will provide adequate funding for the time period of FY 2020 FY 2024 based on the assumptions developed as part of the rate study. Revenue adjustments after the proposed five-year period will be based on an updated analysis and O&M and capital needs at that time.

## Summary of the Cost of Service Analysis

A cost of service analysis determines the proportional and equitable allocation of the revenue requirement to the various customer classes of service. The objective of the cost of service analysis is different from determining the revenue requirement. A cost of service analysis determines the fair and equitable manner to collect that revenue requirement based on the customer class characteristics and facility requirements.

For the water utility, there are three customer classes of service (i.e., rate schedules). Based on the cost of service analysis, the revenue requirement for FY 2020 has been proportionally allocated to the various customer classes of service. This reflects each customer class's proportional share of average day, peak day, and customer related costs. The sum of the total distributed costs is compared to the current revenues of each customer class to determine the overall change in rates. A summary of the cost of service analysis is provided in Table ES-3.

Table ES - 3 Summary of the Cost of Service Analysis (\$000)				
Class of Service	Present Revenue (FY 2018/19)	Allocated Costs	\$ Difference	% Difference
Single Family	\$8,332	\$9,013	(\$681)	8.2%
Multifamily	1,936	1,956	(19)	1.0%
Commercial	<u>2,593</u>	<u>2,665</u>	<u>(72)</u>	<u>2.8%</u>
Total	\$12,862	\$13,634	(\$772)	6.0%

Table ES-3 provides a comparison of the current rate revenues to the distributed costs. The difference between the rate revenues and distributed costs for each class of service represents the variance between the level of revenues currently received from each class of service (e.g., current rates), and the equitable distribution of costs. In viewing these results, it is important to remember that a cost of service analysis is not an exact calculation. Rather, it reflects the current relationships between current customer revenues and current costs. These relationships change over time given

budgetary changes and changes in customer consumption patterns and characteristics. A customer class is generally considered being within a reasonable range of its Cost of Service when the customers cost of service change is within 5% of the overall rate adjustment. However, the results of this study are indicating that there are differences in the rate revenue collected and the allocated cost which results in cost of service adjustments being made to meet the requirements of Proposition 218.

## Summary of the Rate Design Analysis

Rates that meet the utility's objectives are designed based on both the revenue requirement, the cost of service analysis, and the District's philosophy on rates. The purpose of this study is to develop cost-based and equitable rates for the District's customers. It is recommended that rates be reevaluated periodically so that rates are collecting sufficient revenue to properly maintain adequate level of operations and investment in the system to provide future reliable operations and maintain equity between the customer classes of service.

The overall revenue adjustments were determined in the revenue requirement analysis to calculate the prudent revenue levels necessary to fund operating and capital expenses. How the overall revenue adjustment is applied by class of service takes into consideration the cost of service results to determine how the overall revenue adjustment is collected.

Based on the revenue requirement and the cost of service analysis proposed rates were developed for the next five-years. The proposed rates for FY 2020 reflect the results of the cost of service analysis and future years (FY 2021 – FY 2024) were adjusted evenly across all customer classes based on the overall revenue needs identified in the revenue requirement analysis. Table ES-4 provides the current rates and the proposed rates for the next 5 years.

**Table ES-4  
Current and Proposed Rates**

	Current	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>Quarterly Charge by Meter Size</b>						
5/8" & 3/4"	\$140.90	\$141.84	\$150.35	\$159.37	\$168.93	\$179.07
1"	235.20	236.77	250.97	266.03	281.99	298.91
1 1/2"	469.10	472.22	500.56	530.59	562.42	596.17
2"	750.80	755.80	801.15	849.21	900.17	954.18
3"	1,408.70	1,418.08	1,503.16	1,593.35	1,688.95	1,790.29
4"	2,348.20	2,363.83	2,505.66	2,656.00	2,815.36	2,984.28
6"	4,694.90	4,726.15	5,009.72	5,310.30	5,628.92	5,966.66
8"	7,512.20	7,562.20	8,015.94	8,496.89	9,006.71	9,547.11
10"	10,799.90	10,871.79	11,524.09	12,215.54	12,948.47	13,725.38
<b>Unmetered Customers</b>						
Single Family	\$165.20	\$178.80	\$189.53	\$200.90	\$212.95	\$225.73
Duplex	293.70	296.44	314.22	333.07	353.06	374.24
Triplex	399.00	402.72	426.88	452.49	479.64	508.42
Four-plex	516.20	521.01	552.27	585.40	620.53	657.76
Additional Multifamily Units (>4)	86.50	87.31	92.54	98.10	103.98	110.22
Commercial	251.40	257.97	273.44	289.85	307.24	325.68
<b>Commodity Charges (\$/CCF)</b>						
<b>Single Family</b>						
0 - 45 CCF	\$1.09	\$1.58	\$1.67	\$1.77	\$1.88	\$1.99
45 + CCF	1.64	2.40	2.55	2.70	2.86	3.03
<b>Multifamily</b>						
All Consumption	\$1.53	\$1.57	\$1.67	\$1.77	\$1.88	\$1.99
<b>Commercial</b>						
All Consumption	\$1.52	\$1.62	\$1.72	\$1.82	\$1.93	\$2.04

## Summary

This completes the summary of the comprehensive rate study completed for the District's water utility. Based on the Board discussion, and results of the comprehensive water rate study, the following recommendations have been developed:

- The revenue requirement analysis showed a deficiency of annual revenues to meet annual operating and capital needs. To maintain the revenue sufficiency of the water utility, proposed annual revenue adjustments of 6.0% are recommended in FY 2020 through FY 2024.

- The cost of service study resulted in minor cost differences between the various customer classes of service. As a result, it is recommended that rates be developed around the cost of service results, for each customer class of service.
- Proposed rates were developed that reflect the overall revenue needs and cost of service results for the next five-year period. It is recommended that the proposed rates be adopted as they reflect the equitable and proportional allocation of costs.

A full and complete discussion of the development of the comprehensive water rate study and the proposed rate adjustments can be found in following sections of this report.



# 1 Introduction

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The South Tahoe Public Utility District (District) retained HDR Engineering, Inc. (HDR) to perform a comprehensive rate study for its water utility. A comprehensive water rate study determines the adequacy of the existing water rates and provides the basis to maintain cost-based and equitable rates. This report describes the methodology, findings, and conclusions of the comprehensive water rate study process undertaken for the District.

The District owns and operates the Water collection and treatment systems in the City of South Lake Tahoe and surrounding communities. In all the District serves approximately 14,000 Water customers with the vast majority being residential, or single-family, customers.

This study determined whether existing rates are adequate to meet the utility's operating and capital expenses with revenues received from customers. Rates set too low may result in insufficient funds to maintain system integrity. The study provides a basis for making rate adjustments; as well as, addressing the proportionality and equity of the District's current rates.

An additional component of this study involves adherence to legal requirements set in the California Constitution Article XIII D, or commonly referred to as proposition 218. This law requires Water utilities to established rate methodologies which result in costs based rates which are then subject to a vote of its customers.

This study has been designed and intended to comply with the legal requirements of Proposition 218. This study has been developed using industry accepted water rate setting methodologies and best practices, as outlined in the American Water Works Association M1 Manual, along with District specific water system data and information.

## 1.1 Goals and Objectives

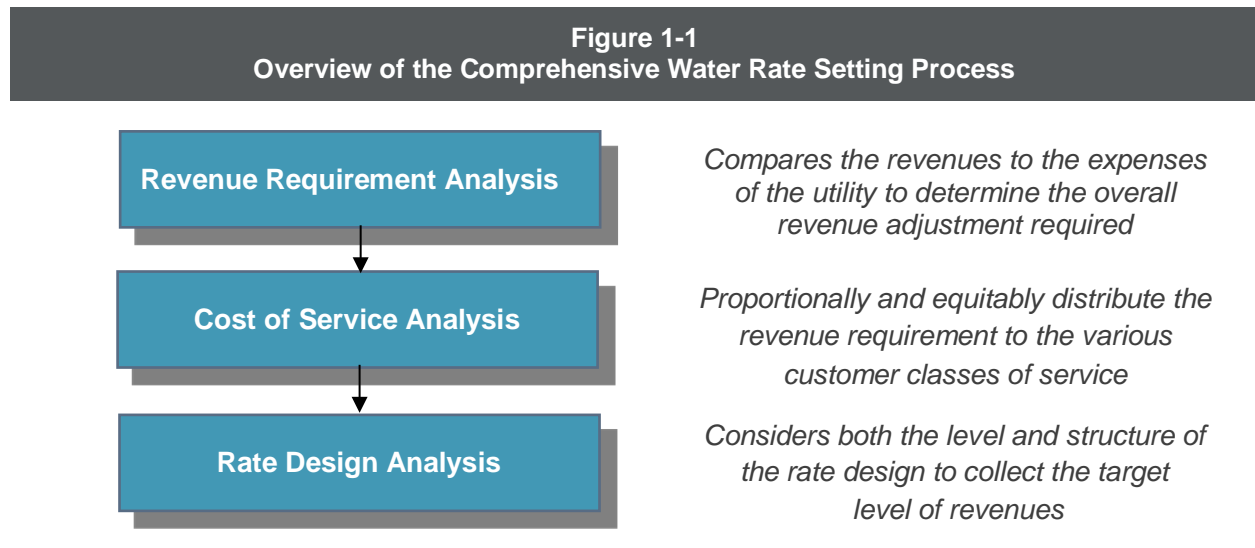
The District had a number of goals and objectives in mind prior to beginning the comprehensive water rate study. These goals and objectives were discussed with District staff and the District's board to establish policies that ultimately guided the rate study to its conclusion. These goals and objectives were as follows:

- Develop the water study in a manner that is consistent with the principles and methodologies established by the American Water Works Association M1, Principles of Water Rates, Fees and Charges (AWWA M1 Manual).
- In financial planning and establishing the District's rates, review and utilize best industry practices, while recognizing and acknowledging the specific and unique characteristics of the District's water system and facilities.
- Review the District's rates utilizing "generally accepted" rate making methodologies to determine adequacy and equity of the utility rates.
- Meet the District's financial planning criteria and goals, such as debt service coverage ratios, adequate funding of capital infrastructure, and maintenance of prudent reserve levels.
- Develop a final proposed financial plan which adequately supports the water utility's funding requirements, while attempting to minimize overall impacts to rates.

- Provide rates designed to meet the legal requirements of Article XIII D and recent legal decisions related to Article XIII D.
- Develop proposed rates that are cost-based and reflective of the District's specific costs.

## 1.2 Overview of the Rate Study Process

This Comprehensive study consists of three interrelated analysis performed for the Water utility. Figure 1-1 provides an overview of these analyses.



A revenue requirement analysis is concerned with the overall funding sources and expenses of the utility. From this analysis, a determination can be made as to the overall level of adjustment to revenues. Next, a cost of service analysis is performed to equitably allocate the revenue requirement to the various types of customers served (e.g., single-family, multi-family, commercial). Finally, once an overall level of revenue adjustment is determined and a proportional and equitable allocation of those costs, the last step of the rate study process is the design of rates to collect the appropriate level of revenues while considering the other rate design goals and objectives of the utility (e.g., revenue stability, cost-based, continuity in philosophy) as included within the cost of service analysis. As a part of this study, HDR developed each of these analyses to analyze the District's current Water rates which are based on generally accepted cost of service and rate setting techniques.

## 1.3 Report Organization

This report is organized as follows:

- ✓ Section 2 provides background information about the utility rate setting process
- ✓ Section 3 reviews the revenue requirement analysis
- ✓ Section 4 reviews the cost of service analysis
- ✓ Section 5 reviews the rate design analysis



A technical appendices is attached at the end of the report which provides the detailed analysis used in preparation of this report.

## 1.4 Summary

This report will review the comprehensive water rate analysis prepared for the District. This report has been developed utilizing generally accepted rate setting methodologies as outlined in the AWWA M1 Manual to meet the requirements of Proposition 218. The next section of the report provides an overview of the basic theory and methodology used to establish cost-based rates. This provided the methodological foundation for the development of the District's Water rates.

## 2 Overview of the Rate Setting Process

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### 2.1 Introduction

This section provides background information about the rate setting process, including descriptions of generally accepted principles, types of utilities, methods of determining revenue requirements, the cost of service approach, and rate design. This information is useful for gaining a better understanding of the details presented in Sections 3 through 5.

### 2.2 Generally Accepted Rate Setting Principle

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

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

### 2.3 Determining the Revenue Requirement

Because public and private utilities have very different administrative and financial characteristics, their methods differ for determining revenue requirements and setting rates.

#### 2.3.1 Public Utilities

Most public utilities like the District use the “cash basis” approach 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:

- ✓ **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 debt service payments (principal and interest) to capital improvements financed with rate revenues (Rate Funded Capital). In lieu of including capital improvements financed with rate revenues, a utility sometimes includes depreciation expense to stabilize the annual revenue requirement.

Under the cash basis approach, the sum of the capital and operating expenses equals the utility's revenue requirement during any period of time (see Table 2-1).

Note that the two portions of the capital expense component, debt service and capital improvements financed from rates, are necessary under the cash basis approach because utilities generally cannot finance all their capital facilities with long-term debt. An exception occurs if a public utility provides service to a wholesale or contract customer. In this situation, a public utility could use the “utility basis” approach (see below) to earn a fair return on its investment.

Table 2-1 Cash versus Utility Basis Comparison	
Cash Basis	Utility Basis (Accrual)
+ O&M Expense	+ O&M Expense
+ Taxes or Transfer Payments	+ Taxes or Transfer Payments
+ Rate Funded Capital ( $\geq$ Depreciation Expense)	+ Depreciation Expense
+ Debt service (Principal + Interest)	+ Return on Investment
= Total Revenue Requirement	= Total Revenue Requirement

## 2.4 Analyzing Cost of Service

After the total revenue requirement is determined, it is allocated to the users of the service. The allocation, usually analyzed through a cost of service study, reflects the cost relationships for producing and delivering services. A cost of service study requires three steps:

1. Costs are **functionalized** or grouped into the various cost categories related to providing service (supply, treatment, distribution, pumping, etc.). This step is often largely accomplished by the utility’s chart of accounts within its 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 are typically allocated as average day, peak day, or customer-related.
3. Once the costs are allocated into components, they are **distributed** to the customer classes of service (single-family, multi-family, commercial). The distribution is based on each customer class’ relative, proportional, contribution to the cost component. For example, customer-related costs are distributed to each class of service based on the total number of customers in that class of service. Once costs are distributed, the required revenues for achieving cost-based rates can be determined.

## 2.5 Designing Rates

Rates that meet the utility’s objectives are designed based on both the revenue requirement and the cost of service analyses. This approach results in rates that are strictly cost-based. In designing the final proposed rates, factors such as ability to pay, continuity of past rate philosophy, economic development, ease of administration, and customer understanding may be taken into consideration. However, the proposed rates must take into consideration each customer class’s proportionate share of the costs allocated through the cost of service analysis to meet legal requirements.

## 2.6 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 watering needs. It follows that the customers who create excessive peak demands on the system and create the need for upsizing of the distribution system should pay for those over-sized facilities in proportion to their contribution to total peaking requirements. When costing and pricing techniques are refined, consumers have a more accurate understanding of what the commodity costs to produce and deliver.

***“Economic theory suggests that the price of a commodity must roughly equal its cost if equity among customers is to be maintained.”***

## 2.7 Summary

This section of the report has provided a brief introduction to the general principles, techniques, and economic theory used to set utility rates. These principles and techniques will become the basis for the District's analysis. The next section will review the development of the financial and rate setting policies established for this study.



## 3 Development of the Revenue Requirement

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### 3.1 Introduction

This section describes the development of the water revenue requirement analysis for the District's water rate study. The revenue requirement analysis is the first analytical step in the comprehensive process. This analysis determines the adequacy (level) of the District's overall water rate levels. From this analysis, a determination can be made as to the overall level of water revenue adjustment needed to provide adequate and prudent funding for both operating and capital needs. One of the main objectives of a water rate study is to develop cost-based and equitable rates while minimizing the impacts to the utility's customers.

In developing the water revenue requirement, it was assumed the utility must financially "stand on its own" and adequately fund both operations and capital. As a result, the revenue requirement analysis as developed herein assumes the full and proper funding needed to operate and maintain the system on a financially sound and prudent basis over a long-term period. This results in stable rate levels from both the District's and customers perspective and minimizes large rate swings over time.

Provided below is a detailed discussion of the development of the revenue requirement analysis for the District's water utility.

### 3.2 Establishing a Time Frame and Approach

The first step in calculating the revenue requirement was to establish a time frame for the revenue requirement analysis. For this study, the revenue requirement was developed for a ten-year projected time period (FY 2020 – FY 2029), not including the budget year. While a ten-year period was reviewed, for long-term sustainability purposes, the focus of the rate study is the next five-year rate setting period of FY 2020 – FY 2024.

The second step in determining the revenue requirement for the District, was to decide on the basis of accumulating costs. For the District's revenue requirement, a "cash basis" approach was utilized, which is also the approach used in past studies completed by the District. As was discussed in Section 2, the cash basis approach is the most common methodology used by municipal utilities such as the District to set their revenue requirement. Section 2 of this report also provided a simple overview of the cash basis methodology. The actual revenue requirement developed for the District was customized to follow the District's system of accounts (budget documents). However, even with these modifications, the District's revenue requirement still contains the four basic cost components of a cash basis methodology. Table 3-1 provides a summary of the specific components within the cash basis approach used to develop the District's revenue requirement.

**Table 3-1**  
**Overview of the Water Utility Cash Basis Revenue Requirement**

+ Water Operation and Maintenance Expenses	
+ Transfer / Taxes	
+ Rate Funded Capital[1]	
<u>+ Debt Service (P + I) – Existing and Future</u>	
= Total Water Revenue Requirement	
<u>– Miscellaneous Revenues</u>	
= Net Revenue Requirement (Balance Required from Rates)	
<hr/>	
[1] Rate Funded Capital	
+ Total Water Capital Improvement Projects	
- Funding Sources Other than Rates	
✓ Connection Fees	
✓ Capital Reserves	
<u>✓ Long term debt issues</u>	
= Rate Funded Capital	

Given a time period around which to develop the revenue requirement and a method to accumulate the appropriate costs; the focus shifts to the development and projection of the revenues and expenses of the water utility.

The primary financial inputs in this process were the District's historical billing records, adopted water operating budget, and current capital improvement plan. Presented below is a detailed discussion of the steps and key assumptions in the development of the District's water projected revenues and expenses.

### 3.3 Projection of Revenues

The starting point of the analysis is the projection of revenues received by the District for providing water services. These revenue sources include rate revenues, or revenues received from customers, as well as miscellaneous revenues received as part of operating a water utility. Provided below is a summary of the revenues received by the District's water utility.

#### 3.3.1 Projecting Water Rate Revenues

The first step in developing the revenue requirement was to develop a projection of rate revenues, at present rate levels. This process involved developing a revenue projection based on historical billing units for each customer group such as meters by size and consumption by customer class and by consumption tier where applicable. The billing units for each customer group were then multiplied by the applicable current rates. This method of independently calculating rate revenues assures the projected rate revenues used within the analysis tie to the projected billing units (i.e., meters, consumption).

The majority of the District's rate revenues are derived from single-family customers. Currently, the District has three major classes of service: single-family, multi-family, and commercial customers.

In total, at present rates, the District is projected to receive approximately \$12.7 million in rate revenue in FY 2019. Over the planning horizon of this study, customer growth is assumed to increase 0.2% annually resulting in projected rate revenue in FY 2029 of \$13.0 million.

### 3.3.2 Projecting Miscellaneous Revenues

In addition to rate revenues, the District also receives a variety of miscellaneous revenues which includes Capacity Charges, connection fees and interest income. The sum of the miscellaneous revenue is approximately \$1.2 million in FY 2019 and increases to \$1.3 million in FY 2029.

## 3.4 Projecting Operation and Maintenance Expenses

Operation and maintenance (O&M) expenses are incurred by the District to operate and maintain the existing plant in service and provide water service. In general, operation and maintenance expenses are grouped into a number of different functional categories. HDR reviewed the District's FY 2019 budget and determined it contained sufficient detail to develop the revenue requirement analysis. Therefore, in developing this analysis, HDR maintained the overall functional nature of the District's system of accounts (i.e., underground repair, pumps, etc.).

Once the FY 2019 expenses were developed, escalation factors were developed for the basic types of expenses the District incurs: salaries, benefits, professional service, materials and supplies, equipment, Miscellaneous, and utilities. The escalation factors developed for the projection of the District's O&M expenses were in the range of two to four percent per year, depending on the type of cost and recent inflationary trends. Provided in Table 3-2 is a summary of the escalations factors used with the study.

Table 3-2 Summary of the Escalation Factors	
Type of Expense	Average Escalation Rate
Salaries	3.0%
Benefits	4.0%
Professional Services	2.0%
Materials & Supplies	2.0%
Equipment	2.0%
Miscellaneous	2.0%
Utilities	2.0%

Total O&M expenses for the District are projected to be approximately \$8.8 million in FY 2019, increasing to approximately \$11.8 million by FY 2029 as a result of assumed inflation.

## 3.5 Projecting Capital Project Funding

The District is in the process of upgrading and replacing the water system to provide adequate fire flow throughout their service area. Increased fire flow is the main driver behind the capital plan and

is planned to be implemented over the next 10 years. The District intends to pay for the necessary capital improvement projects with a mix of long-term debt and annual rate funding.

The rate funded capital component of the plan includes two line items in the District's budget, the capital improvement charge and an operating fund transfer. In addition to fire flow, the District has other water line replacement projects and metering project which has been going on for the last several years. The District currently allocates \$1.8 million per year for capital improvement projects. However this amount is only the base amount of funding for capital. In addition to the allocated capital improvements, the District anticipates spending between \$1.4 and \$9.5 million per year on other projects including the fire flow projects. The balance of the required funds for the District's capital plan are expected to be funded with periodic long-term debt. The additional debt issues are funded through the annual debt service payments and included in the development of the revenue requirement. A summary of the water capital improvement funding plan is provided in Table 3-3.



**Table 3-3**  
**Overview of the Water Capital Improvement Plan (000's)**

	Budget	Projected									
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Capitalized Engineering Costs</b>	\$2,181	\$1,852	\$1,905	\$1,960	\$2,016	\$2,075	\$2,135	\$2,196	\$2,260	\$2,326	\$2,394
<b>Capital Improvement Projects</b>											
Budgeted Capital	6,081	7,120	4,340	680	0	0	0	0	0	0	0
Fire Flow - 6% Capital Projects	2,297	1,141	3,817	7,521	7,967	8,103	7,888	7,993	7,800	7,876	7,987
<b>Capital Project Spending</b>	<b>\$10,560</b>	<b>\$10,113</b>	<b>\$10,063</b>	<b>\$10,160</b>	<b>\$9,983</b>	<b>\$10,177</b>	<b>\$10,023</b>	<b>\$10,189</b>	<b>\$10,060</b>	<b>\$10,201</b>	<b>\$10,380</b>
Debt Service	\$819	\$782	\$714	\$1,029	\$1,260	\$1,467	\$1,726	\$1,854	\$2,083	\$2,303	\$2,328
Transfer to (From) Capital Reserve	\$864	\$1,952	(\$805)	\$227	\$680	\$226	(\$1,283)	\$2,206	\$812	\$907	(\$1,447)
<b>Total Capital Investment</b>	<b>\$12,243</b>	<b>\$12,847</b>	<b>\$9,971</b>	<b>\$11,416</b>	<b>\$11,922</b>	<b>\$11,871</b>	<b>\$10,466</b>	<b>\$14,249</b>	<b>\$12,955</b>	<b>\$13,411</b>	<b>\$11,261</b>
<b>Capital Plan Funding</b>											
Assumed Debt Issuance / Proceeds	\$6,081	\$7,120	\$4,340	\$3,318	\$6,339	\$4,207	\$0	\$6,000	\$2,000	\$0	\$0
Rate Funded Capital:											
Operating Reserve	4,396	3,852	1,066	4,833	4,108	4,892	5,332	5,968	6,361	7,039	7,783
Capital Improvement Charge	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766
<b>Total Capital Funding</b>	<b>\$12,243</b>	<b>\$12,847</b>	<b>\$9,971</b>	<b>\$11,416</b>	<b>\$11,922</b>	<b>\$11,871</b>	<b>\$10,466</b>	<b>\$14,249</b>	<b>\$12,955</b>	<b>\$13,411</b>	<b>\$11,261</b>

A general financial guideline states that, at a minimum, a utility should fund an amount equal to or greater than annual depreciation expense through rates. The District's annual depreciation for the water utility is approximately \$3 million. Annual depreciation expense reflects the current investment in plant being depreciated or "losing" its useful life. Therefore, this portion of infrastructure needs to be replaced to maintain the existing level of infrastructure. It must also be kept in mind that, in theory, annual depreciation expense reflects an investment in infrastructure an average of 15 years ago, assuming a 30-year depreciable (useful) life. Simply funding an amount equal to annual depreciation expense will not be sufficient to replace the existing or depreciated facility. Therefore, consideration should be given to funding within rates some amount greater than annual depreciation expense for renewals and replacements. Whenever possible, the District should be funding capital projects from rates in an amount greater than annual depreciation expense. The District is currently projected to fund an average of \$7.5 million annually on capital projects. While this level of funding is greater than annual depreciation, it is important for the District to continually review the renewal and replacement needs as well as fire flow improvements to ensure adequate funding on an annual basis to maintain and improve the water system.

### 3.6 Projection of Annual Debt Service

The District currently has a number of outstanding debts which funded water lines and meter installations. During the last rate study the majority of the District's customers were unmetered. In 2004 AB 2572 requires all customer to be metered by 2025, which is the reason for the need for meter installations. In FY 2019 the District had \$966,000 in annual debt service payments, based on current interest rates ranging from 0% to 2.5%. Based on the capital funding plan, and planned issuance of long-term debt, the District has estimated future debt issuance terms of 4.5% over a 20 year term. It is projected that annual debt service payments will increase over the projected time period reaching approximately \$4.0 million by FY 2029.

It is important to note that HDR is not advising the District on the terms of any bond issuances but rather identifying the overall funding needs. The District will work with an independent financial advisor and District financial staff for the issuance of long-term debt. HDR is not acting in a municipal advisor role to the Department for the issuance of any long-term borrowing.

### 3.7 Summary of the Revenue Requirement Analysis

Given the above projections of revenues and expenses, a summary of the revenue requirement for the District's Water utility can be developed. In developing the final revenue requirement, consideration was given to the financial planning considerations of the District. In particular, emphasis was placed on attempting to minimize rates, yet still have adequate funds to support the operational activities and capital projects throughout the projected time period. Presented in Table 3-4 is a summary of the water revenue requirement. A detailed analysis of the revenue requirement can be found in the Exhibits 2 through 4 in the Technical Appendices.

**Table 3-4**  
**Summary of the Revenue Requirement Analysis (000's)**

	Budget	Projected									
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Sources of Funds</b>											
Rates	\$12,703	\$12,862	\$12,941	\$12,957	\$12,973	\$12,988	\$13,003	\$13,019	\$13,034	\$13,051	\$13,068
Other Revenues	2,494	1,261	1,305	1,293	1,307	1,321	1,334	1,317	1,369	1,395	1,422
<b>Total Sources of Funds</b>	<b>\$15,197</b>	<b>\$14,123</b>	<b>\$14,247</b>	<b>\$14,250</b>	<b>\$14,279</b>	<b>\$14,309</b>	<b>\$14,337</b>	<b>\$14,335</b>	<b>\$14,403</b>	<b>\$14,446</b>	<b>\$14,490</b>
<b>Applications of Funds</b>											
Operations & Maintenance Expenses	\$8,823	\$9,198	\$9,482	\$9,731	\$10,031	\$10,297	\$10,593	\$10,898	\$11,212	\$11,536	\$11,870
Rate Funded Capital:											
Capital Improvement Charge	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766	1,766
Transfer from Operations	4,396	3,983	1,389	5,174	4,513	5,521	6,222	7,007	7,716	8,675	9,529
Debt Service	966	974	827	1,454	2,125	2,560	2,914	3,097	3,520	3,789	4,020
To / (From) Reserves	(831)	(1,027)	2,351	(1,552)	(919)	(1,568)	(1,832)	(1,967)	(2,203)	(2,430)	(2,464)
<b>Total Revenue Requirement</b>	<b>\$15,119</b>	<b>\$14,894</b>	<b>\$15,815</b>	<b>\$16,572</b>	<b>\$17,516</b>	<b>\$18,577</b>	<b>\$19,663</b>	<b>\$20,801</b>	<b>\$22,012</b>	<b>\$23,336</b>	<b>\$24,720</b>
Balance/(Def.) of Funds	\$78	(\$772)	(\$1,568)	(\$2,322)	(\$3,236)	(\$4,268)	(\$5,325)	(\$6,466)	(\$7,608)	(\$8,890)	(\$10,231)
Balance/(Def.) of Funds as % of Rates	-0.6%	6.0%	12.1%	17.9%	24.9%	32.9%	41.0%	49.7%	58.4%	68.1%	78.3%
<b>Proposed Rate Adjustment</b>	<b>0.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>

It is important to note the annual deficiencies (line noted as “Bal/(Defic.) of Funds”) in Table 3-4 are cumulative. That is, any adjustment in the initial years will reduce the cumulative deficiency in the following years. The results of the revenue requirement analysis indicate a deficiency of funds over the planning period. These results indicate that the District’s water revenues will need to increase by 6.0% annually in FY 2020 through FY 2024. The calculation of the proposed revenue adjustments are based on the annual deficiency of funds divided by the current rate revenues to determine the percentage revenue adjustment necessary to fund annual operating and capital expenses.

### 3.8 Consultant’s Recommendations

Based on the revenue requirement analysis developed, HDR recommends the District increase the overall revenue levels of the water utility based on the proposed adjustments shown in Table 3-4 during the next five-year period. The first proposed revenue adjustment would be in FY 2020. Subsequent years of adjustments, through FY 2029 are proposed, to fund the annual debt service payments and meet debt service coverage ratios. Table 3-5 shows the proposed revenue transition plan for the next ten-year period. The proposed rate adjustments would allow the District to fund projected O&M and capital needs over the next ten-year period for the water utility.

Table 3-5 Ten-Year Rate Transition Plan									
FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
6%	6%	6%	6%	6%	6%	6%	6%	6%	6%

### 3.9 Summary

This section of the report has summarized the development of the revenue requirement for the District’s water utility. The revenue requirement resulted in a projection of revenue adjustments necessary to prudently fund the water utility operating and capital infrastructure requirements over the next five-year period. The next section will discuss the cost of service analysis, or proportional and equitable distribution of costs, to the various customer’s served by the District.



## 4 Development of the Cost of Service

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In the previous section, the revenue requirement analysis focused on the total sources and application of funds required to adequately fund the District's water utility operating and capital needs. This section of the report will discuss the development of the cost of service analysis. A cost of service analysis is concerned with the proportional and equitable allocation of the total revenue requirement between the various customer classes of service (single-family, multi-family, commercial). The previously developed revenue requirement was functionalized and allocated to the various customer classes of service using generally accepted cost of service principles as outlined in the AWWA M1 Manual.

In recent years, increasing emphasis has been placed on cost of service studies to meet Proposition 218 requirements. Following the generally-accepted guidelines and principles of a cost of service analysis will inherently lead to rates which are equitable, cost-based, not viewed as arbitrary or capricious in nature and reflect the requirements of Proposition 218.

### 4.1 Objectives of a Cost of Service Study

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

- ✓ Allocate the revenue requirement among the customer classes of service
- ✓ Derive average unit costs for subsequent rate designs

The objectives of the Water cost of service analysis are different from determining revenue requirement. As noted in the previous section, a revenue requirement analysis determines the utility's overall financial needs, while the cost of service study determines the fair and equitable manner to collect the revenue requirement.

The cost of service analysis results in unit costs which can be used to design water rates are designed which reflect the costs incurred by the customers. For example, a water utility incurs costs related to average day, peak day, customer-cost components, and fire protection. Each of these types of costs may be collected in a slightly different manner as to allow for the development of rates that collect costs in the same manner as they are incurred.

### 4.2 Determining the Customer Class of Service

The first step in a cost of service study is to determine the customer classes of service. Currently, the District has a separate rate schedule for single-family, multi-family, and commercial customer types.

In determining classes of service for cost of service purposes, the objective is to group customers together into similar or homogeneous groups based upon facility requirements and/or consumption characteristics.

HDR reviewed the customer classes of service and recommends no changes to the District's current customer classes of service (i.e., rate schedules).

Based on this recommendation, the classes of service used within the cost of service analysis for cost allocation purposes are:

- ✓ Single-family
- ✓ Multi-family
- ✓ Commercial

## 4.3 General Cost of Service Procedures

A cost of service study utilizes a three-step approach to review costs. These were previously discussed in our generic discussion in Section 2, and take the form of functionalization, classification, and distribution. Provided below is a detailed discussion of the water cost of service study conducted for the District, and the specific steps taken within the analysis.

### 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 (infrastructure) data by major operating functions within each utility. For example, a water utility generally incurs costs for source, treatment, distribution, etc. Within this study, the functionalization of the cost data was largely accomplished through the District's system of accounts and asset data.

### 4.3.2 Allocation of Costs

The second analytical task performed in a cost of service analysis is the allocation process. Allocation determines why the expenses were incurred or what type of need is being met. The District's plant accounts and revenue requirement were reviewed and allocated using the following cost components:

- ✓ **Commodity Related Costs:** Commodity costs are those costs which tend to vary with the total quantity of water consumed by a customer class. Commodity costs are those incurred under average day (demand) conditions and are generally specified for a period of time such as a month or year. Chemicals or utilities (electricity) are examples of commodity-related cost as these costs tend to vary based upon the total demand of water. For the proposed tiered rate structure for single-family, the commodity costs are allocated for each tier based on the total consumption billed in each tier based for the proposed tier sizes rather than in total for the multi-family and commercial customers.

- ✓ **Capacity Related Costs:** Capacity costs are those which vary with peak day 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 tanks, pumps, and mains (pipes) must be adequately sized to meet the peak demands of all customers. Similar to the commodity related costs, capacity related costs are allocated for each tier based on the peaking factor for those customers in each tier to reflect the costs associated with higher consumption in each tier. Capacity costs were split between supply capacity, related to providing peak event consumption, and distribution capacity, related to individual peak demands.
- ✓ **Customer Related Costs:** Customer related costs vary with the addition or deletion of a customer. Customer related costs typically include the costs of billing, collecting, and accounting. Customer related costs may also be further categorized as actual or weighted.
- ✓ **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 tanks for fire protection purposes.
- ✓ **Direct Assignments:** Certain costs associated with operating the utility may be directly traced to a specific customer or class of service. These costs are then "directly assigned" to that specific class of service.

### 4.3.3 Development of Distribution Factors

Once the allocation process is complete, the allocated costs are distributed to each customer class of service. For the District's study, allocated costs were distributed to the various customer groups using the following distribution factors.

- ✓ **Commodity Distribution Factor:** As noted earlier, commodity-related costs vary with the total water consumption. Therefore, the commodity distribution factor was based on the projected total metered consumption plus losses for each class of service and tier for the projected test period. A distribution factor was developed for

#### Terminology of a Water Cost of Service Analysis

**Functionalization** – The arrangement of the cost data by functional category (e.g. Distribution, pumping, treatment).

**Allocation** – The assignment of functionalized costs to cost components (e.g. average day, peak day, and customer related).

**Distribution** – 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 classified as commodity related vary with the total consumption of water (e.g., power for pumping).

**Capacity Related Costs** – Costs classified capacity related refer to the peak demand on the system. Different types of customers may have high water peak demand characteristics and high demand system components are a significant cost to the water system. Treatment facilities are often designed and sized around meeting these costs.

**Customer-Related Costs** – Costs classified as customer related vary with the number of customers on the system, e.g., billing costs.

**Fire Protection-Related Costs** – Costs classified as fire protection related vary with different fire protection requirements of the different customer classes.

**Direct Assignment** – Costs that can be clearly identified as belonging to a specific customer group or group of customers.



multifamily, commercial, and the single family tiers to reflect the consumption for each customer class and tier.

- ✓ **Capacity Distribution Factor:** The capacity distribution factor was developed based on the assumed contribution to peak day use of each class. Peak day use by customer class of service and tier was developed using peaking factors for each customer group and tier. In this particular 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 average month to peak month consumption. Given an estimated peaking factor, the peak day contribution for each class of service was developed. The peak factors were developed for multifamily, commercial, and each tier for single-family which reflects the increased peaking factor for those customers using higher levels of consumption. Capacity costs were split into two categories: supply capacity and distribution capacity. Supply capacity is related to the customer class's peak use. Therefore, coincident peak day demand is used to allocate water supply related costs. Distribution capacity costs were allocated based on the capacity requirements of each customer class. The overall system capacity is designed based on the sum total of demands placed on it by each individual customer meter. Therefore non-coincident peak day demand was used to allocate costs incurred as a result of the capacity (demand) requirements of the water mains and storage tanks.
- ✓ **Customer Distribution Factor:** Customer costs within the cost of service study are allocated to the various customer classes of service based on their respective customer counts. The number of customers, by customer class of service, was developed within the revenue requirement study. In total four types of customer allocation factors were developed for the costs of service, actual customer, dwelling units, customer accounts, and meters & services. Customer costs do not vary by the average day or peak day use of the class of service and are based on the one of the four customer allocation factors developed. Actual customer is based on the number of customer accounts. Dwelling units is based on the number of dwelling, or living, units. Apartments for example would be based on the number of living units rather than the number accounts. Weighted customer intends to reflect the disproportionate costs associated with various customers. These customers can be assigned a higher per customer cost because they require additional administrative costs and possible monitoring. Lastly meters & services reflects the capacity each customer class places on the system assuming the sum of customer meter size capacity.
- ✓ **Fire Protection Distribution Factor:** The development of the distribution factor for public fire protection expenses involved an analysis of each class of service and their fire flow requirements. The analysis took into account the gallon per minute 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 the class' prorated fire flow requirements.

Given the development of the allocation factors, the final step in the cost of service study is to distribute the allocated costs to the various customer classes of service.



## 4.4 Functionalization and Allocation of Plant in Service

As noted, one of the first steps of the cost of service is the functionalization and allocation of plant in service. In performing the functionalization of plant in service, HDR utilized the District'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 component the assets were related to. For example, the District assets were allocated as: commodity-related, capacity-related, customer-related, revenue-related, fire protection-related, or a direct assignment. Provided below is a summary of the allocation process. The following approach is based on the methodology as described in the AWWA M1 Manual.

**Source of supply** – Source of supply was allocated as average and peak day related. Based on the operation of the system, the source of supply assets were allocated 52% to commodity and 48% to capacity-supply. This allocation reflects the District's system peak demand (capacity needs) in relation to the system average day use (base needs) as source of supply assets provide both average day and peak day service.

**Treatment** – Treatment was allocated the same as supply; 52% to commodity and 48% to capacity-supply. This reflects the purpose of the treatment facilities, to meet both average day and peak day needs of the system.

**Pumping Equipment** – Pumping equipment was also allocated as 52% to commodity and 48% to capacity-supply to reflect average day and peak day.

**Transmission & 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 considered to be a customer related cost, or a function of the number of customers on the system. Next, a portion of the distribution system mains is considered a function of meeting peak flow requirements on the system. Distribution mains must be sized to adequately meet the maximum (peak) flows demanded by customers. This portion of the distribution main plant investment is considered capacity related. Finally, distribution mains must also be over-sized for public fire flow demands. This final portion of over-sizing for distribution plant investment is classified as fire protection-related. Based upon an analysis of the District's distribution main size and lengths, a minimum system analysis was completed to develop the assignment of the distribution mains as 61.8% customer - weighted by meters and service, 30.0% capacity-distribution related, and 8.2% fire protection related.

Table 4 - 1 provides a summary of the basic functionalization and allocation of the major water plant items. A more detailed exhibit of the functionalization and allocation of Districts water plant (assets) can be found in the Technical Appendix in Exhibit 11.

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

Plant Component	Com.	Capacity		Customer			Rev. Related	Fire Protection	Direct Assign
		Supply	Dist.	Actual Cust.	Weighted Cust.	Weighted Meters & Svc			
Source of Supply	52%	48%	0%	0%	0%	0%	0%	0%	0%
Water Rights	52%	48%	0%	0%	0%	0%	0%	0%	0%
Treatment Plant	52%	48%	0%	0%	0%	0%	0%	0%	0%
Pump/Force Mains	52%	48%	0%	0%	0%	0%	0%	0%	0%
Trans & Dist	0%	0%	62%	30%	0%	0%	0%	8%	0%
Land & Easement	14%	13%	45%	22%	0%	0%	0%	6%	0%
Other Land Rights	14%	13%	45%	22%	0%	0%	0%	6%	0%
Construction In progress	14%	13%	45%	22%	0%	0%	0%	6%	0%
G&A Equipment	14%	13%	45%	22%	0%	0%	0%	6%	0%

## 4.5 Functionalization and Allocation of Operating Expenses

Operating expenses are generally functionalized and allocated in a manner similar to the corresponding plant account. For example, maintenance of distribution lines is typically allocated in the same manner (allocation percentages) as the similarly corresponding plant account for distribution lines like underground repairs. This approach to allocation of operating expenses was used for this analysis.

For the District's study, the revenue requirement for FY 2020 were functionalized, allocated, and distributed. As noted earlier, the District utilized a cash basis revenue requirement, which was comprised of operation and maintenance expenses, debt service, and rate funded capital. Table 4-2 provides a breakdown of allocated expenses. A more detailed review of the allocation of revenue requirement can be found in the Technical Appendix, Exhibit 12.

**Table 4-2**  
**Summary of the Allocation of the Water Revenue Requirement (\$000)**

Total	Com.	Capacity		Customer			Rev. Related	Fire Protection	Direct Assign
		Supply	Dist.	Actual Cust.	Dwelling Units	Weighted Meters & Svc			
\$13,634	\$1,356	\$2,094	\$7,158	\$1,817	\$732	\$175	\$11	\$291	\$0
100.0%	9.9%	15.4%	52.5%	13.3%	5.4%	1.3%	0.1%	2.1%	0.0%

## 4.6 Major Assumptions of the Cost of Service Study

A number of key assumptions were used within the District's water cost of service study. Below is a brief discussion of the major assumptions used.

- ✓ The test period used for the cost of service analysis was FY 2020. The revenue and expense data was previously developed within the revenue requirement analysis.
- ✓ A "cash basis" approach was utilized which conforms to generally accepted water cost of service approaches and methodologies. Under the "cash basis" approach, the revenue requirements previously developed are distributed to each customer class of service.
- ✓ The allocation of plant in service was developed based on generally accepted cost allocation techniques. Furthermore, the allocation process was developed using the District specific data and District's operation of the water system.

## 4.7 Summary Results of the Cost of Service Analysis

In summary form, the cost of service analysis began by functionalizing the District's infrastructure records and operating expenses. The functionalized infrastructure and operating expenses were then allocated into their various cost components. The individual allocation totals were then distributed to the various customer classes of service based on the appropriate distribution factor(s). The distributed expenses for each customer group were then aggregated to determine each customer group's overall revenue responsibility. A summary of the detailed cost responsibility developed for each class of service is shown below in Table 4-3.

Table 4 – 3 Summary of the Distribution of the Water Revenue Requirement (\$000)				
Cost Classifier	Total Costs	Single Family	Multifamily	Commercial
Commodity	\$1,378	\$743	\$238	\$396
Capacity - Supply	2,094	1,223	317	553
Capacity - Distribution	7,136	4,952	982	1,201
Actual Customer	2,733	1,897	376	460
Public Fire Protection	291	202	40	49
Revenue Related	2	1	0	0
Direct Assignment	0	0	0	0
<b>Total</b>	<b>\$13,634</b>	<b>\$9,018</b>	<b>\$1,954</b>	<b>\$2,661</b>

The distribution of costs reflects the benefits received from infrastructure in place to provide service and the resulting operating expenses for each customer class of service. The difference between the rate revenues and distributed costs for each class of service represents the variance from current rate levels to reflect this cost of service analysis. It is important to remember that a cost of service analysis is not an exact calculation. Rather it reflects the current relationships between current customer rate revenues and current costs. Cost of service relationships can change over time given changes in the way costs may be incurred, along with changes in customer characteristics.

The revenue requirement determined the overall revenue adjustment necessary to fund operating and capital expenses. The cost of service results provide an indication of how the overall revenue adjustment should be collected. Table 4-4 provides the results of the Cost of Service comparing the revenue at current rates to the allocated costs.

Table 4 - 4 Summary of the Cost of Service Analysis (\$000)				
Class of Service	Present Revenue (FY 2020)	Allocated Costs	\$ Difference	% Difference
Single Family	\$8,332	\$9,018	(\$686)	8.2%
Multifamily	1,936	1,954	(18)	0.9%
Commercial	<u>2,593</u>	<u>2,661</u>	<u>(68)</u>	<u>2.6%</u>
Total	\$12,862	\$13,634	(\$772)	6.0%

In reviewing the above results, it should also be understood that a cost of service analysis is based on one year's data and customer information, and customer characteristics may change over time. Therefore, it is appropriate to determine whether these findings are consistent over time, by conducting a cost of service analysis periodically to support the rates charged to the various customer classes of service.

The final key component of a cost of service analysis is the development of unit costs. Unit costs are based on the distribution of costs between the various cost of service characteristics divided by the appropriate consumption by component. These unit costs, or cost-based rates become the rates in year 1 of the proposed rates. In this way, the rates reflect the results of the cost of service and the proportional and equitable distribution of costs. Provided in Table 4-5 is a summary of the unit costs.

Table 4 - 5 Summary of the Unit Costs					
	Commodity Costs (\$/CCF)	Capacity Costs (\$/CCF)	Direct Assignment Costs (\$/CCF)	Total Unit Costs (\$/CCF)	Differential Costs (\$/CCF)
<b>Single-family</b>					
Tier 1, Less than 45 CCF	\$0.68	\$0.90	\$0.00	\$1.58	N/A
Tier 2, Greater than 45 CCF	\$0.68	\$1.73	\$0.00	\$2.40	\$0.82
<b>Multi-family</b>	\$0.68	\$0.90	\$0.00	\$1.57	N/A
<b>Commercial</b>	\$0.68	\$0.94	\$0.00	\$1.62	N/A

These unit costs were developed based on the allocation of costs for each component, consumption, and capacity, divided by the estimated total system volume. One of the key uses of this data is to determine the rate differential between each single-family tier as well as the unit costs for multi-family and commercial. It should also be noted that the above unit costs do not include the fixed

cost component which is developed on meter size basis. These customer, or fixed charges, are in addition to the consumption charges developed above. A more detailed discussion of the development of the unit costs is provided in the rate design section of this report.

## 4.8 Consultant's Conclusions and Recommendations

The results of the cost of service show minor cost differences between the various customer classes of service. Given this, it is recommended that the District implement rates that reflect the results of the cost of service. Furthermore, the unit costs become the basis for the rates in the first year of the proposed rates. Future years are adjusted “across the board” based on the overall revenue needs as developed in the revenue requirement for the time period established by the Board and the Proposition 218 process.

## 4.9 Summary

This section of the report has provided an analysis of the cost of service analysis developed for the District. This analysis was prepared using generally accepted cost of service techniques. The next section of the report will review the present and proposed water rates for the District.

## 5 Development of the Rate Designs

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The final step of a comprehensive rate study is the design of rates to collect the desired levels of revenues, based on the results of the revenue requirement and cost of service analyses. In reviewing water rate designs, consideration is given to the level of the rates and the structure of the rates. The level of the rates refers to the amount of annual revenues received through rates. The structure of the rate is how the customer is charged. The combination of the level of rates, and structure of rates, provides a price signal to the customer on how their use impacts the costs of the system.

### 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 utility to administer
- ✓ Consideration of the customer's ability to pay
- ✓ 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)

The focus of the District's water rate study is to develop cost-based rates, and is the primary guidance to utilities on rate structure and policy. It is important that the District provide its customers with a proper price signal as to what their consumption is costing. This goal may be approached through rate level and structure. When developing the proposed rate designs, all the above listed criteria can be 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. For example, it may be difficult to design a rate that takes into consideration the customer's ability to pay, and one which is cost-based. In designing rates, there are always trade-offs between a utility's rate design goals and objectives.

### 5.2 Development of Cost-Based Rates

Developing cost-based and equitable rates is of paramount importance in developing proposed water rates. While always a key consideration in developing 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 District's proposed water rates have been developed to meet the legal requirements of California constitution article XIII D, section 6 (Article XIII D). A key component of Article XIII D is the development of rates which reflect

the cost of providing service and are proportionally allocated among the various customer classes of service. HDR would point out that there is no single prescribed methodology for equitably assigning costs to the various customer groups. The American Water Works Association (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 District's proposed water rates based on the methodologies provided in the AWWA M1 Manual to meet the requirements of Article XIII D and recent legal decisions to provide an administrative record of the steps taken to establish the District'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 requirements of the District'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 District's water rates are used exclusively to operate and maintain the District'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.** This study has focused almost exclusively on the issue of proportional assignment of costs to customer classes of service. The proposed rates have appropriately grouped customers into customer classes of service, single-family, multi-family and commercial 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 equity and 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 equitably assigned to customer classes of service based upon their proportional impacts and burdens on District's the water system.

The District currently has different rate structure for all of its three customer classes of service. Single-family customers are charged a quarterly meter charge which varies by size as well as a consumption charge for each of the tiers. The tier size for single family are 0 to 45 hundred cubic feet for tier 1 and over 45 hundred cubic feet per quarter. Both multi-family and commercial are charged a quarterly meter charge which is the same as single-family and a uniform rate for all consumption as opposed to the tiered single family rate. This is a typical approach for multi-family and commercial customers given the different types of customers as will be explained later in this report. Based on the review of the current rate structures, it is recommended that the individual rate component charges reflect the overall revenue needs and cost of service results, while maintaining the current rate structure.

As a part of this study, HDR developed a water rate design discussion to clearly demonstrate and support the proposed water rates and tiered pricing for the single-family customer class. The following discussion provides a more detailed analysis of the costing techniques and methodologies used to support the District's proposed rate design.



### 5.2.1 Determination of Sizing and Number of Tiers

The first step in reviewing the District's current, and proposed, tiered rate structure is to identify the number of tiers and determine the size of the tiers. After reviewing the customer consumption patterns, it was determined that the current tier size reflect the consumption patterns of the single-family customer class.

Given the variability of multi-family and commercial customers overall use and the diversity of customer's within the class, it is difficult to develop tiers which reflect the typical customer consumption habits like is done in single-family. For example, a multi-family complex may have 5 living units or 50 living units. As a result, the overall consumption levels are different and that makes it difficult to develop a tiered rate structure that is equitable to all customers. It should also be noted that while the overall consumption (total usage) can vary for different size multi-family customers, the overall characteristics and patterns remain the same. As a note, the same can be said for commercial customers, while single-family customers overall consumption patterns are very similar (homogeneous) and behave in a much more like manner. With this variability of possible water use it is recommended that multi-family and commercial customers would remain with a uniform rate, or a single rate for all consumption.

### 5.3.2 Establishing the Cost-Basis for Pricing Tiers

Given past legal decisions regarding water rates, HDR has concluded that utilities have available to them at least three technical approaches to be able to demonstrate (i.e., cost justify) the individual pricing of the tiers. These technical approaches encompass the following areas:

1. Cost differences in water supply (i.e., stacking of water supply resources to tiers).
2. Cost differences from high peak use consumers (relationship of average use to peak use).
3. Direct assignment of costs to specific tiers (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 (e.g., 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 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 demand event, pay for the demand event. In this particular case, this has implications upon the equitable allocation of capacity-related costs to the different usage tiers (low 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 water tiers, or seasons, 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 District's study, the focus of the analysis was on the second method of determining the cost impacts and cost differences associated with peak use. The pricing of the tiers, or uniform rate, was developed to provide the cost-basis and meet the intent of Proposition 218.

## 5.4 Development of the Unit Costs for Rate Designs

To begin the assignment of costs related to specific tiers, the results of the cost of service analysis is utilized. As noted in Section 4, the cost of service analysis allocates the revenue requirement between the various cost components of average use (commodity), peak use (capacity), and customer (actual and weighted). However, the results provided in Table 4 - 2 which allocated the totals to the various customer classes of service are further allocated between the rate structure components (e.g., service charge, usage charge, tiers). Provided in Table 5 – 2 is a summary of the allocation of the FY 2020 revenue requirement from the cost of service analysis (same as Table 4 - 2).

Table 5-1 Summary of the Allocation of the Water Revenue Requirement (\$000)									
		Capacity		Customer					
Total	Com.	Supply	Dist.	Actual Cust.	Dwelling Units	Weighted Meters & Svc	Rev. Related	Fire Protection	Direct Assign
\$13,634	\$1,378	\$2,094	\$7,136	\$0	\$0	\$2,733	\$2	\$291	\$0
100.0%	10.1%	15.4%	52.3%	0.0%	0.0%	20.0%	0.0%	2.1%	0.0%

The total of the above allocated costs, of approximately \$13.6 million, is the same as the total costs allocated in Table 4 - 2 of the cost of service analysis. This allocation of the total revenue requirement for FY 2020 is then distributed to the various customer classes of service. Prior to the recent legal decisions, the analyses would have been complete. However, given the legal requirement to provide the cost-basis for each rate, both fixed and variable pricing, the allocated costs are further distributed between the various rate structure components based on the corresponding distribution factors. The distribution factors were discussed for the costs of service in Section 4 of this report. For example, the commodity costs are divided through by each customer class's consumption from a given tier. Provided below is a discussion of the approach used to allocate the revenue requirement between the various customer classes of service as established in Sections 3 and 4 to the various rate components for each customer class of service.

### 5.4.1 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 components were used:

- Single-family
  - ✓ Tier 1
  - ✓ Tier 2

- Multi-family
- Commercial

To develop the commodity distribution factor for each customer class, the usage for each class, and tier, was divided by the total water production of the system. This produces the percent of the system that each class is responsible for and, therefore, their contribution to commodity related costs. Provided below in Table 5 – 3 is a summary of the commodity Distribution factor.

Table 5 - 2 Summary of the Commodity Distribution Factor				
Reference Calculation	A	B	C C = A + B	D
	FY 2020 Consumption CCF	Est. System Losses CCF	Total Annual Use (CCF)	% of Total
<b>Single-family</b>				
Tier 1	821,830	98,620	920,450	40.3%
Tier 2	<u>278,486</u>	<u>\$33,418</u>	<u>311,904</u>	<u>13.7%</u>
<b>Single-family Total</b>	1,100,316	132,038	1,232,354	53.9%
<b>Multi-family</b>	353,020	42,362	395,383	17.3%
<b>Commercial</b>	<u>586,804</u>	<u>70,417</u>	<u>657,221</u>	<u>28.8%</u>
<b>Total</b>	2,040,141	244,817	2,284,958	100.0%

As can be seen, the development of the commodity distribution factor is fairly straightforward. It is important to note that the distribution factor is based on the actual metered consumption each class and tier, plus overall system losses. In this way, those costs allocated to the commodity component can be proportionally distributed to the appropriate customer class and customer class tier. As an example, Tier 1 consumption of the single family class of service represents 40.3% of the total consumption on the system. As a result, 40.3% of the commodity related costs are then distributed to Tier 1 of the single family customers.

This approach is used for each of the customer classes of service for each rate component. Using the costs allocated to the commodity component in the cost of service analysis from Table 5 - 1, and the commodity distribution factor in Table 5 - 2, the distribution of costs to each tier or customer class can be developed. The summary of the distributed commodity costs are shown below in Table 5 – 3.

**Table 5 - 3**  
**Distribution of Commodity Costs (\$000s)**

Reference Calculation	A	B	C	D D = B / C
	% of Total	Commodity Costs	Water Sales (CCF)	Unit Cost (\$/CCF) <sup>[1]</sup>
<b>Single-family</b>				
Tier 1	40.28%	\$555	821,830	\$0.68
Tier 2	<u>13.65%</u>	<u>188</u>	<u>278,486</u>	<u>\$0.68</u>
<b>Single-family Total</b>	53.93%	\$743	1,100,316	\$0.68
<b>Multi-family</b>	17.30%	\$238	353,020	\$0.68
<b>Commercial</b>	<u>28.76%</u>	<u>396</u>	<u>586,804</u>	<u>\$0.68</u>
<b>Total</b>	100.00%	\$1,378	2,040,141	\$0.68

The figures in column A are from column D in Table 5 – 3. The costs shown in column B are based on the total commodity related costs from column A of Table 5 – 2. Column C is from column A in Table 5 – 3, or the actual consumption that is billed to the customers.

From the unit costs developed in Table 5 – 3 above, the per unit cost basis of the tiered and uniform rates can be determined for the commodity related costs identified in the cost of service analysis (Column D). For example, for the proposed single-family tier 1 rate, the commodity component is \$0.68 per CCF. This applies to each tier and customer class (single-family, multi-family, commercial).

## 5.2.2 Capacity-Supply Distribution Factor

As was mentioned in the development of the allocation and distribution for the cost of service analysis, the capacity costs were split between capacity-supply and capacity-distribution. The capacity-distribution costs are included in the quarterly fixed service charge whereas the capacity-supply costs are included in the costs developed for the consumption charge calculation. The capacity-supply distribution factor utilizes the same customer classes, and tiers, as has been established for the cost of service study. Whereas commodity costs are related to the volume of water used by each class of service by tier or season, the capacity supply costs are related to how the class uses that water in each tier or annually. 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 District must size the system to meet the peak demands of customers. To determine the distribution by tier or annually, peaking factors need to be developed for each customer class of service tier or season. The peaking factors for each class of service must be estimated due to a lack of specific metered data related to peak day usage by each class of service. One method discussed in the AWWA M1 Manual used to estimate a class's peaking factor is to review the average quarter amount of water consumed and compare it to the maximum quarter amount of water consumed. By dividing the maximum quarter by the average quarter, a peak-day

factor is calculated. Essentially, this factor provides a seasonal surrogate for the difference between the average use and peak day use in each tier or season. For example, if a customer used 10 CCF per quarter on average and in the peak quarter 15 CCF was used, the peaking factor would be 1.50 ( $15 / 10 = 1.50$ ). In this example, the peaking factor is stating that the maximum usage in a quarter is 1.50 time higher than the average usage per quarter.

For the District's study the consumption patterns of each customer class and tier were reviewed and peaking factors were developed for each tier. In other words, a peak factor for each customer, by tier was developed to depending on the amount of water used and the peak demands of those customers within that tier compared to the average customer consumption peak. Shown below in Table 5 – 4 is a summary of the capacity-supply distribution factor for each customer class.

Table 5-4 Summary of the Capacity-Supply Distribution Factor				
Reference Calculation	A	B	C C = A * B	D
	Average Consumption (MGD)	Peaking Factors	Peak Day Use (MGD)	% of Total
<b>Single-family</b>				
Tier 1	1.89	1.69	3.18	35.4%
Tier 2	<u>0.64</u>	<u>3.23</u>	<u>2.06</u>	<u>23.0%</u>
<b>Single-family Total</b>	2.53	2.08	5.24	58.4%
<b>Multi-family</b>	0.81	1.68	1.36	15.2%
<b>Commercial</b>	<u>1.35</u>	<u>1.76</u>	<u>2.37</u>	<u>26.4%</u>
<b>Total</b>	4.68	1.92	8.98	100.0%

Table 5 – 4 above shows the development of the capacity-supply distribution factor. For example, based on the District's single-family customer consumption data, those customers that stayed within tier 1 have a peak factor of 1.69. In other words, those customers that stay within tier 1 use 1.69 times more water in the peak period than on average. This is compared to customers in the second tier which show a higher peaking factor based on how the customers in these tiers consume water. These peaking factors were developed around the District's specific customers consumption patterns. Similar to the distribution of commodity costs to the tiers or customer classes, the capacity-supply related costs are distributed in the same manner. For example, 35.4% of the capacity-supply costs are allocated to Tier 1 of the single-family customers based on column D in Table 5 - 4. To determine this, the average day use (column A) of each tier or class is multiplied by the peaking factor (column B). The total peak use by tier or class is divided by the system total peak use to develop the proportional distribution.

Table 5 – 5 provides a summary of the distributed capacity-supply costs to each tier and season.

Table 5-5 Distributed Capacity-Supply Costs (\$000s)				
Reference Calculation	A	B	C	D D = B/C
	% of Total	Capacity Costs	Water Sales (CCF)	Unit Costs (\$/CCF)
<b>Single-family</b>				
Tier 1	35.4%	\$742	821,830	\$0.90
Tier 2	<u>23.0%</u>	<u>481</u>	<u>278,486</u>	<u>1.73</u>
<b>Single-family Total</b>	58.4%	\$1,223	1,100,316	\$1.11
<b>Multi-family</b>	15.2%	\$317	353,020	\$0.90
<b>Commercial</b>	<u>26.4%</u>	<u>553</u>	<u>586,804</u>	<u>0.94</u>
<b>Total</b>	100.0%	\$2,094	2,040,141	\$1.03

The figures in column A are from column D in Table 5 – 4. The costs shown in column B are based on the total capacity related costs from column B of Table 5 – 3. Column C is from column A in Table 5 – 2. For example, the proposed rate for Tier 1 includes a capacity component cost of \$0.90 per CCF while the Tier 2 capacity cost is \$1.73 per CCF. This difference reflects the costs associated with providing consumption at second tier and the costs of providing that capacity.

### 5.2.3 Summary of the Consumption Based Unit Costs

Combining the unit costs from the commodity and capacity-supply unit costs result in the basis of the tiered rate pricing. It is important to note that there could be additional costs classified as direct assignment related costs. The direct assignment cost, for example, could be related to conservation and could then be assigned to specific tiers for single family, multifamily and/or commercial customers.

The summary Table 5 – 7 below shows the summation of the costs for each tier / rate. This table sums the costs from Table 5 – 3 column D and Table 5 – 4 column D.

**Table 5-6**  
**Summary of the Unit Costs for Rate Design**

Reference	A	B	C	D	E
	Commodity Costs (\$/CCF)	Capacity Costs (\$/CCF)	Direct Assignment Costs (\$/CCF)	Total Unit (\$/CCF)	Differential (\$/CCF)
<b>Single-family</b>					
Tier 1 - 0-45 CCF	\$0.68	\$0.90	\$0.00	\$1.58	
Tier 2 – Greater than 45 CCF	<u>0.68</u>	<u>1.73</u>	<u>0.00</u>	<u>2.40</u>	<u>\$0.82</u>
<b>Single-family Total</b>	\$0.68	\$1.11	\$0.00	\$1.79	
<b>Multi-family</b>	\$0.68	\$0.90	\$0.00	\$1.57	NA
<b>Commercial</b>	<u>0.68</u>	<u>0.94</u>	<u>0.00</u>	<u>1.62</u>	<u>NA</u>
<b>Total</b>	\$0.68	\$1.03	\$0.00	\$1.70	NA

The results shown in Table 5 – 7 above are the basis for the District’s consumption pricing for the proposed rates. The analysis and costs shown above have been developed to meet the intent of Proposition 218 and recent legal decisions related to developing cost-based water rates.

#### 5.2.4 Summary of the Customer (Fixed) Costs

It is also important to note that the customer related costs as well as the Tier 1 consumption costs and the capacity-distribution costs are used to establish the quarterly service charge which varies by meter size. As a result, 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 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 5 – 7 is a summary of the customer related costs and customer charge development.

Table 5-7 Summary of the Customer Charge for Rate Design		
	Current District Ratios	Cost (\$ / Acct. / Mo)
<b>Total Customer Costs</b>		
Total 1" Meter Equiv. <sup>[1]</sup>		17,911
<b>Cost per Equiv. Meter</b>		<b>\$141.84</b>
<b>Proposed Rates</b>		
5/8" & 3/4"	1.00	\$140.90
1"	1.67	235.20
1 1/2"	3.33	469.10
2"	5.33	750.80
3"	10.00	1,408.70
4"	16.67	2,348.20
6"	33.32	4,694.90
8"	53.32	7,512.20
10"	76.65	10,799.90

[1] – Based on the current District equivalent meter ratios

As indicated in the revenue requirement and the cost of service analyses, the priority for the water utility was to transition the overall level of the water rates to meet financial needs. A rate transition plan was developed to prudently fund the utility's operating and capital infrastructure needs. Provided in Table 5-8 is a summary of the proposed revenue adjustments for the next five-year period.

Table 5-8 Five-Year Rate Transition Plan				
FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
6%	6%	6%	6%	6%

While the revenue requirement analysis resulted in the proposed revenue transition plan, it does not take into consideration the proportional distribution of costs between the various customer classes of service. In developing the final rates, the cost of service results, and specifically the unit costs, were the basis for the proposed rates in year 1 of the proposed rate setting period.

### 5.3 Present and Proposed Rates

Given the development of the unit costs for rate design purposes, the next step is to develop the proposed rates for the next five-year period. As a note, the proposed rates are being developed for the test year FY 2020 based on the unit costs as discussed in the cost of service section and above discussion in this section of this report based on generally accepted cost of service principles.

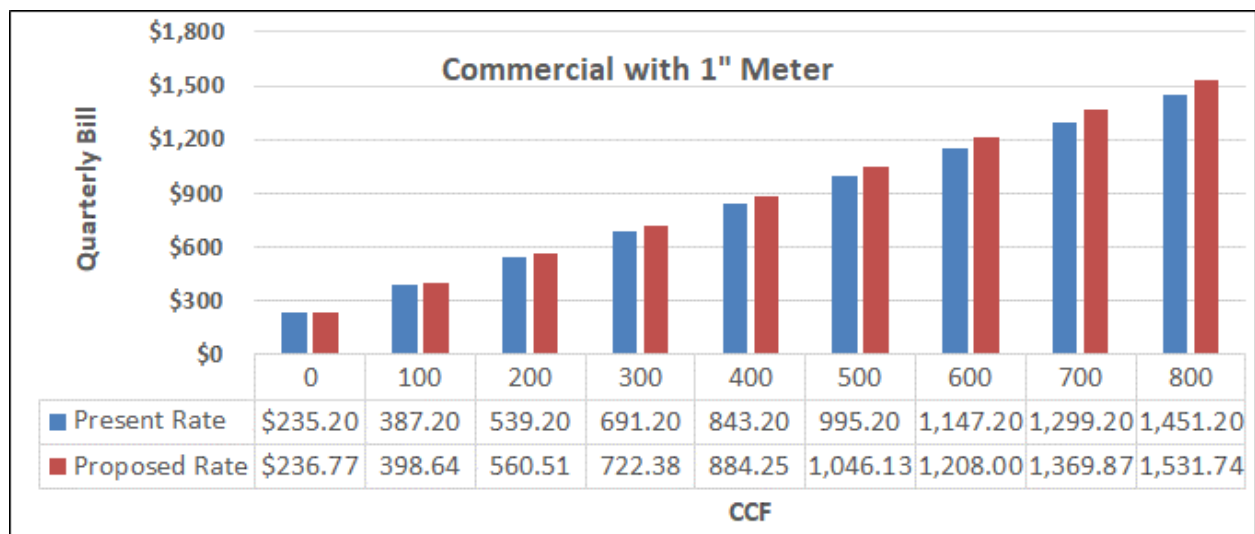
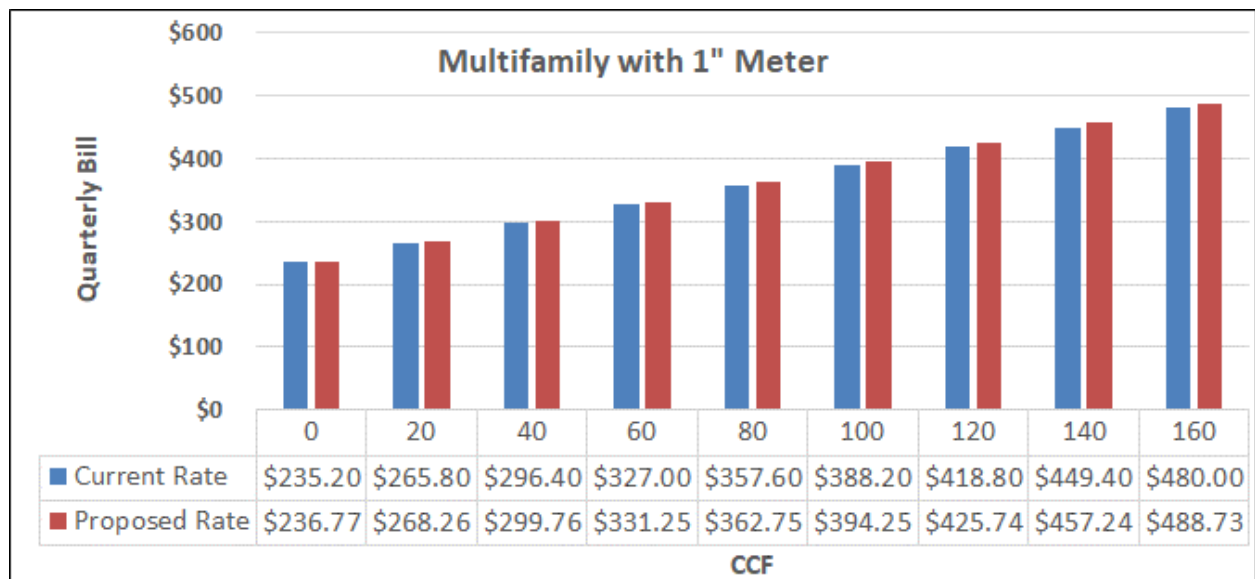
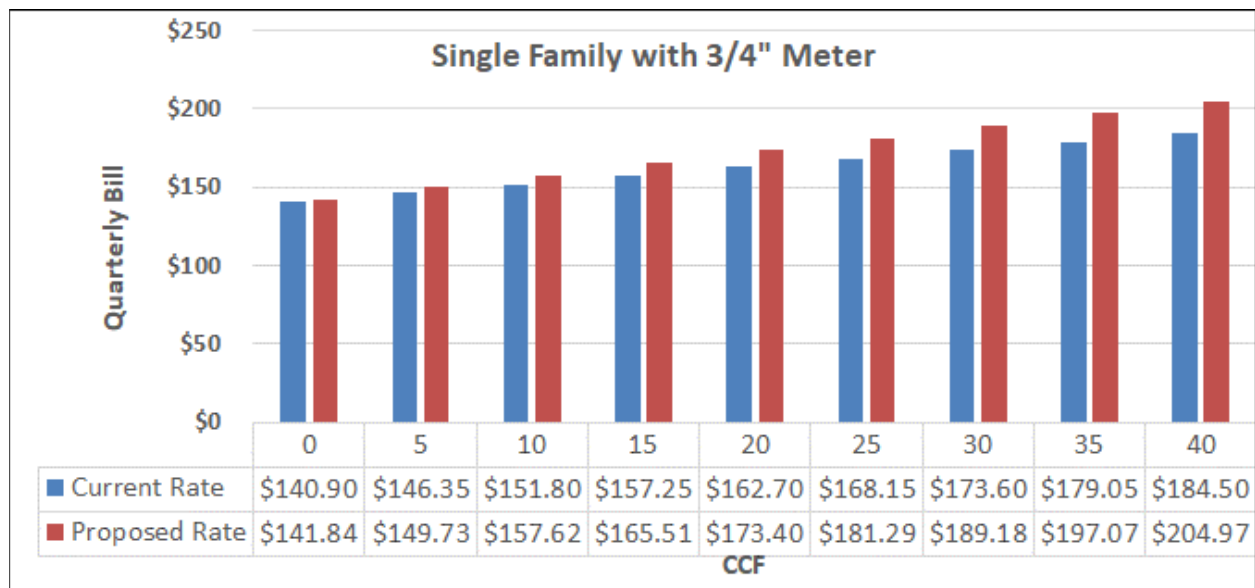
Provided in the following is a summary of the present and proposed rates for each customer class of service for each year of the review period.

The proposed rates reflect the results of the revenue requirement and cost of service analysis. Provided below in Table 5 - 9 is a summary of the current and proposed rates for the District's customers. As noted, the proposed rates in are based on the previously discussed unit costs.

Table 5-9 Current and Proposed Rates						
	Current Rates	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>Quarterly Charge by Meter Size</b>						
5/8" & 3/4"	\$140.90	\$141.84	\$150.35	\$159.37	\$168.93	\$179.07
1"	235.20	236.77	250.97	266.03	281.99	298.91
1 1/2"	469.10	472.22	500.56	530.59	562.42	596.17
2"	750.80	755.80	801.15	849.21	900.17	954.18
3"	1,408.70	1,418.08	1,503.16	1,593.35	1,688.95	1,790.29
4"	2,348.20	2,363.83	2,505.66	2,656.00	2,815.36	2,984.28
6"	4,694.90	4,726.15	5,009.72	5,310.30	5,628.92	5,966.66
8"	7,512.20	7,562.20	8,015.94	8,496.89	9,006.71	9,547.11
10"	10,799.90	10,871.79	11,524.09	12,215.54	12,948.47	13,725.38
<b>Unmetered Customers</b>						
Single Family	\$165.20	\$178.80	\$189.53	\$200.90	\$212.95	\$225.73
Duplex	293.70	296.44	314.22	333.07	353.06	374.24
Triplex	399.00	402.72	426.88	452.49	479.64	508.42
Four-plex	516.20	521.01	552.27	585.40	620.53	657.76
Additional Multifamily Units (>4 Units)	86.50	87.31	92.54	98.10	103.98	110.22
Commercial	251.40	257.97	273.44	289.85	307.24	325.68
<b>Commodity Charges (\$/CCF)</b>						
<b>Single Family</b>						
0 - 45 CCF	\$1.09	\$1.58	\$1.67	\$1.77	\$1.88	\$1.99
45 + CCF	1.64	2.40	2.55	2.70	2.86	3.03
<b>Multi-Family</b>						
All Consumption	\$1.53	\$1.57	\$1.67	\$1.77	\$1.88	\$1.99
<b>Commercial</b>						
All Consumption	\$1.52	\$1.62	\$1.72	\$1.82	\$1.93	\$2.04

It is important to note that the bill impacts will not only vary between customer classes, as the cost of service results show cost differences, but also customers in the same class. This is due to the tier pricing being based on the costs associate with the District's costs and allocated based on a snapshot of consumption characteristics. Shown below are typical customer bill impacts; these are not meant to be prescriptive for projecting a customers' bill impact but rather representative.





## 5.4 Summary of the Proposed Rate Revenues

The rates for each customer class of service meet the results of the revenue requirement and cost of service results. Provided in Table 5 - 10 is a summary of the revenue targets based on the revenue requirement and cost of service analyses for the FY 2020 proposed rate adjustment.

Table 5-10 Comparison of the FY 2018/19 Proposed Revenues and Allocated Costs (\$000's)			
	Present Revenue	Allocated Revenue	Proposed Revenue
Single Family	8,332	9,018	8,988
Multifamily	1,936	1,954	1,961
Commercial	<u>2,593</u>	<u>2,661</u>	<u>2,662</u>
<b>Total</b>	<b>12,862</b>	<b>13,634</b>	<b>13,611</b>

The proportional distribution of costs to the various customer classes of service is based on District budgeted O&M expenses as well as capital projects as identified in the revenue requirement analysis. Additionally, actual consumption data was used from FY 2020 to distribute costs to specific customer classes and tiers, where applicable. Any discrepancy in the summation of the totals are due to rounding. A more detailed analysis of the projection of the proposed revenues is included within the Technical Appendix of this report in Exhibit 15.

This concludes the discussion of the proposed water rates. Detailed exhibits for the various rate designs are included within the water technical appendices.

## 5.5 Water Rate Study Recommendations

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

- Revenue adjustments are necessary to prudently fund operating and capital renovation and replacement expenses.
- Water revenues should be adjusted 6% annually in FY 2020 through FY 2029.
- The proposed rates reflect the results of the cost of service analysis and the proportional allocation of costs to the various customer classes of service.
- Prior to the end of the financial planning projected period, the District should complete a review of the water revenue levels and costs at that time.

## 5.6 Summary of the Water Rate Study

This completes the comprehensive water rate study for the South Tahoe Public Utility District's. This study has provided a comprehensive review and development of cost-based and equitable water rates for the District. Adoption of the proposed water rates will allow the District to meet its current and projected water system financial obligations for the time period reviewed based on the assumed customer growth, capital plan and deferred capital, and inflationary increases in operating costs.

Should these assumptions change, the proposed rate adjustments may also need to be revised to reflect the current conditions.



# Technical Appendix

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South Tahoe PUD  
Water Utility  
Revenue Requirement Summary  
Fire Flow - 6%

	Budget	Projected									
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Revenue</b>											
Rate Revenue at Current Rates	\$12,703	\$12,862	\$12,941	\$12,957	\$12,973	\$12,988	\$13,003	\$13,019	\$13,034	\$13,051	\$13,068
Miscellaneous Revenue	2,494	1,239	1,299	1,281	1,288	1,295	1,301	1,276	1,320	1,336	1,354
Total Revenue	\$15,197	\$14,101	\$14,241	\$14,238	\$14,260	\$14,283	\$14,304	\$14,294	\$14,354	\$14,387	\$14,422
<b>Expenditures</b>											
O&M Expenses	\$8,823	\$9,198	\$9,482	\$9,731	\$10,031	\$10,297	\$10,593	\$10,898	\$11,212	\$11,536	\$11,870
Rate Funded Capital	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Debt Service	\$965.84	\$973.98	\$826.78	\$1,453.75	\$2,124.54	\$2,560.39	\$2,914.29	\$3,097.43	\$3,520.25	\$3,789.31	\$4,019.94
Transfers	\$3,565	\$2,671	\$3,453	\$3,311	\$3,258	\$3,591	\$4,000	\$4,620	\$5,063	\$5,759	\$6,544
<b>Total Revenue Requirement</b>	<b>\$15,119</b>	<b>\$14,609</b>	<b>\$15,528</b>	<b>\$16,262</b>	<b>\$17,180</b>	<b>\$18,215</b>	<b>\$19,273</b>	<b>\$20,382</b>	<b>\$21,561</b>	<b>\$22,851</b>	<b>\$24,200</b>
Balance/Deficiency of Funds	\$78	(\$508)	(\$1,287)	(\$2,024)	(\$2,919)	(\$3,932)	(\$4,969)	(\$6,088)	(\$7,207)	(\$8,464)	(\$9,778)
Rate Adj. as a % of Rate Rev	-0.6%	3.9%	9.9%	15.6%	22.5%	30.3%	38.2%	46.8%	55.3%	64.9%	74.8%
<b>Proposed Rate Adjustment</b>	<b>5.0%</b>	<b>4.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>
Rate Revenue After Adjustment	\$12,703	\$13,370	\$14,260	\$15,134	\$16,061	\$17,045	\$18,089	\$19,196	\$20,372	\$21,623	\$22,950
<b>Debt Service Coverage Ratio</b>											
After Rate Adjustment	4.34	3.65	5.05	3.25	2.50	2.33	2.29	2.38	2.34	2.40	2.50
Average Quarterly Residential Bill (3/4" meter + 20 CCF)	\$162.70	\$169.13	\$179.27	\$190.03	\$201.43	\$213.52	\$226.33	\$239.91	\$254.30	\$269.56	\$285.74
\$ Change Per Quarter	0.00	6.43	10.15	10.76	11.40	12.09	12.81	13.58	14.39	15.26	16.17

South Tahoe PUD  
Water Utility  
Revenue Requirement  
Exhibit 1 - Escalation Factors  
Fire Flow - 6%

Page 1 of 1

	Budget	Projected										
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Notes
Revenues												
Residential	Calculated	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	
Multifamily	Calculated	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	
Commercial	Calculated	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	
Consumption	Calculated	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	
Misc. Revenue	Calculated	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	
Flat	Calculated	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Expenses												
Salaries	Budget	5.6%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Retirement	Budget	6.6%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
Benefits	Budget	6.6%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
Dental & Vision Benefits	Budget	6.6%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
Repairs & Maintenance	Budget	1.3%	2.7%	1.3%	2.6%	1.4%	2.0%	2.0%	2.0%	2.0%	2.0%	
Worker's Compensation	Budget	6.6%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
OPEB	Budget	6.6%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
Materials & Supplies	Budget	1.3%	2.7%	1.3%	2.6%	1.4%	2.0%	2.0%	2.0%	2.0%	2.0%	
Equipment	Budget	1.3%	2.7%	1.3%	2.6%	1.4%	2.0%	2.0%	2.0%	2.0%	2.0%	
Miscellaneous	Budget	1.3%	2.7%	1.3%	2.6%	1.4%	2.0%	2.0%	2.0%	2.0%	2.0%	
Utilities	Budget	1.3%	2.7%	1.3%	2.6%	1.4%	2.0%	2.0%	2.0%	2.0%	2.0%	
Professional Services	Budget	1.3%	2.7%	1.3%	2.6%	1.4%	2.0%	2.0%	2.0%	2.0%	2.0%	
Insurance	Budget	1.3%	2.7%	1.3%	2.6%	1.4%	2.0%	2.0%	2.0%	2.0%	2.0%	
Purchased Water	Budget	1.3%	2.7%	1.3%	2.6%	1.4%	2.0%	2.0%	2.0%	2.0%	2.0%	
Flat	Budget	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
One-time	Budget	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	
Flat	Budget	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Capital O&M	Budget	-39.5%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
Investment Interest	1.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
New Long-Term Debt Assumptions												
Revenue Bond												
Rate	4.8%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
Term	20	20	20	20	20	20	20	20	20	20	20	
Low Interest Loan												
Rate	2.8%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Term	20	20	20	20	20	20	20	20	20	20	20	

South Tahoe PUD  
Water Utility  
Revenue Requirement  
Exhibit 2 - Revenues & Expenses  
Fire Flow - 6%

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	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
<b>Revenues</b>												
<b>Rate Revenues</b>												
Single Family	\$8,340,192	\$8,332,359	\$8,370,330	\$8,382,471	\$8,394,650	\$8,406,833	\$8,419,018	\$8,431,207	\$8,443,400	\$8,456,256	\$8,469,115	Calc'd in Cust Data Tab
Multifamily	1,764,089	1,936,414	1,977,954	1,980,644	1,982,398	1,984,152	1,985,909	1,987,665	1,989,423	1,991,182	1,992,943	Calc'd in Cust Data Tab
Commercial	2,599,079	2,593,099	2,592,987	2,594,256	2,595,599	2,596,942	2,598,287	2,599,636	2,600,985	2,603,342	2,605,702	Calc'd in Cust Data Tab
<b>Total Rate Revenues</b>	<b>\$12,703,360</b>	<b>\$12,861,872</b>	<b>\$12,941,272</b>	<b>\$12,957,372</b>	<b>\$12,972,646</b>	<b>\$12,987,928</b>	<b>\$13,003,214</b>	<b>\$13,018,508</b>	<b>\$13,033,808</b>	<b>\$13,050,780</b>	<b>\$13,067,760</b>	
<b>Other Revenues</b>												
Repairs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	As Flat
Sale/Resale Service Charge Revenue	0	0	0	0	0	0	0	0	0	0	0	As Misc. Revenue
Interfund Service Charge Revenue	0	0	0	0	0	0	0	0	0	0	0	As Misc. Revenue
Service Call - Water Exemption Fees	0	0	0	0	0	0	0	0	0	0	0	As Misc. Revenue
Capacity Charge	318,000	318,000	318,000	318,000	318,000	318,000	318,000	318,000	318,000	318,001	318,002	As Flat
Fire Service Capacity Charge	1,000	1,005	1,010	1,015	1,020	1,025	1,030	1,036	1,041	1,046	1,051	As Misc. Revenue
Physical Connection Fee	215,000	216,075	217,155	218,241	219,332	220,429	221,531	222,639	223,752	224,871	225,995	As Misc. Revenue
Secured Taxes	30,000	30,150	30,301	30,452	30,605	30,758	30,911	31,066	31,221	31,377	31,534	As Misc. Revenue
Sale of Surplus Assets	0	0	0	0	0	0	0	0	0	0	0	As Misc. Revenue
Realized Gain - Loss on Investment	0	0	0	0	0	0	0	0	0	0	0	As Misc. Revenue
Interest Income	68,000	201,000	258,000	236,000	239,000	243,000	245,000	216,000	257,000	269,000	283,000	As Misc. Revenue
Fair Market Value Unrealized Gain/Loss	0	0	0	0	0	0	0	0	0	0	0	As Misc. Revenue
Rents and Leases	192,000	192,960	193,925	194,894	195,869	196,848	197,832	198,822	199,816	200,815	201,819	As Misc. Revenue
Federal Aid	438,075	0	0	0	0	0	0	0	0	0	0	As Misc. Revenue
State Aid	551,900	0	0	0	0	0	0	0	0	0	0	As Misc. Revenue
Interest /Pentalty Charges	100,000	100,500	101,003	101,508	102,015	102,525	103,038	103,553	104,071	104,591	105,114	As Misc. Revenue
Fire Hydrant Permits	30,000	30,150	30,301	30,452	30,605	30,758	30,911	31,066	31,221	31,377	31,534	As Misc. Revenue
Admin Fee - New Service	10,000	10,050	10,100	10,151	10,202	10,253	10,304	10,355	10,407	10,459	10,511	As Misc. Revenue
Contractor Plans & Specs Fee	1	1	1	1	1	1	1	1	1	1	1	As Misc. Revenue
Other Miscellaneous Income	98,300	98,792	99,285	99,782	100,281	100,782	101,286	101,793	102,302	102,813	103,327	As Misc. Revenue
Lab Monitoring Revenue	30,000	30,150	30,301	30,452	30,605	30,758	30,911	31,066	31,221	31,377	31,534	As Misc. Revenue
Water & Fire Meter Sales	10,000	10,050	10,100	10,151	10,202	10,253	10,304	10,355	10,407	10,459	10,511	As Misc. Revenue
Local Aid	401,275	0	0	0	0	0	0	0	0	0	0	As Misc. Revenue
Sewer Loan Repayment	0	0	0	0	0	0	0	0	0	0	0	
Investment Interest		0	0	0	0	0	0	0	0	0	0	Based on Investment Rate
<b>Total Other Revenues</b>	<b>\$2,493,551</b>	<b>\$1,238,883</b>	<b>\$1,299,482</b>	<b>\$1,281,099</b>	<b>\$1,287,735</b>	<b>\$1,295,388</b>	<b>\$1,301,060</b>	<b>\$1,275,751</b>	<b>\$1,320,459</b>	<b>\$1,336,188</b>	<b>\$1,353,935</b>	
<b>Total Revenues</b>	<b>\$15,196,911</b>	<b>\$14,100,754</b>	<b>\$14,240,754</b>	<b>\$14,238,471</b>	<b>\$14,260,381</b>	<b>\$14,283,316</b>	<b>\$14,304,275</b>	<b>\$14,294,259</b>	<b>\$14,354,268</b>	<b>\$14,386,968</b>	<b>\$14,421,694</b>	

	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
Operations & Maintenance Expenses												
Electric												
Regular Salaries - Wages	\$171,175	\$180,718	\$186,140	\$191,724	\$197,475	\$203,400	\$209,502	\$215,787	\$222,260	\$228,928	\$235,796	As Salaries
Wages Overtime	3,000	3,167	3,262	3,360	3,461	3,565	3,672	3,782	3,895	4,012	4,133	As Salaries
Wages Double Time	50	53	54	56	58	59	61	63	65	67	69	As Salaries
FICA Taxes	13,325	14,068	14,490	14,925	15,372	15,834	16,309	16,798	17,302	17,821	18,355	As Salaries
Dental Self Insured	3,425	3,651	3,797	3,949	4,107	4,271	4,442	4,620	4,805	4,997	5,197	As Benefits
Vision	575	613	637	663	689	717	746	776	807	839	872	As Benefits
Retirement Health Savings Account	2,700	2,878	2,993	3,113	3,238	3,367	3,502	3,642	3,788	3,939	4,097	As Benefits
Workers Compensation	6,375	6,796	7,068	7,350	7,644	7,950	8,268	8,599	8,943	9,300	9,672	As Benefits
Uniforms	875	933	970	1,009	1,049	1,091	1,135	1,180	1,227	1,277	1,328	As Benefits
Health Savings Account - ER Portion	3,600	3,838	3,991	4,151	4,317	4,489	4,669	4,856	5,050	5,252	5,462	As Benefits
ACWA Medical Insurance	51,550	54,952	57,150	59,436	61,814	64,286	66,858	69,532	72,313	75,206	78,214	As Benefits
Life Insurance	425	453	471	490	510	530	551	573	596	620	645	As Benefits
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Long Term Disability - Union	450	480	499	519	540	561	584	607	631	657	683	As Benefits
CalPERS Classic ER Contribution	16,600	17,696	18,403	19,140	19,905	20,701	21,529	22,391	23,286	24,218	25,186	As OPEB
CalPERS PEPPRA ER Contribution	4,925	5,250	5,460	5,678	5,906	6,142	6,387	6,643	6,909	7,185	7,472	As OPEB
Health Savings Account Administrative fee - ER Portion	50	53	55	58	60	62	65	67	70	73	76	As Benefits
Gasoline Expense	2,500	2,533	2,601	2,636	2,705	2,742	2,797	2,853	2,910	2,969	3,028	As Utilities
Office Supplies	575	583	598	606	622	631	643	656	669	683	696	As Materials & Supplies
Buildings	8,000	8,106	8,322	8,434	8,657	8,776	8,951	9,130	9,313	9,499	9,689	As Repairs & Maintenance
Wells	5,000	5,066	5,201	5,271	5,411	5,485	5,595	5,707	5,821	5,937	6,056	As Repairs & Maintenance
Pump Stations	42,000	42,554	43,691	44,279	45,450	46,073	46,995	47,935	48,894	49,871	50,869	As Utilities
Repair - Maintenance Water Tanks	2,150	2,178	2,237	2,267	2,327	2,359	2,406	2,454	2,503	2,553	2,604	As Repairs & Maintenance
Radio Repairs - Replacement	225	228	234	237	243	247	252	257	262	267	273	As Repairs & Maintenance
Shop Supplies	2,625	2,660	2,731	2,767	2,841	2,880	2,937	2,996	3,056	3,117	3,179	As Materials & Supplies
Small Tools	1,300	1,317	1,352	1,371	1,407	1,426	1,455	1,484	1,513	1,544	1,575	As Equipment
Safety Equipment - Physicals	2,000	2,026	2,081	2,109	2,164	2,194	2,238	2,283	2,328	2,375	2,422	As Equipment
Travel - Meetings - Education	3,600	3,647	3,745	3,795	3,896	3,949	4,028	4,109	4,191	4,275	4,360	As Miscellaneous
Dues - Memberships - Certification	175	177	182	184	189	192	196	200	204	208	212	As Miscellaneous
Telephone	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Utilities
Supplies	450	456	468	474	487	494	504	514	524	534	545	As Materials & Supplies
SCADA RTU - Water (Location TBD)	0	0	0	0	0	0	0	0	0	0	0	As Repairs & Maintenance
Total Electric	\$350,700	\$368,143	\$379,925	\$391,105	\$403,627	\$415,571	\$428,394	\$441,632	\$455,299	\$469,409	\$483,976	
Heavy Maintenance												
Service Contracts	\$4,200	\$4,255	\$4,369	\$4,428	\$4,545	\$4,607	\$4,699	\$4,793	\$4,889	\$4,987	\$5,087	As Professional Services
Buildings	13,950	14,134	14,512	14,707	15,096	15,303	15,609	15,921	16,240	16,564	16,896	As Materials & Supplies
Total Heavy Maintenance	\$18,150	\$18,389	\$18,881	\$19,135	\$19,641	\$19,910	\$20,309	\$20,715	\$21,129	\$21,552	\$21,983	



	Budget	Projected										
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Notes
Field Operations												
Regular Salaries - Wages	\$67,275	\$71,026	\$73,156	\$75,351	\$77,612	\$79,940	\$82,338	\$84,808	\$87,353	\$89,973	\$92,672	As Salaries
FICA Taxes	5,050	5,332	5,491	5,656	5,826	6,001	6,181	6,366	6,557	6,754	6,956	As Salaries
Dental Self Insured	850	906	942	980	1,019	1,060	1,102	1,147	1,192	1,240	1,290	As Benefits
Vision	150	160	166	173	180	187	195	202	210	219	228	As Benefits
Retirement Health Savings Account	100	107	111	115	120	125	130	135	140	146	152	As Benefits
Workers Compensation	275	293	305	317	330	343	357	371	386	401	417	As Benefits
ACWA Medical Insurance	11,100	11,833	12,306	12,798	13,310	13,842	14,396	14,972	15,571	16,194	16,841	As Benefits
Life Insurance	175	187	194	202	210	218	227	236	245	255	266	As Benefits
Long Term Disability - Management	400	426	443	461	480	499	519	540	561	584	607	As Benefits
CalPERS Classic ER Contribution	11,550	12,312	12,805	13,317	13,850	14,404	14,980	15,579	16,202	16,850	17,524	As OPEB
Legal-Regular	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Professional Services
Gasoline Expense	500	507	520	527	541	548	559	571	582	594	606	As Utilities
Office Supplies	500	507	520	527	541	548	559	571	582	594	606	As Materials & Supplies
Safety Equipment - Physicals	100	101	104	105	108	110	112	114	116	119	121	As Equipment
Travel - Meetings - Education	1,500	1,520	1,560	1,581	1,623	1,645	1,678	1,712	1,746	1,781	1,817	As Miscellaneous
Dues - Memberships - Certification	250	253	260	264	271	274	280	285	291	297	303	As Miscellaneous
Supplies	100	101	104	105	108	110	112	114	116	119	121	As Materials & Supplies
Regulatory Operating Permits	79,875	80,929	83,091	84,209	86,437	87,622	89,374	91,162	92,985	94,845	96,742	As Miscellaneous
Total Field Operations	\$180,750	\$187,511	\$193,120	\$197,744	\$203,647	\$208,573	\$214,218	\$220,026	\$226,001	\$232,151	\$238,479	
Underground Repair												
Regular Salaries - Wages	\$788,975	\$832,960	\$857,949	\$883,688	\$910,198	\$937,504	\$965,629	\$994,598	\$1,024,436	\$1,055,169	\$1,086,824	As Salaries
Wages Overtime	45,000	47,509	48,934	50,402	51,914	53,472	55,076	56,728	58,430	60,183	61,988	As Salaries
Wages Double Time	3,200	3,378	3,480	3,584	3,692	3,802	3,916	4,034	4,155	4,280	4,408	As Salaries
Wages - Part Time	82,975	87,601	90,229	92,936	95,724	98,596	101,553	104,600	107,738	110,970	114,299	As Salaries
Wages - Part Time Overtime	5,000	5,279	5,437	5,600	5,768	5,941	6,120	6,303	6,492	6,687	6,888	As Salaries
FICA Taxes	70,775	74,721	76,962	79,271	81,649	84,099	86,622	89,220	91,897	94,654	97,494	As Salaries
Dental Self Insured	17,100	18,229	18,958	19,716	20,505	21,325	22,178	23,065	23,988	24,947	25,945	As Benefits
Vision	2,850	3,038	3,160	3,286	3,417	3,554	3,696	3,844	3,998	4,158	4,324	As Benefits
Retirement Health Savings Account	13,450	14,338	14,911	15,508	16,128	16,773	17,444	18,142	18,867	19,622	20,407	As Benefits
Workers Compensation	31,650	33,739	35,088	36,492	37,952	39,470	41,049	42,690	44,398	46,174	48,021	As Benefits
Uniforms	3,000	3,198	3,326	3,459	3,597	3,741	3,891	4,046	4,208	4,377	4,552	As Benefits
Health Savings Account - ER Portion	1,300	1,386	1,441	1,499	1,559	1,621	1,686	1,753	1,824	1,897	1,972	As Benefits
ACWA Medical Insurance	254,550	271,350	282,204	293,492	305,232	317,441	330,139	343,345	357,078	371,362	386,216	As Benefits
Life Insurance	2,000	2,132	2,217	2,306	2,398	2,494	2,594	2,698	2,806	2,918	3,035	As Benefits
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Long Term Disability - Union	2,050	2,185	2,273	2,364	2,458	2,556	2,659	2,765	2,876	2,991	3,110	As Benefits
CalPERS Classic ER Contribution	83,225	88,718	92,267	95,957	99,796	103,787	107,939	112,256	116,747	121,417	126,273	As OPEB
CalPERS PEPPRA ER Contribution	18,400	19,614	20,399	21,215	22,064	22,946	23,864	24,818	25,811	26,844	27,917	As OPEB
Health Savings Account Administrative fee - ER Portion	50	53	55	58	60	62	65	67	70	73	76	As Benefits
Contractual Services	0	0	0	0	0	0	0	0	0	0	0	As Professional Services
Miscellaneous Liability Claims	3,000	3,040	3,121	3,163	3,246	3,291	3,357	3,424	3,492	3,562	3,633	As Miscellaneous
Gasoline Expense	14,000	14,185	14,564	14,760	15,150	15,358	15,665	15,978	16,298	16,624	16,956	As Utilities
Diesel	25,000	25,330	26,007	26,356	27,054	27,425	27,973	28,533	29,103	29,685	30,279	As Utilities
Office Supplies	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Materials & Supplies
Equipment Rental- Lease	500	507	520	527	541	548	559	571	582	594	606	As Equipment
Mobile Equipment	500	507	520	527	541	548	559	571	582	594	606	As Equipment
Office Equipment Repair	200	203	208	211	216	219	224	228	233	237	242	As Equipment
Service Contracts	500	507	520	527	541	548	559	571	582	594	606	As Professional Services
Caltrans - City - County - Improvements	46,000	46,607	47,852	48,496	49,779	50,461	51,471	52,500	53,550	54,621	55,713	As Repairs & Maintenance
Pipe - Covers & Manholes	350,000	354,616	364,092	368,991	378,754	383,945	391,624	399,457	407,446	415,595	423,907	As Repairs & Maintenance
Radio Repairs - Replacement	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Repairs & Maintenance
Shop Supplies	8,500	8,612	8,842	8,961	9,198	9,324	9,511	9,701	9,895	10,093	10,295	As Materials & Supplies
Small Tools	18,500	18,744	19,245	19,504	20,020	20,294	20,700	21,114	21,536	21,967	22,407	As Materials & Supplies
Safety Equipment - Physicals	5,000	5,066	5,201	5,271	5,411	5,485	5,595	5,707	5,821	5,937	6,056	As Equipment
Standby Accomodations	3,000	3,040	3,121	3,163	3,246	3,291	3,357	3,424	3,492	3,562	3,633	As Miscellaneous
Travel - Meetings - Education	7,000	7,092	7,282	7,380	7,575	7,679	7,832	7,989	8,149	8,312	8,478	As Miscellaneous
Dues - Memberships - Certification	2,000	2,026	2,081	2,109	2,164	2,194	2,238	2,283	2,328	2,375	2,422	As Miscellaneous
Telephone	3,500	3,546	3,641	3,690	3,788	3,839	3,916	3,995	4,074	4,156	4,239	As Utilities
Propane	300	304	312	316	325	329	336	342	349	356	363	As Utilities
Supplies	500	507	520	527	541	548	559	571	582	594	606	As Materials & Supplies
Construction & Excavation Permit	30,000	30,396	31,208	31,628	32,465	32,910	33,568	34,239	34,924	35,622	36,335	As Miscellaneous
Total Underground Repair	\$1,945,550	\$2,036,287	\$2,100,228	\$2,159,047	\$2,226,831	\$2,289,619	\$2,357,961	\$2,428,454	\$2,501,167	\$2,576,175	\$2,653,554	

South Tahoe PUD  
Water Utility  
Revenue Requirement  
Exhibit 2 - Revenues & Expenses  
Fire Flow - 6%

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	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
<b>Pumps</b>												
Regular Salaries - Wages	\$529,250	\$558,756	\$575,518	\$592,784	\$610,567	\$628,884	\$647,751	\$667,184	\$687,199	\$707,815	\$729,049	As Salaries
Wages Overtime	12,000	12,669	13,049	13,441	13,844	14,259	14,687	15,127	15,581	16,049	16,530	As Salaries
Wages Double Time	4,525	4,777	4,921	5,068	5,220	5,377	5,538	5,704	5,875	6,052	6,233	As Salaries
Wages - Part Time	16,675	17,605	18,133	18,677	19,237	19,814	20,409	21,021	21,651	22,301	22,970	As Salaries
Wages - Part Time Overtime	0	0	0	0	0	0	0	0	0	0	0	As Salaries
FICA Taxes	43,025	45,424	46,786	48,190	49,636	51,125	52,658	54,238	55,865	57,541	59,268	As Salaries
Dental Self Insured	10,250	10,927	11,364	11,818	12,291	12,782	13,294	13,826	14,379	14,954	15,552	As Benefits
Vision	1,725	1,839	1,912	1,989	2,068	2,151	2,237	2,327	2,420	2,517	2,617	As Benefits
Retirement Health Savings Account	8,075	8,608	8,952	9,310	9,683	10,070	10,473	10,892	11,327	11,781	12,252	As Benefits
Workers Compensation	22,000	23,452	24,390	25,366	26,380	27,436	28,533	29,674	30,861	32,096	33,380	As Benefits
Uniforms	3,000	3,198	3,326	3,459	3,597	3,741	3,891	4,046	4,208	4,377	4,552	As Benefits
Health Savings Account - ER Portion	3,050	3,251	3,381	3,517	3,657	3,804	3,956	4,114	4,278	4,450	4,628	As Benefits
ACWA Medical Insurance	141,750	151,106	157,150	163,436	169,973	176,772	183,843	191,197	198,845	206,798	215,070	As Benefits
Life Insurance	1,200	1,279	1,330	1,384	1,439	1,496	1,556	1,619	1,683	1,751	1,821	As Benefits
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Long Term Disability - Union	1,325	1,412	1,469	1,528	1,589	1,652	1,718	1,787	1,859	1,933	2,010	As Benefits
CalPERS Classic ER Contribution	75,125	80,083	83,287	86,618	90,083	93,686	97,434	101,331	105,384	109,599	113,983	As OPEB
CalPERS PEPRA ER Contribution	5,325	5,676	5,904	6,140	6,385	6,641	6,906	7,183	7,470	7,769	8,079	As OPEB
Health Savings Account Administrative fee - ER Portion	50	53	55	58	60	62	65	67	70	73	76	As Benefits
Contractual Services	0	0	0	0	0	0	0	0	0	0	0	As Professional Services
Gasoline Expense	9,500	9,625	9,883	10,015	10,280	10,421	10,630	10,842	11,059	11,280	11,506	As Utilities
Diesel	4,500	4,559	4,681	4,744	4,870	4,936	5,035	5,136	5,239	5,343	5,450	As Utilities
Oil & Lubricants	550	557	572	580	595	603	615	628	640	653	666	As Materials & Supplies
Hypochlorite	22,000	22,290	22,886	23,194	23,807	24,134	24,616	25,109	25,611	26,123	26,646	As Materials & Supplies
Office Supplies	700	709	728	738	758	768	783	799	815	831	848	As Materials & Supplies
Land and Buildings	6,000	6,079	6,242	6,326	6,493	6,582	6,714	6,848	6,985	7,124	7,267	As Repairs & Maintenance
Mobile Equipment	150	152	156	158	162	165	168	171	175	178	182	As Equipment
Buildings	3,600	3,647	3,745	3,795	3,896	3,949	4,028	4,109	4,191	4,275	4,360	As Repairs & Maintenance
Grounds & Maintenance	1,450	1,469	1,508	1,529	1,569	1,591	1,622	1,655	1,688	1,722	1,756	As Repairs & Maintenance
Wells	15,000	15,198	15,604	15,814	16,232	16,455	16,784	17,120	17,462	17,811	18,167	As Repairs & Maintenance
Pump Stations	17,100	17,326	17,789	18,028	18,505	18,758	19,134	19,516	19,907	20,305	20,711	As Repairs & Maintenance
Repair - Maintenance Water Tanks	15,000	15,198	15,604	15,814	16,232	16,455	16,784	17,120	17,462	17,811	18,167	As Repairs & Maintenance
Radio Repairs - Replacement	275	279	286	290	298	302	308	314	320	327	333	As Materials & Supplies
Shop Supplies	4,050	4,103	4,213	4,270	4,383	4,443	4,532	4,622	4,715	4,809	4,905	As Materials & Supplies
Small Tools	4,050	4,103	4,213	4,270	4,383	4,443	4,532	4,622	4,715	4,809	4,905	As Equipment
Safety Equipment - Physicals	5,000	5,066	5,201	5,271	5,411	5,485	5,595	5,707	5,821	5,937	6,056	As Equipment
Standby Accomodations	6,000	6,079	6,242	6,326	6,493	6,582	6,714	6,848	6,985	7,124	7,267	As Miscellaneous
Travel - Meetings - Education	2,500	2,533	2,601	2,636	2,705	2,742	2,797	2,853	2,910	2,969	3,028	As Miscellaneous
Dues - Memberships - Certification	2,000	2,026	2,081	2,109	2,164	2,194	2,238	2,283	2,328	2,375	2,422	As Miscellaneous
Telephone	1,500	1,520	1,560	1,581	1,623	1,645	1,678	1,712	1,746	1,781	1,817	As Utilities
Supplies	325	329	338	343	352	357	364	371	378	386	394	As Materials & Supplies
Regulatory Operating Permits	0	0	0	0	0	0	0	0	0	0	0	As Miscellaneous
<b>Total Pumps</b>	<b>\$999,600</b>	<b>\$1,052,964</b>	<b>\$1,087,059</b>	<b>\$1,120,609</b>	<b>\$1,156,921</b>	<b>\$1,192,763</b>	<b>\$1,230,619</b>	<b>\$1,269,720</b>	<b>\$1,310,108</b>	<b>\$1,351,828</b>	<b>\$1,394,924</b>	

South Tahoe PUD  
Water Utility  
Revenue Requirement  
Exhibit 2 - Revenues & Expenses  
Fire Flow - 6%

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	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
<b>Equipment Repair</b>												
Regular Salaries - Wages	\$127,250	\$134,344	\$138,375	\$142,526	\$146,802	\$151,206	\$155,742	\$160,414	\$165,226	\$170,183	\$175,289	As Salaries
Wages Overtime	6,500	6,862	7,068	7,280	7,499	7,724	7,955	8,194	8,440	8,693	8,954	As Salaries
Wages Double Time	500	528	544	560	577	594	612	630	649	669	689	As Salaries
FICA Taxes	10,275	10,848	11,173	11,508	11,854	12,209	12,576	12,953	13,341	13,742	14,154	As Salaries
Dental Self Insured	2,575	2,745	2,855	2,969	3,088	3,211	3,340	3,473	3,612	3,757	3,907	As Benefits
Vision	450	480	499	519	540	561	584	607	631	657	683	As Benefits
Retirement Health Savings Account	2,025	2,159	2,245	2,335	2,428	2,525	2,626	2,731	2,841	2,954	3,072	As Benefits
Workers Compensation	5,100	5,437	5,654	5,880	6,115	6,360	6,614	6,879	7,154	7,440	7,738	As Benefits
Uniforms	450	480	499	519	540	561	584	607	631	657	683	As Benefits
ACWA Medical Insurance	37,675	40,162	41,768	43,439	45,176	46,983	48,863	50,817	52,850	54,964	57,162	As Benefits
Life Insurance	300	320	333	346	360	374	389	405	421	438	455	As Benefits
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Long Term Disability - Union	325	346	360	375	390	405	422	438	456	474	493	As Benefits
CalPERS Classic ER Contribution	16,100	17,163	17,849	18,563	19,306	20,078	20,881	21,716	22,585	23,488	24,428	As OPEB
CalPERS PEPRA ER Contribution	2,025	2,159	2,245	2,335	2,428	2,525	2,626	2,731	2,841	2,954	3,072	As OPEB
Gasoline Expense	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Utilities
Diesel	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Utilities
Oil & Lubricants	4,500	4,559	4,681	4,744	4,870	4,936	5,035	5,136	5,239	5,343	5,450	As Materials & Supplies
Office Supplies	800	811	832	843	866	878	895	913	931	950	969	As Materials & Supplies
Automotive	33,800	34,246	35,161	35,634	36,577	37,078	37,820	38,576	39,348	40,135	40,937	As Materials & Supplies
Mobile Equipment	250	253	260	264	271	274	280	285	291	297	303	As Equipment
Generators	2,500	2,533	2,601	2,636	2,705	2,742	2,797	2,853	2,910	2,969	3,028	As Equipment
Service Contracts	9,500	9,625	9,883	10,015	10,280	10,421	10,630	10,842	11,059	11,280	11,506	As Professional Services
Shop Supplies	3,000	3,040	3,121	3,163	3,246	3,291	3,357	3,424	3,492	3,562	3,633	As Materials & Supplies
Small Tools	1,500	1,520	1,560	1,581	1,623	1,645	1,678	1,712	1,746	1,781	1,817	As Materials & Supplies
Safety Equipment - Physicals	600	608	624	633	649	658	671	685	698	712	727	As Equipment
Travel - Meetings - Education	2,000	2,026	2,081	2,109	2,164	2,194	2,238	2,283	2,328	2,375	2,422	As Miscellaneous
Dues - Memberships - Certification	200	203	208	211	216	219	224	228	233	237	242	As Miscellaneous
Supplies	300	304	312	316	325	329	336	342	349	356	363	As Materials & Supplies
<b>Total Equipment Repair</b>	<b>\$272,500</b>	<b>\$285,785</b>	<b>\$294,870</b>	<b>\$303,410</b>	<b>\$313,058</b>	<b>\$322,179</b>	<b>\$332,011</b>	<b>\$342,159</b>	<b>\$352,632</b>	<b>\$363,442</b>	<b>\$374,599</b>	

South Tahoe PUD  
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	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
<b>Laboratory</b>												
Regular Salaries - Wages	\$255,925	\$270,193	\$278,299	\$286,648	\$295,247	\$304,104	\$313,228	\$322,624	\$332,303	\$342,272	\$352,540	As Salaries
Wages Overtime	4,000	4,223	4,350	4,480	4,615	4,753	4,896	5,042	5,194	5,350	5,510	As Salaries
Wages Double Time	3,000	3,167	3,262	3,360	3,461	3,565	3,672	3,782	3,895	4,012	4,133	As Salaries
Wages - Part Time	8,000	8,446	8,699	8,960	9,229	9,506	9,791	10,085	10,388	10,699	11,020	As Salaries
Wages - Part Time Overtime	50	53	54	56	58	59	61	63	65	67	69	As Salaries
Wages - Part Time Double Time	200	211	217	224	231	238	245	252	260	267	276	As Salaries
FICA Taxes	20,750	21,907	22,564	23,241	23,938	24,656	25,396	26,158	26,943	27,751	28,583	As Salaries
Dental Self Insured	4,275	4,557	4,739	4,929	5,126	5,331	5,544	5,766	5,997	6,237	6,486	As Benefits
Vision	725	773	804	836	869	904	940	978	1,017	1,058	1,100	As Benefits
Retirement Health Savings Account	3,725	3,971	4,130	4,295	4,467	4,645	4,831	5,024	5,225	5,434	5,652	As Benefits
Workers Compensation	5,875	6,263	6,513	6,774	7,045	7,327	7,620	7,924	8,241	8,571	8,914	As Benefits
Uniforms	675	720	748	778	809	842	875	910	947	985	1,024	As Benefits
Health Savings Account - ER Portion	4,350	4,637	4,823	5,015	5,216	5,425	5,642	5,867	6,102	6,346	6,600	As Benefits
ACWA Medical Insurance	43,250	46,105	47,949	49,867	51,861	53,936	56,093	58,337	60,670	63,097	65,621	As Benefits
Life Insurance	575	583	598	606	622	631	643	656	669	683	696	As Insurance
Long Term Disability - Management	425	453	471	490	510	530	551	573	596	620	645	As Benefits
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Long Term Disability - Union	450	480	499	519	540	561	584	607	631	657	683	As Benefits
CalPERS Classic ER Contribution	43,750	46,638	48,503	50,443	52,461	54,559	56,742	59,011	61,372	63,827	66,380	As OPEB
Health Savings Account Administrative fee - ER Portion	75	80	83	86	90	94	97	101	105	109	114	As Benefits
Contractual Services	5,000	5,066	5,201	5,271	5,411	5,485	5,595	5,707	5,821	5,937	6,056	As Professional Services
Gasoline Expense	1,600	1,621	1,664	1,687	1,731	1,755	1,790	1,826	1,863	1,900	1,938	As Utilities
Laboratory Supplies	29,200	29,585	30,376	30,784	31,599	32,032	32,673	33,326	33,993	34,672	35,366	As Materials & Supplies
Other Supplies	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Materials & Supplies
Postage Expenses	750	760	780	791	812	823	839	856	873	891	908	As Materials & Supplies
Office Supplies	2,000	2,026	2,081	2,109	2,164	2,194	2,238	2,283	2,328	2,375	2,422	As Materials & Supplies
Laboratory Equipment	6,500	6,586	6,762	6,853	7,034	7,130	7,273	7,418	7,567	7,718	7,873	As Materials & Supplies
Service Contracts	4,500	4,559	4,681	4,744	4,870	4,936	5,035	5,136	5,239	5,343	5,450	As Professional Services
Buildings	500	507	520	527	541	548	559	571	582	594	606	As Repairs & Maintenance
Grounds & Maintenance	100	101	104	105	108	110	112	114	116	119	121	As Repairs & Maintenance
Radio Repairs - Replacement	150	152	156	158	162	165	168	171	175	178	182	As Repairs & Maintenance
Safety Equipment - Physicals	800	811	832	843	866	878	895	913	931	950	969	As Miscellaneous
Monitoring	55,000	55,725	57,215	57,984	59,518	60,334	61,541	62,772	64,027	65,308	66,614	As Repairs & Maintenance
Travel - Meetings - Education	9,000	9,119	9,362	9,488	9,739	9,873	10,070	10,272	10,477	10,687	10,900	As Materials & Supplies
Dues - Memberships - Certification	900	912	936	949	974	987	1,007	1,027	1,048	1,069	1,090	As Miscellaneous
Supplies	100	101	104	105	108	110	112	114	116	119	121	As Materials & Supplies
Regulatory Operating Permits	4,000	4,053	4,161	4,217	4,329	4,388	4,476	4,565	4,657	4,750	4,845	As Miscellaneous
<b>Total Laboratory</b>	<b>\$521,175</b>	<b>\$546,155</b>	<b>\$563,282</b>	<b>\$579,279</b>	<b>\$597,443</b>	<b>\$614,511</b>	<b>\$632,953</b>	<b>\$651,975</b>	<b>\$671,597</b>	<b>\$691,837</b>	<b>\$712,717</b>	

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Budget		Projected										Notes
FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029		
Administration												
Regular Salaries - Wages	\$207,825	\$219,411	\$225,994	\$232,773	\$239,757	\$246,949	\$254,358	\$261,988	\$269,848	\$277,944	\$286,282	As Salaries
Wages Overtime	25	26	27	28	29	30	31	32	32	33	34	As Salaries
FICA Taxes	12,675	13,382	13,783	14,197	14,622	15,061	15,513	15,978	16,458	16,951	17,460	As Salaries
Dental Self Insured	2,575	2,745	2,855	2,969	3,088	3,211	3,340	3,473	3,612	3,757	3,907	As Benefits
Vision	450	480	499	519	540	561	584	607	631	657	683	As Benefits
Retirement Health Savings Account	3,500	3,731	3,880	4,035	4,197	4,365	4,539	4,721	4,910	5,106	5,310	As Benefits
Workers Compensation	750	800	831	865	899	935	973	1,012	1,052	1,094	1,138	As Benefits
Health Savings Account - ER Portion	650	693	721	749	779	811	843	877	912	948	986	As Benefits
ACWA Medical Insurance	30,850	32,886	34,202	35,570	36,992	38,472	40,011	41,611	43,276	45,007	46,807	As Benefits
Life Insurance	575	613	637	663	689	717	746	776	807	839	872	As Benefits
Long Term Disability - Management	1,125	1,199	1,247	1,297	1,349	1,403	1,459	1,517	1,578	1,641	1,707	As Benefits
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Long Term Disability - Union	100	107	111	115	120	125	130	135	140	146	152	As Benefits
CalPERS Classic ER Contribution	25,900	27,609	28,714	29,862	31,057	32,299	33,591	34,935	36,332	37,785	39,297	As OPEB
CalPERS PEPRA ER Contribution	4,050	4,317	4,490	4,670	4,856	5,051	5,253	5,463	5,681	5,909	6,145	As OPEB
Health Savings Account Administrative fee - ER Portion	25	27	28	29	30	31	32	34	35	36	38	As Benefits
Contractual Services	500	507	520	527	541	548	559	571	582	594	606	As Professional Services
Legal-Regular	250	253	260	264	271	274	280	285	291	297	303	As Professional Services
Gasoline Expense	1,100	1,115	1,144	1,160	1,190	1,207	1,231	1,255	1,281	1,306	1,332	As Utilities
Office Supplies	1,800	1,824	1,872	1,898	1,948	1,975	2,014	2,054	2,095	2,137	2,180	As Materials & Supplies
Subscription Expense	150	152	156	158	162	165	168	171	175	178	182	As Professional Services
Printing	100	101	104	105	108	110	112	114	116	119	121	As Materials & Supplies
Service Contracts	650	659	676	685	703	713	727	742	757	772	787	As Professional Services
Safety Equipment - Physicals	100	101	104	105	108	110	112	114	116	119	121	As Equipment
Travel - Meetings- Education	4,900	4,965	5,097	5,166	5,303	5,375	5,483	5,592	5,704	5,818	5,935	As Miscellaneous
Dues - Memberships - Certification	500	507	520	527	541	548	559	571	582	594	606	As Miscellaneous
Supplies	1,250	1,266	1,300	1,318	1,353	1,371	1,399	1,427	1,455	1,484	1,514	As Materials & Supplies
Incentive & Recognition Program	4,500	4,559	4,681	4,744	4,870	4,936	5,035	5,136	5,239	5,343	5,450	As Miscellaneous
Total Administration	\$306,875	\$324,034	\$334,455	\$344,998	\$356,103	\$367,353	\$379,080	\$391,191	\$403,698	\$416,615	\$429,955	
Board of Directors												
Regular Salaries - Wages	\$11,765	\$12,421	\$12,794	\$13,177	\$13,573	\$13,980	\$14,399	\$14,831	\$15,276	\$15,734	\$16,206	As Salaries
FICA Taxes	925	977	1,006	1,036	1,067	1,099	1,132	1,166	1,201	1,237	1,274	As Salaries
Dental Self Insured	4,275	4,557	4,739	4,929	5,126	5,331	5,544	5,766	5,997	6,237	6,486	As Benefits
Vision	725	773	804	836	869	904	940	978	1,017	1,058	1,100	As Benefits
Workers Compensation	125	133	139	144	150	156	162	169	175	182	190	As Benefits
ACWA Medical Insurance	62,250	66,359	69,013	71,773	74,644	77,630	80,735	83,965	87,323	90,816	94,449	As Benefits
Life Insurance	125	133	139	144	150	156	162	169	175	182	190	As Benefits
CalPERS Classic ER Contribution	450	480	499	519	540	561	584	607	631	657	683	As OPEB
Legal-Special Projects	250	253	260	264	271	274	280	285	291	297	303	As Professional Services
Legal-Regular	21,000	21,277	21,846	22,139	22,725	23,037	23,497	23,967	24,447	24,936	25,434	As Professional Services
Office Supplies	950	963	988	1,002	1,028	1,042	1,063	1,084	1,106	1,128	1,151	As Materials & Supplies
Travel - Meetings - Education	10,000	10,132	10,403	10,543	10,822	10,970	11,189	11,413	11,641	11,874	12,112	As Miscellaneous
Dues - Memberships - Certification	45,000	45,594	46,812	47,442	48,697	49,364	50,352	51,359	52,386	53,434	54,502	As Miscellaneous
Supplies	250	253	260	264	271	274	280	285	291	297	303	As Materials & Supplies
Election Expense	6,200	6,282	6,450	6,536	6,709	6,801	6,937	7,076	7,218	7,362	7,509	As Miscellaneous
Total Board of Directors	\$164,290	\$170,585	\$176,150	\$180,747	\$186,641	\$191,580	\$197,257	\$203,120	\$209,176	\$215,431	\$221,892	

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	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
Human Resources												
Regular Salaries - Wages	\$114,325	\$120,699	\$124,320	\$128,049	\$131,891	\$135,847	\$139,923	\$144,120	\$148,444	\$152,897	\$157,484	As Salaries
Wages Overtime	1,350	1,425	1,468	1,512	1,557	1,604	1,652	1,702	1,753	1,805	1,860	As Salaries
Wages - Part Time	0	0	0	0	0	0	0	0	0	0	0	As Salaries
FICA Taxes	8,450	8,921	9,189	9,464	9,748	10,041	10,342	10,652	10,972	11,301	11,640	As Salaries
Dental Self Insured	1,725	1,839	1,912	1,989	2,068	2,151	2,237	2,327	2,420	2,517	2,617	As Benefits
Vision	300	320	333	346	360	374	389	405	421	438	455	As Benefits
Retirement Health Savings Account	1,825	1,945	2,023	2,104	2,188	2,276	2,367	2,462	2,560	2,662	2,769	As Benefits
Workers Compensation	475	506	527	548	570	592	616	641	666	693	721	As Benefits
Health Savings Account - ER Portion	1,300	1,386	1,441	1,499	1,559	1,621	1,686	1,753	1,824	1,897	1,972	As Benefits
ACWA Medical Insurance	24,175	25,771	26,801	27,873	28,988	30,148	31,354	32,608	33,912	35,269	36,680	As Benefits
Life Insurance	300	320	333	346	360	374	389	405	421	438	455	As Benefits
Long Term Disability - Management	475	506	527	548	570	592	616	641	666	693	721	As Benefits
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Long Term Disability - Union	125	133	139	144	150	156	162	169	175	182	190	As Benefits
CalPERS Classic ER Contribution	19,775	21,080	21,923	22,800	23,712	24,661	25,647	26,673	27,740	28,850	30,004	As OPEB
Health Savings Account Administrative fee - ER Portion	25	27	28	29	30	31	32	34	35	36	38	As Benefits
Contractual Services	19,450	19,707	20,233	20,505	21,048	21,336	21,763	22,198	22,642	23,095	23,557	As Professional Services
Personnel Legal	5,000	5,066	5,201	5,271	5,411	5,485	5,595	5,707	5,821	5,937	6,056	As Professional Services
Postage Expenses	75	76	78	79	81	82	84	86	87	89	91	As Materials & Supplies
Office Supplies	1,100	1,115	1,144	1,160	1,190	1,207	1,231	1,255	1,281	1,306	1,332	As Materials & Supplies
Subscription Expense	125	127	130	132	135	137	140	143	146	148	151	As Materials & Supplies
Printing	100	101	104	105	108	110	112	114	116	119	121	As Materials & Supplies
Ads-Legal Notices	8,250	8,359	8,582	8,698	8,928	9,050	9,231	9,416	9,604	9,796	9,992	As Materials & Supplies
Service Contracts	10,150	10,284	10,559	10,701	10,984	11,134	11,357	11,584	11,816	12,052	12,293	As Professional Services
Safety Equipment - Physicals	2,250	2,280	2,341	2,372	2,435	2,468	2,518	2,568	2,619	2,672	2,725	As Equipment
Safety Programs	33,300	33,739	34,641	35,107	36,036	36,530	37,260	38,005	38,766	39,541	40,332	As Insurance
Travel - Meetings - Education	3,750	3,799	3,901	3,953	4,058	4,114	4,196	4,280	4,365	4,453	4,542	As Miscellaneous
Staff Development	10,750	10,892	11,183	11,333	11,633	11,793	12,028	12,269	12,514	12,765	13,020	As Miscellaneous
Dues - Memberships - Certification	900	912	936	949	974	987	1,007	1,027	1,048	1,069	1,090	As Professional Services
Supplies	150	152	156	158	162	165	168	171	175	178	182	As Materials & Supplies
Personnel Expense	1,800	1,900	1,957	2,016	2,077	2,139	2,203	2,269	2,337	2,407	2,480	As Salaries
Total Human Resources	\$271,775	\$283,386	\$292,109	\$299,791	\$309,011	\$317,206	\$326,306	\$335,683	\$345,346	\$355,305	\$365,569	
District Information												
Contractual Services	\$82,000	\$83,082	\$85,302	\$86,449	\$88,737	\$89,953	\$91,752	\$93,587	\$95,459	\$97,368	\$99,315	As Professional Services
Postage Expenses	4,500	4,559	4,681	4,744	4,870	4,936	5,035	5,136	5,239	5,343	5,450	As Materials & Supplies
Subscription Expense	100	101	104	105	108	110	112	114	116	119	121	As Materials & Supplies
Printing	10,000	10,132	10,403	10,543	10,822	10,970	11,189	11,413	11,641	11,874	12,112	As Materials & Supplies
Travel - Meetings - Education	3,000	3,040	3,121	3,163	3,246	3,291	3,357	3,424	3,492	3,562	3,633	As Miscellaneous
Dues - Memberships - Certification	0	0	0	0	0	0	0	0	0	0	0	As Miscellaneous
Supplies	25	25	26	26	27	27	28	29	29	30	30	As Materials & Supplies
Public Relations Expense	25,000	25,330	26,007	26,356	27,054	27,425	27,973	28,533	29,103	29,685	30,279	As Miscellaneous
Total District Information	\$124,625	\$126,269	\$129,643	\$131,387	\$134,863	\$136,712	\$139,446	\$142,235	\$145,080	\$147,981	\$150,941	

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	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
<b>Finance</b>												
Regular Salaries - Wages	\$175,625	\$185,416	\$190,979	\$196,708	\$202,609	\$208,687	\$214,948	\$221,397	\$228,038	\$234,880	\$241,926	As Salaries
Wages Overtime	31,500	33,256	34,254	35,281	36,340	37,430	38,553	39,710	40,901	42,128	43,392	As Salaries
Wages Double Time	0	0	0	0	0	0	0	0	0	0	0	As Salaries
Wages - Part Time	0	0	0	0	0	0	0	0	0	0	0	As Salaries
FICA Taxes	14,275	15,071	15,523	15,989	16,468	16,962	17,471	17,995	18,535	19,091	19,664	As Salaries
Dental Self Insured	2,575	2,745	2,855	2,969	3,088	3,211	3,340	3,473	3,612	3,757	3,907	As Benefits
Vision	425	453	471	490	510	530	551	573	596	620	645	As Benefits
Retirement Health Savings Account	2,800	2,985	3,104	3,228	3,357	3,492	3,631	3,777	3,928	4,085	4,248	As Benefits
Workers Compensation	675	720	748	778	809	842	875	910	947	985	1,024	As Benefits
Uniforms	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Health Savings Account - ER Portion	1,300	1,386	1,441	1,499	1,559	1,621	1,686	1,753	1,824	1,897	1,972	As Benefits
ACWA Medical Insurance	31,575	33,659	35,005	36,406	37,862	39,376	40,951	42,589	44,293	46,065	47,907	As Benefits
Life Insurance	475	506	527	548	570	592	616	641	666	693	721	As Benefits
Long Term Disability - Management	600	640	665	692	719	748	778	809	842	875	910	As Benefits
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Long Term Disability - Union	225	240	249	259	270	281	292	303	316	328	341	As Benefits
CalPERS Classic ER Contribution	30,400	32,406	33,703	35,051	36,453	37,911	39,427	41,004	42,645	44,350	46,124	As OPEB
calPERS PEPPRA ER Contribution	0	0	0	0	0	0	0	0	0	0	0	As OPEB
Health Savings Account Administrative fee - ER Portion	25	27	28	29	30	31	32	34	35	36	38	As Benefits
Contractual Services	15,250	15,451	15,864	16,077	16,503	16,729	17,064	17,405	17,753	18,108	18,470	As Professional Services
Advisory	38,075	38,577	39,608	40,141	41,203	41,768	42,603	43,455	44,324	45,211	46,115	As Professional Services
Auditing	28,500	28,876	29,648	30,046	30,841	31,264	31,889	32,527	33,178	33,841	34,518	As Professional Services
Legal - Special Projects	6,000	6,079	6,242	6,326	6,493	6,582	6,714	6,848	6,985	7,124	7,267	As Professional Services
Legal - Regular	2,000	2,026	2,081	2,109	2,164	2,194	2,238	2,283	2,328	2,375	2,422	As Professional Services
Gasoline Expense	0	0	0	0	0	0	0	0	0	0	0	As Utilities
Diesel	0	0	0	0	0	0	0	0	0	0	0	As Materials & Supplies
Postage Expenses	50	51	52	53	54	55	56	57	58	59	61	As Materials & Supplies
Office Supplies	2,500	2,533	2,601	2,636	2,705	2,742	2,797	2,853	2,910	2,969	3,028	As Materials & Supplies
Subscription Expense	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Materials & Supplies
Printing	700	709	728	738	758	768	783	799	815	831	848	As Materials & Supplies
Ads-Legal Notices	800	811	832	843	866	878	895	913	931	950	969	As Materials & Supplies
Office Equipment Repair	75	76	78	79	81	82	84	86	87	89	91	As Repairs & Maintenance
Service Contracts	1,450	1,469	1,508	1,529	1,569	1,591	1,622	1,655	1,688	1,722	1,756	As Professional Services
Safety Equipment - Physicals	100	101	104	105	108	110	112	114	116	119	121	As Equipment
Travel - Meetings - Education	4,000	4,053	4,161	4,217	4,329	4,388	4,476	4,565	4,657	4,750	4,845	As Miscellaneous
Dues - Memberships - Certification	14,900	15,097	15,500	15,708	16,124	16,345	16,672	17,005	17,346	17,692	18,046	As Miscellaneous
Supplies	350	355	364	369	379	384	392	399	407	416	424	As Materials & Supplies
<b>Total Finance</b>	<b>\$408,225</b>	<b>\$426,786</b>	<b>\$439,962</b>	<b>\$451,957</b>	<b>\$465,903</b>	<b>\$478,692</b>	<b>\$492,669</b>	<b>\$507,076</b>	<b>\$521,925</b>	<b>\$537,233</b>	<b>\$553,012</b>	

South Tahoe PUD  
Water Utility  
Revenue Requirement  
Exhibit 2 - Revenues & Expenses  
Fire Flow - 6%

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	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
<b>Accounting</b>												
Regular Salaries - Wages	\$180,600	\$190,668	\$196,389	\$202,280	\$208,349	\$214,599	\$221,037	\$227,668	\$234,498	\$241,533	\$248,779	As Salaries
Wages Overtime	4,500	4,751	4,893	5,040	5,191	5,347	5,508	5,673	5,843	6,018	6,199	As Salaries
Wages - Part Time	0	0	0	0	0	0	0	0	0	0	0	As Salaries
FICA Taxes	13,825	14,596	15,034	15,485	15,949	16,428	16,920	17,428	17,951	18,489	19,044	As Salaries
Dental Self Insured	3,425	3,651	3,797	3,949	4,107	4,271	4,442	4,620	4,805	4,997	5,197	As Benefits
Vision	575	613	637	663	689	717	746	776	807	839	872	As Benefits
Retirement Health Savings Account	3,050	3,251	3,381	3,517	3,657	3,804	3,956	4,114	4,278	4,450	4,628	As Benefits
Workers Compensation	725	773	804	836	869	904	940	978	1,017	1,058	1,100	As Benefits
Health savings Account - ER Portion	1,300	1,386	1,441	1,499	1,559	1,621	1,686	1,753	1,824	1,897	1,972	As Benefits
ACWA Medical Insurance	46,700	49,782	51,773	53,844	55,998	58,238	60,568	62,990	65,510	68,130	70,856	As Benefits
Life Insurance	500	533	554	576	600	624	648	674	701	729	759	As Benefits
Long Term Disability - Management	425	453	471	490	510	530	551	573	596	620	645	As Benefits
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Long Term Disability - Union	350	373	388	404	420	436	454	472	491	511	531	As Benefits
CalPERS Classic ER Contribution	31,300	33,366	34,700	36,088	37,532	39,033	40,595	42,218	43,907	45,663	47,490	As OPEB
Health Savings Account Administrative fee - ER Portion	25	27	28	29	30	31	32	34	35	36	38	As Benefits
Contractual Services	20,250	20,517	21,065	21,349	21,914	22,214	22,658	23,111	23,574	24,045	24,526	As Professional Services
Advisory	750	760	780	791	812	823	839	856	873	891	908	As Professional Services
Postage Expenses	25	25	26	26	27	27	28	29	29	30	30	As Materials & Supplies
Office Supplies	500	507	520	527	541	548	559	571	582	594	606	As Materials & Supplies
Subscription Expense	725	735	754	764	785	795	811	827	844	861	878	As Materials & Supplies
Printing	275	279	286	290	298	302	308	314	320	327	333	As Miscellaneous
Ads-Legal Notices	25	25	26	26	27	27	28	29	29	30	30	As Miscellaneous
Service Contracts	24,125	24,443	25,096	25,434	26,107	26,465	26,994	27,534	28,085	28,646	29,219	As Professional Services
Safety Equipment - Physicals	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Equipment
Travel - Meetings - Education	4,500	4,559	4,681	4,744	4,870	4,936	5,035	5,136	5,239	5,343	5,450	As Miscellaneous
Tuition & Reimbursement Program	500	507	520	527	541	548	559	571	582	594	606	As Miscellaneous
Dues - Memberships - Certification	150	152	156	158	162	165	168	171	175	178	182	As Miscellaneous
Supplies	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Materials & Supplies
<b>Total Accounting</b>	<b>\$341,125</b>	<b>\$358,758</b>	<b>\$370,284</b>	<b>\$381,446</b>	<b>\$393,707</b>	<b>\$405,629</b>	<b>\$418,309</b>	<b>\$431,403</b>	<b>\$444,922</b>	<b>\$458,883</b>	<b>\$473,300</b>	



South Tahoe PUD  
Water Utility  
Revenue Requirement  
Exhibit 2 - Revenues & Expenses  
Fire Flow - 6%

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	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
<b>Purchasing</b>												
Regular Salaries - Wages	\$94,775	\$100,059	\$103,060	\$106,152	\$109,337	\$112,617	\$115,995	\$119,475	\$123,060	\$126,751	\$130,554	As Salaries
Wages Overtime	150	158	163	168	173	178	184	189	195	201	207	As Salaries
FICA Taxes	7,250	7,654	7,884	8,120	8,364	8,615	8,873	9,140	9,414	9,696	9,987	As Salaries
Dental Self Insured	1,725	1,839	1,912	1,989	2,068	2,151	2,237	2,327	2,420	2,517	2,617	As Benefits
Vision	300	320	333	346	360	374	389	405	421	438	455	As Benefits
Retirement Health Savings Account	1,625	1,732	1,802	1,874	1,949	2,026	2,108	2,192	2,280	2,371	2,466	As Benefits
Workers Compensation	375	400	416	432	450	468	486	506	526	547	569	As Benefits
Uniforms	175	187	194	202	210	218	227	236	245	255	266	As Benefits
ACWA Medical Insurance	30,300	32,300	33,592	34,935	36,333	37,786	39,298	40,870	42,504	44,205	45,973	As Benefits
Life Insurance	275	293	305	317	330	343	357	371	386	401	417	As Benefits
Long Term Disability - Management	400	426	443	461	480	499	519	540	561	584	607	As Benefits
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Long Term Disability - Union	125	133	139	144	150	156	162	169	175	182	190	As Benefits
CalPERS Classic ER Contribution	16,350	17,429	18,126	18,851	19,605	20,390	21,205	22,053	22,936	23,853	24,807	As OPEB
Advisory	500	507	520	527	541	548	559	571	582	594	606	As Professional Services
Legal-Regular	500	507	520	527	541	548	559	571	582	594	606	As Professional Services
Gasoline Expense	250	253	260	264	271	274	280	285	291	297	303	As Utilities
Diesel	50	51	52	53	54	55	56	57	58	59	61	As Utilities
Postage Expenses	25	25	26	26	27	27	28	29	29	30	30	As Materials & Supplies
Office Supplies	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Materials & Supplies
Subscription Expense	25	25	26	26	27	27	28	29	29	30	30	As Materials & Supplies
Printing	200	203	208	211	216	219	224	228	233	237	242	As Miscellaneous
Ads-Legal Notices	100	101	104	105	108	110	112	114	116	119	121	As Miscellaneous
Janitorial Supplies	2,700	2,736	2,809	2,846	2,922	2,962	3,021	3,082	3,143	3,206	3,270	As Materials & Supplies
Janitorial Services	19,700	19,960	20,493	20,769	21,318	21,611	22,043	22,484	22,933	23,392	23,860	As Materials & Supplies
Safety Equipment - Physicals	100	101	104	105	108	110	112	114	116	119	121	As Equipment
Travel - Meetings - Education	300	304	312	316	325	329	336	342	349	356	363	As Miscellaneous
Dues - Memberships - Certification	75	76	78	79	81	82	84	86	87	89	91	As Miscellaneous
Supplies	50	51	52	53	54	55	56	57	58	59	61	As Materials & Supplies
<b>Total Purchasing</b>	<b>\$179,400</b>	<b>\$188,842</b>	<b>\$194,973</b>	<b>\$200,955</b>	<b>\$207,484</b>	<b>\$213,877</b>	<b>\$220,656</b>	<b>\$227,660</b>	<b>\$234,894</b>	<b>\$242,368</b>	<b>\$250,089</b>	

	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
<b>Information Technology</b>												
Regular Salaries - Wages	\$190,125	\$200,724	\$206,746	\$212,949	\$219,337	\$225,917	\$232,695	\$239,676	\$246,866	\$254,272	\$261,900	As Salaries
Wages Overtime	2,400	2,534	2,610	2,688	2,769	2,852	2,937	3,025	3,116	3,210	3,306	As Salaries
Wages Double Time	100	106	109	112	115	119	122	126	130	134	138	As Salaries
FICA Taxes	14,725	15,546	16,012	16,493	16,987	17,497	18,022	18,563	19,120	19,693	20,284	As Salaries
Dental Self Insured	3,425	3,651	3,797	3,949	4,107	4,271	4,442	4,620	4,805	4,997	5,197	As Benefits
Vision	575	613	637	663	689	717	746	776	807	839	872	As Benefits
Retirement Health Savings Account	3,000	3,198	3,326	3,459	3,597	3,741	3,891	4,046	4,208	4,377	4,552	As Benefits
Workers Compensation	775	826	859	894	929	966	1,005	1,045	1,087	1,131	1,176	As Benefits
Health Savings Account - ER Portion	1,850	1,972	2,051	2,133	2,218	2,307	2,399	2,495	2,595	2,699	2,807	As Benefits
ACWA Medical Insurance	42,975	45,811	47,644	49,550	51,532	53,593	55,737	57,966	60,285	62,696	65,204	As Benefits
Life Insurance	475	506	527	548	570	592	616	641	666	693	721	As Benefits
Long Term Disability - Management	400	426	443	461	480	499	519	540	561	584	607	As Benefits
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Long Term Disability - Union	325	346	360	375	390	405	422	438	456	474	493	As Benefits
CalPERS Classic ER Contribution	27,350	29,155	30,321	31,534	32,796	34,107	35,472	36,891	38,366	39,901	41,497	As OPEB
CalPERS PEPR ER Contribution	2,275	2,425	2,522	2,623	2,728	2,837	2,951	3,069	3,191	3,319	3,452	As OPEB
Health Savings Account Administrative fee - ER Portion	50	53	55	58	60	62	65	67	70	73	76	As Benefits
Contractual Services	15,000	15,198	15,604	15,814	16,232	16,455	16,784	17,120	17,462	17,811	18,167	As Professional Services
Postage Expenses	75	76	78	79	81	82	84	86	87	89	91	As Miscellaneous
Office Supplies	3,000	3,040	3,121	3,163	3,246	3,291	3,357	3,424	3,492	3,562	3,633	As Materials & Supplies
Subscription Expense	175	177	182	184	189	192	196	200	204	208	212	As Materials & Supplies
District Computer Supplies	32,000	32,422	33,288	33,736	34,629	35,104	35,806	36,522	37,252	37,997	38,757	As Materials & Supplies
Computer Purchases	22,500	22,797	23,406	23,721	24,348	24,682	25,176	25,679	26,193	26,717	27,251	As Equipment
Printing	300	304	312	316	325	329	336	342	349	356	363	As Materials & Supplies
Service Contracts	102,225	103,573	106,341	107,772	110,623	112,139	114,382	116,670	119,003	121,383	123,811	As Professional Services
Safety Equipment - Physicals	200	203	208	211	216	219	224	228	233	237	242	As Equipment
Travel - Meetings - Education	10,650	10,790	11,079	11,228	11,525	11,683	11,917	12,155	12,398	12,646	12,899	As Miscellaneous
Dues - Memberships - Certification	600	608	624	633	649	658	671	685	698	712	727	As Miscellaneous
Telephone	650	659	676	685	703	713	727	742	757	772	787	As Miscellaneous
Supplies	250	253	260	264	271	274	280	285	291	297	303	As Materials & Supplies
<b>Total Information Technology</b>	<b>\$478,450</b>	<b>\$497,994</b>	<b>\$513,200</b>	<b>\$526,292</b>	<b>\$542,343</b>	<b>\$556,306</b>	<b>\$571,978</b>	<b>\$588,121</b>	<b>\$604,749</b>	<b>\$621,878</b>	<b>\$639,524</b>	

	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
<b>Customer Service</b>												
Regular Salaries - Wages	\$230,150	\$242,981	\$250,270	\$257,778	\$265,512	\$273,477	\$281,681	\$290,132	\$298,836	\$307,801	\$317,035	As Salaries
Wages Overtime	1,600	1,689	1,740	1,792	1,846	1,901	1,958	2,017	2,078	2,140	2,204	As Salaries
FICA Taxes	17,725	18,713	19,275	19,853	20,448	21,062	21,694	22,345	23,015	23,705	24,416	As Salaries
Dental Self Insured	5,125	5,463	5,682	5,909	6,145	6,391	6,647	6,913	7,189	7,477	7,776	As Benefits
Vision	850	906	942	980	1,019	1,060	1,102	1,147	1,192	1,240	1,290	As Benefits
Retirement Health Savings Account	4,400	4,690	4,878	5,073	5,276	5,487	5,707	5,935	6,172	6,419	6,676	As Benefits
Workers Compensation	925	986	1,025	1,067	1,109	1,154	1,200	1,248	1,298	1,349	1,403	As Benefits
Uniforms	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Health Savings Account - ER Portion	3,150	3,358	3,492	3,632	3,777	3,928	4,085	4,249	4,419	4,596	4,779	As Benefits
ACWA Medical Insurance	63,275	67,451	70,149	72,955	75,873	78,908	82,065	85,347	88,761	92,312	96,004	As Benefits
Life Insurance	800	853	887	922	959	998	1,038	1,079	1,122	1,167	1,214	As Benefits
Long Term Disability - Management	425	453	471	490	510	530	551	573	596	620	645	As Benefits
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	As Benefits
Long Term Disability - Union	500	533	554	576	600	624	648	674	701	729	759	As Benefits
CalPERS Classic ER Contribution	29,525	31,474	32,733	34,042	35,404	36,820	38,293	39,824	41,417	43,074	44,797	As OPEB
CalPERS PEPRA ER Contribution	4,075	4,344	4,518	4,698	4,886	5,082	5,285	5,496	5,716	5,945	6,183	As OPEB
Health Savings Account Administrative fee - ER Portion	50	53	55	58	60	62	65	67	70	73	76	As Benefits
Contractual Services	0	0	0	0	0	0	0	0	0	0	0	As Professional Services
Legal-Special Projects	1,500	1,520	1,560	1,581	1,623	1,645	1,678	1,712	1,746	1,781	1,817	As Professional Services
Legal Litigation Confidential	0	0	0	0	0	0	0	0	0	0	0	As Professional Services
Legal-Regular	2,500	2,533	2,601	2,636	2,705	2,742	2,797	2,853	2,910	2,969	3,028	As Professional Services
Miscellaneous Liability Claims	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Professional Services
CSRMA Liability Claims	1,000	1,013	1,040	1,054	1,082	1,097	1,119	1,141	1,164	1,187	1,211	As Professional Services
Gasoline Expense	0	0	0	0	0	0	0	0	0	0	0	As Utilities
Postage Expenses	20,000	20,264	20,805	21,085	21,643	21,940	22,379	22,826	23,283	23,748	24,223	As Materials & Supplies
Office Supplies	2,300	2,330	2,393	2,425	2,489	2,523	2,574	2,625	2,678	2,731	2,786	As Materials & Supplies
Printing	7,150	7,244	7,438	7,538	7,737	7,843	8,000	8,160	8,324	8,490	8,660	As Materials & Supplies
Ads-Legal Notices	1,500	1,520	1,560	1,581	1,623	1,645	1,678	1,712	1,746	1,781	1,817	As Materials & Supplies
Equipment Rental - Lease	1,050	1,064	1,092	1,107	1,136	1,152	1,175	1,198	1,222	1,247	1,272	As Equipment
Office Equipment Repair	100	101	104	105	108	110	112	114	116	119	121	As Repairs & Maintenance
Service Contracts	31,500	31,915	32,768	33,209	34,088	34,555	35,246	35,951	36,670	37,404	38,152	As Professional Services
Water Meters & Parts	0	0	0	0	0	0	0	0	0	0	0	As Materials & Supplies
Shop Supplies	0	0	0	0	0	0	0	0	0	0	0	As Materials & Supplies
Small Tools	0	0	0	0	0	0	0	0	0	0	0	As Equipment
Safety Equipment - Physicals	200	203	208	211	216	219	224	228	233	237	242	As Equipment
Travel - Meetings - Education	6,200	6,282	6,450	6,536	6,709	6,801	6,937	7,076	7,218	7,362	7,509	As Miscellaneous
Dues - Memberships - Certification	0	0	0	0	0	0	0	0	0	0	0	As Miscellaneous
Telephone	125	127	130	132	135	137	140	143	146	148	151	As Miscellaneous
Supplies	250	253	260	264	271	274	280	285	291	297	303	As Materials & Supplies
Bad Debt Expense	9,000	9,119	9,362	9,488	9,739	9,873	10,070	10,272	10,477	10,687	10,900	As Miscellaneous
Water Conservation Expense	0	0	0	0	0	0	0	0	0	0	0	As Miscellaneous
Meter Tester	0	0	0	0	0	0	0	0	0	0	0	As Miscellaneous
<b>Total Customer Service</b>	<b>\$447,950</b>	<b>\$470,449</b>	<b>\$485,484</b>	<b>\$499,833</b>	<b>\$515,814</b>	<b>\$531,139</b>	<b>\$547,547</b>	<b>\$564,485</b>	<b>\$581,971</b>	<b>\$600,022</b>	<b>\$618,659</b>	

South Tahoe PUD  
Water Utility  
Revenue Requirement  
Exhibit 2 - Revenues & Expenses  
Fire Flow - 6%

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	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
<b>Inspections</b>												
Regular Salaries - Wages	\$233,950	\$246,993	\$254,402	\$262,035	\$269,896	\$277,992	\$286,332	\$294,922	\$303,770	\$312,883	\$322,269	As Salaries
Wages Overtime	4,800	5,068	5,220	5,376	5,538	5,704	5,875	6,051	6,233	6,419	6,612	As Salaries
Wages - Part Time	0	0	0	0	0	0	0	0	0	0	0	As Salaries
FICA Taxes	18,275	19,294	19,873	20,469	21,083	21,715	22,367	23,038	23,729	24,441	25,174	As Salaries
Dental Self Insured	5,125	5,463	5,682	5,909	6,145	6,391	6,647	6,913	7,189	7,477	7,776	As Benefits
Vision	850	906	942	980	1,019	1,060	1,102	1,147	1,192	1,240	1,290	As Benefits
Retirement Health Savings Account	4,025	4,291	4,462	4,641	4,826	5,019	5,220	5,429	5,646	5,872	6,107	As Benefits
Workers Compensation	375	400	416	432	450	468	486	506	526	547	569	As Benefits
Uniforms	1,025	1,093	1,136	1,182	1,229	1,278	1,329	1,383	1,438	1,495	1,555	As Benefits
Health Savings Account - ER Portion	1,950	2,079	2,162	2,248	2,338	2,432	2,529	2,630	2,735	2,845	2,959	As Benefits
ACWA Medical Insurance	69,725	74,327	77,300	80,392	83,608	86,952	90,430	94,047	97,809	101,721	105,790	As Benefits
Life Insurance	600	640	665	692	719	748	778	809	842	875	910	As Benefits
Long Term Disability - Union	675	720	748	778	809	842	875	910	947	985	1,024	As Benefits
CalPERS Classic ER Contribution	22,925	24,438	25,416	26,432	27,489	28,589	29,733	30,922	32,159	33,445	34,783	As OPEB
CalPERS PEPRA ER Contribution	6,925	7,382	7,677	7,984	8,304	8,636	8,981	9,341	9,714	10,103	10,507	As OPEB
Health Savings Account Administrative fee - ER Portion	50	53	55	58	60	62	65	67	70	73	76	As Benefits
Contractual Services	24,000	24,317	24,966	25,302	25,972	26,328	26,854	27,391	27,939	28,498	29,068	As Professional Services
Gasoline Expense	3,600	3,647	3,745	3,795	3,896	3,949	4,028	4,109	4,191	4,275	4,360	As Utilities
Office Supplies	1,900	1,925	1,977	2,003	2,056	2,084	2,126	2,168	2,212	2,256	2,301	As Materials & Supplies
Service Contracts	875	887	910	922	947	960	979	999	1,019	1,039	1,060	As Professional Services
Water Meters & Parts	71,125	72,063	73,989	74,984	76,968	78,023	79,584	81,175	82,799	84,455	86,144	As Materials & Supplies
Shop Supplies	3,000	3,040	3,121	3,163	3,246	3,291	3,357	3,424	3,492	3,562	3,633	As Materials & Supplies
Small Tools	500	507	520	527	541	548	559	571	582	594	606	As Equipment
Safety Equipment - Physicals	250	253	260	264	271	274	280	285	291	297	303	As Equipment
Travel - Meetings - Education	7,800	7,903	8,114	8,223	8,441	8,556	8,728	8,902	9,080	9,262	9,447	As Miscellaneous
Dues - Memberships - Certification	950	963	988	1,002	1,028	1,042	1,063	1,084	1,106	1,128	1,151	As Miscellaneous
Telephone	2,675	2,710	2,783	2,820	2,895	2,934	2,993	3,053	3,114	3,176	3,240	As Miscellaneous
Supplies	50	51	52	53	54	55	56	57	58	59	61	As Materials & Supplies
<b>Total Inspections</b>	<b>\$488,000</b>	<b>\$511,409</b>	<b>\$527,582</b>	<b>\$542,667</b>	<b>\$559,828</b>	<b>\$575,935</b>	<b>\$593,357</b>	<b>\$611,334</b>	<b>\$629,883</b>	<b>\$649,023</b>	<b>\$668,774</b>	

South Tahoe PUD  
Water Utility  
Revenue Requirement  
Exhibit 2 - Revenues & Expenses  
Fire Flow - 6%

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	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
Water Conservation												
Regular Salaries - Wages	\$40,825	\$43,101	\$44,394	\$45,726	\$47,098	\$48,511	\$49,966	\$51,465	\$53,009	\$54,599	\$56,237	As Salaries
Wages Overtime	250	264	272	280	288	297	306	315	325	334	344	As Salaries
FICA Taxes	3,150	3,326	3,425	3,528	3,634	3,743	3,855	3,971	4,090	4,213	4,339	As Salaries
Dental Self Insured	850	906	942	980	1,019	1,060	1,102	1,147	1,192	1,240	1,290	As Benefits
Vision	150	160	166	173	180	187	195	202	210	219	228	As Benefits
Retirement Health Savings Account	675	720	748	778	809	842	875	910	947	985	1,024	As Benefits
Workers Compensation	175	187	194	202	210	218	227	236	245	255	266	As Benefits
Health Savings Account - ER Portion	1,200	1,279	1,330	1,384	1,439	1,496	1,556	1,619	1,683	1,751	1,821	As Benefits
ACWA Medical Insurance	12,125	12,925	13,442	13,980	14,539	15,121	15,726	16,355	17,009	17,689	18,397	As Benefits
Life Insurance	100	107	111	115	120	125	130	135	140	146	152	As Benefits
Long Term Disability - Union	125	133	139	144	150	156	162	169	175	182	190	As Benefits
CalPERS Classic ER Contribution	7,150	7,622	7,927	8,244	8,574	8,917	9,273	9,644	10,030	10,431	10,848	As OPEB
Health Savings Account Administrative fee - ER Portion	25	27	28	29	30	31	32	34	35	36	38	As Benefits
Contractual Services	54,675	55,396	56,876	57,642	59,167	59,978	61,177	62,401	63,649	64,922	66,220	As Professional Services
Gasoline Expense	400	405	416	422	433	439	448	457	466	475	484	As Utilities
Office Supplies	3,000	3,040	3,121	3,163	3,246	3,291	3,357	3,424	3,492	3,562	3,633	As Materials & Supplies
Printing	1,675	1,697	1,742	1,766	1,813	1,837	1,874	1,912	1,950	1,989	2,029	As Miscellaneous
Ads-Legal Notices	4,700	4,762	4,889	4,955	5,086	5,156	5,259	5,364	5,471	5,581	5,692	As Materials & Supplies
Safety Equipment - Physicals	100	101	104	105	108	110	112	114	116	119	121	As Equipment
Travel - Meetings - Education	5,000	5,066	5,201	5,271	5,411	5,485	5,595	5,707	5,821	5,937	6,056	As Miscellaneous
Dues - Memberships - Certification	2,875	2,913	2,991	3,031	3,111	3,154	3,217	3,281	3,347	3,414	3,482	As Materials & Supplies
Supplies	100	101	104	105	108	110	112	114	116	119	121	As Materials & Supplies
Water Conservation Expense	0	0	0	0	0	0	0	0	0	0	0	As Miscellaneous
Toilet Rebate Program	7,500	7,599	7,802	7,907	8,116	8,227	8,392	8,560	8,731	8,906	9,084	As Miscellaneous
Clothes Washer Rebate Program	7,500	7,599	7,802	7,907	8,116	8,227	8,392	8,560	8,731	8,906	9,084	As Miscellaneous
Turf Buy-Back Program	72,475	73,431	75,393	76,407	78,429	79,504	81,094	82,716	84,370	86,058	87,779	As Miscellaneous
Total Water Conservation	\$226,800	\$232,866	\$239,561	\$244,244	\$251,234	\$256,221	\$262,434	\$268,810	\$275,352	\$282,067	\$288,958	
Non Crew												
Insurance Expense	\$121,000	\$122,596	\$125,872	\$127,565	\$130,941	\$132,735	\$135,390	\$138,098	\$140,860	\$143,677	\$146,551	As Insurance
Postage Expenses	500	507	520	527	541	548	559	571	582	594	606	As Materials & Supplies
Equipment Rental - Lease	0	0	0	0	0	0	0	0	0	0	0	As Equipment
Safety Equipment - Physicals	1,500	1,520	1,560	1,581	1,623	1,645	1,678	1,712	1,746	1,781	1,817	As Equipment
Telephone	11,000	11,145	11,443	11,597	11,904	12,067	12,308	12,554	12,805	13,062	13,323	As Miscellaneous
Electricity	734,000	743,681	763,554	773,826	794,301	805,188	821,292	837,718	854,472	871,562	888,993	As Utilities
Natural Gas	20,000	20,264	20,805	21,085	21,643	21,940	22,379	22,826	23,283	23,748	24,223	As Utilities
Propane	500	507	520	527	541	548	559	571	582	594	606	As Utilities
Refuse Disposal	3,000	3,040	3,121	3,163	3,246	3,291	3,357	3,424	3,492	3,562	3,633	As Utilities
Other Utilities	6,800	6,890	7,074	7,169	7,359	7,460	7,609	7,761	7,916	8,074	8,236	As Utilities
Miscellaneous Corrections	0	0	0	0	0	0	0	0	0	0	0	As Miscellaneous
Supplies	200	203	208	211	216	219	224	228	233	237	242	As Materials & Supplies
LAFCO Administrative Costs	13,000	13,171	13,523	13,705	14,068	14,261	14,546	14,837	15,134	15,436	15,745	As Miscellaneous
Low Income Rate Discount	35,600	36,070	37,033	37,532	38,525	39,053	39,834	40,630	41,443	42,272	43,117	As Miscellaneous
Contingency Fund	150,000	151,978	156,040	158,139	162,323	164,548	167,839	171,196	174,620	178,112	181,674	As Miscellaneous
Loss on Retired Assets	0	0	0	0	0	0	0	0	0	0	0	As Miscellaneous
Total Non Crew	\$1,097,100	\$1,111,570	\$1,141,273	\$1,156,627	\$1,187,231	\$1,203,504	\$1,227,574	\$1,252,126	\$1,277,168	\$1,302,712	\$1,328,766	

	Budget	Projected										Notes
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
<b>Total Operations &amp; Maintenance Expense</b>	<b>\$8,823,040</b>	<b>\$9,198,182</b>	<b>\$9,482,042</b>	<b>\$9,731,274</b>	<b>\$10,031,332</b>	<b>\$10,297,280</b>	<b>\$10,593,080</b>	<b>\$10,897,923</b>	<b>\$11,212,099</b>	<b>\$11,535,912</b>	<b>\$11,869,672</b>	
		4.3%	3.1%	2.6%	3.1%	2.7%	2.9%	2.9%	2.9%	2.9%	2.9%	
<b>Rate Funded Capital (Capital Improvement Charge)</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	FY 2017 Dep. Exp. = <b>\$3,056,171</b>
		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
<b>Debt Service</b>												
2001, 2013, & 2017 Amortization	\$9,051	\$9,051	\$9,051	\$9,051	\$9,051	\$9,051	\$9,051	\$0	\$0	\$1	\$2	Financial Plan
2013 Waterline / Refunding Loan	769,967	622,769	475,571	475,571	475,571	475,571	475,571	475,571	475,571	475,571	475,571	Financial Plan
Meter Loan I	120,198	120,198	120,198	120,198	120,198	120,198	120,198	120,198	120,198	120,198	120,198	Financial Plan
Meter Loan II	64,621	64,621	64,621	64,621	64,621	64,621	64,621	64,621	64,621	64,621	64,621	Financial Plan
Waterline - Replacement Program	0	155,342	155,342	155,342	155,342	155,342	155,342	155,342	155,342	155,342	155,342	
Meter Loan III-V	0	0	0	434,772	434,772	434,772	434,772	434,772	434,772	434,772	434,772	
Keller/Heavenly	0	0	0	0	377,204	377,204	377,204	377,204	377,204	377,204	377,204	Updated from 5.5 to 7.9m
Customer Refunds	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	
Scenario E - Increased Borrowing	0	0	0	192,190	485,780	921,630	1,275,529	1,467,719	1,890,538	2,159,605	2,390,233	
New Low Interest Loan	0	0	0	0	0	0	0	0	0	0	0	Calculated @ 3.0% for 20 yrs
New Revenue Bond	0	0	0	0	0	0	0	0	0	0	0	Calculated @ 5.0% for 20 yrs
<b>Total Debt Service</b>	<b>\$965,837</b>	<b>\$973,981</b>	<b>\$826,783</b>	<b>\$1,453,745</b>	<b>\$2,124,540</b>	<b>\$2,560,389</b>	<b>\$2,914,289</b>	<b>\$3,097,428</b>	<b>\$3,520,247</b>	<b>\$3,789,314</b>	<b>\$4,019,944</b>	
		0.8%	-15.1%	75.8%	46.1%	20.5%	13.8%	6.3%	13.7%	7.6%	6.1%	
<b>To / (From) Reserves</b>												
To / (From) Capital Reserve	\$4,395,690	\$3,670,996	\$1,100,258	\$4,861,735	\$4,175,415	\$5,157,110	\$5,829,796	\$6,585,288	\$7,263,224	\$8,187,233	\$9,005,291	
To / (From) Capital Reserve for DS Principal	(819,000)	(782,000)	(713,584)	(1,028,507)	(1,259,577)	(1,467,314)	(1,725,791)	(1,854,034)	(2,083,019)	(2,302,889)	(2,328,391)	
To / (From) Sewer Fund	0	0	3,000,000	0	0	0	0	0	0	0	0	
To / (From) Operating Reserve	0	0	0	0	0	0	0	0	0	0	0	
To / (From) Rate Stabilization	(8,536)	(63,019)	66,374	(87,438)	342,077	(98,371)	(104,394)	(110,787)	(117,570)	(125,045)	(132,718)	
To / (From) Debt Reserve	(3,637)	(155,342)	0	(434,772)	0	0	0	0	0	0	0	
<b>Total To / (From) Reserves</b>	<b>\$3,564,517</b>	<b>\$2,670,636</b>	<b>\$3,453,047</b>	<b>\$3,311,018</b>	<b>\$3,257,915</b>	<b>\$3,591,425</b>	<b>\$3,999,611</b>	<b>\$4,620,467</b>	<b>\$5,062,636</b>	<b>\$5,759,300</b>	<b>\$6,544,182</b>	
<b>Total Revenue Requirements</b>	<b>\$15,119,394</b>	<b>\$14,608,798</b>	<b>\$15,527,873</b>	<b>\$16,262,037</b>	<b>\$17,179,786</b>	<b>\$18,215,094</b>	<b>\$19,272,980</b>	<b>\$20,381,817</b>	<b>\$21,560,982</b>	<b>\$22,850,526</b>	<b>\$24,199,798</b>	
		-3.4%	6.3%	4.7%	5.6%	6.0%	5.8%	5.8%	5.8%	6.0%	5.9%	
Balance / (Deficiency) of Funds	\$77,517	(\$508,044)	(\$1,287,119)	(\$2,023,566)	(\$2,919,405)	(\$3,931,778)	(\$4,968,706)	(\$6,087,559)	(\$7,206,714)	(\$8,463,558)	(\$9,778,103)	
Rate Adjust. as a % of Rate Rev	-0.6%	4.0%	9.9%	15.6%	22.5%	30.3%	38.2%	46.8%	55.3%	64.9%	74.8%	
<b>Proposed Rate Adjustment</b>	<b>5.0%</b>	<b>4.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	
Months of Adjustment	12	12	12	12	12	12	12	12	12	12	12	
Add'l Rev from Proposed Adj.	\$0	\$508,044	\$1,318,327	\$2,176,608	\$3,088,283	\$4,056,712	\$5,085,368	\$6,177,941	\$7,338,342	\$8,571,819	\$9,882,015	
Net Bal/(Def) of Funds After Rate Adj.	\$77,517	\$0	\$31,208	\$153,042	\$168,877	\$124,934	\$116,663	\$90,382	\$131,629	\$108,261	\$103,911	
<b>Additional Rate Increase Needed</b>	<b>-0.6%</b>	<b>0.0%</b>	<b>-0.2%</b>	<b>-1.2%</b>	<b>-1.3%</b>	<b>-1.0%</b>	<b>-0.9%</b>	<b>-0.7%</b>	<b>-1.0%</b>	<b>-0.8%</b>	<b>-0.8%</b>	

	Budget	Projected										
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Notes
<b>Debt Service Coverage Ratio</b>												
Before Rate Adjustment	4.34	3.13	3.45	1.75	1.04	0.75	0.54	0.39	0.25	0.14	0.04	
After Rate Adjustment	4.34	3.65	5.05	3.25	2.50	2.33	2.29	2.38	2.34	2.40	2.50	
<b>Average Quarterly Residential Bill (3/4" meter + 20 CCF)</b>	<b>\$162.70</b>	\$169.13	\$179.27	\$190.03	\$201.43	\$213.52	\$226.33	\$239.91	\$254.30	\$269.56	\$285.74	
\$ Change Per Quarter		6.43	10.15	10.76	11.40	12.09	12.81	13.58	14.39	15.26	16.17	
Cumulative \$ Change per Quarter		6.43	16.57	27.33	38.73	50.82	63.63	77.21	91.60	106.86	123.04	
<b>Cash Reserves</b>												
<b>Operating Reserve</b>												
<b>Beginning Balance</b>	<b>\$1,899,036</b>	<b>\$1,976,553</b>	<b>\$1,976,553</b>	<b>\$2,007,761</b>	<b>\$2,160,803</b>	<b>\$2,329,680</b>	<b>\$2,454,614</b>	<b>\$2,571,277</b>	<b>\$2,661,659</b>	<b>\$2,793,287</b>	<b>\$2,901,548</b>	
Plus: Additions	77,517	0	31,208	153,042	168,877	124,934	116,663	90,382	131,629	108,261	103,911	
Less: Uses of Funds	0	0	0	0	0	0	0	0	0	0	0	
<b>Ending Balance</b>	<b>\$1,976,553</b>	<b>\$1,976,553</b>	<b>\$2,007,761</b>	<b>\$2,160,803</b>	<b>\$2,329,680</b>	<b>\$2,454,614</b>	<b>\$2,571,277</b>	<b>\$2,661,659</b>	<b>\$2,793,287</b>	<b>\$2,901,548</b>	<b>\$3,005,460</b>	
Target Balance (90 Days O&M)	\$1,967,725	\$1,976,553	\$2,007,761	\$2,160,803	\$2,329,680	\$2,454,614	\$2,571,277	\$2,661,659	\$2,793,287	\$2,901,548	\$3,005,460	
<b>Capital Reserve</b>												
<b>Beginning Balance</b>	<b>\$7,250,652</b>	<b>\$8,114,679</b>	<b>\$9,776,458</b>	<b>\$8,706,628</b>	<b>\$8,644,492</b>	<b>\$9,012,831</b>	<b>\$8,895,063</b>	<b>\$7,242,155</b>	<b>\$9,050,003</b>	<b>\$9,436,007</b>	<b>\$9,884,991</b>	
Plus: Additions	864,027	1,661,779	0	0	368,339	0	0	1,807,847	386,005	448,984	0	
Less: Uses of Funds	0	0	(1,069,830)	(62,136)	0	(117,768)	(1,652,908)	0	0	0	(1,937,198)	
<b>Ending Balance</b>	<b>\$8,114,679</b>	<b>\$9,776,458</b>	<b>\$8,706,628</b>	<b>\$8,644,492</b>	<b>\$9,012,831</b>	<b>\$8,895,063</b>	<b>\$7,242,155</b>	<b>\$9,050,003</b>	<b>\$9,436,007</b>	<b>\$9,884,991</b>	<b>\$7,947,793</b>	
Target Balance: Average Annual Capital Improv.	<b>\$8,055,445</b>	<b>\$8,273,000</b>	<b>\$8,496,000</b>	<b>\$8,725,000</b>	<b>\$8,961,000</b>	<b>\$9,203,000</b>	<b>\$9,451,000</b>	<b>\$9,706,000</b>	<b>\$9,968,000</b>	<b>\$10,237,000</b>	<b>\$10,513,000</b>	2.7% / Yr. Growth
	<b>\$864,027</b>	<b>\$1,661,779</b>	<b>(\$1,069,830)</b>	<b>(\$62,136)</b>	<b>\$368,339</b>	<b>(\$117,768)</b>	<b>(\$1,652,908)</b>	<b>\$1,807,847</b>	<b>\$386,005</b>	<b>\$448,984</b>	<b>(\$1,937,198)</b>	
<b>Rate Stabilization</b>												
<b>Beginning Balance</b>	<b>\$1,080,618</b>	<b>\$1,089,154</b>	<b>\$1,152,173</b>	<b>\$1,085,799</b>	<b>\$1,173,237</b>	<b>\$831,160</b>	<b>\$929,531</b>	<b>\$1,033,926</b>	<b>\$1,144,712</b>	<b>\$1,262,282</b>	<b>\$1,387,327</b>	
Plus: Additions	8,536	63,019	0	87,438	0	98,371	104,394	110,787	117,570	125,045	132,718	
Less: Uses of Funds	0	0	(66,374)	0	(342,077)	0	0	0	0	0	0	
<b>Ending Balance</b>	<b>\$1,089,154</b>	<b>\$1,152,173</b>	<b>\$1,085,799</b>	<b>\$1,173,237</b>	<b>\$831,160</b>	<b>\$929,531</b>	<b>\$1,033,926</b>	<b>\$1,144,712</b>	<b>\$1,262,282</b>	<b>\$1,387,327</b>	<b>\$1,520,045</b>	
Target Balance: (?)	1,089,154	1,152,173	1,085,799	1,173,237	831,160	929,531	1,033,926	1,144,712	1,262,282	1,387,327	1,520,045	
<b>Debt Reserve</b>												
<b>Beginning Balance</b>	<b>\$181,182</b>	<b>\$184,819</b>	<b>\$340,161</b>	<b>\$340,161</b>	<b>\$774,933</b>	<b>\$774,933</b>	<b>\$774,933</b>	<b>\$774,933</b>	<b>\$774,933</b>	<b>\$774,933</b>	<b>\$774,933</b>	
Plus: Additions	3,637	155,342	0	434,772	0	0	0	0	0	0	0	
Less: Uses of Funds	0	0	0	0	0	0	0	0	0	0	0	
<b>Ending Balance</b>	<b>\$184,819</b>	<b>\$340,161</b>	<b>\$340,161</b>	<b>\$774,933</b>	<b>\$774,933</b>	<b>\$774,933</b>	<b>\$774,933</b>	<b>\$774,933</b>	<b>\$774,933</b>	<b>\$774,933</b>	<b>\$774,933</b>	

South Tahoe PUD  
Water Utility  
Revenue Requirement  
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Fire Flow - 6%

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	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Notes
<b>Engineering</b>												
Regular Salaries - Wages	\$788,850	\$832,828	\$857,813	\$883,548	\$910,054	\$937,356	\$965,476	\$994,441	\$1,024,274	\$1,055,002	\$1,086,652	
Wages Overtime	30,500	32,200	33,166	34,161	35,186	36,242	37,329	38,449	39,602	40,790	42,014	
Wages Double Time	1,000	1,056	1,087	1,120	1,154	1,188	1,224	1,261	1,298	1,337	1,378	
Wages - Part Time	0	0	0	0	0	0	0	0	0	0	0	
Wages - Part Time Overtime	0	0	0	0	0	0	0	0	0	0	0	
FICA Taxes	57,700	61,508	63,969	66,527	69,188	71,956	74,834	77,827	80,941	84,178	87,545	
Dental Self Insured	11,100	11,833	12,306	12,798	13,310	13,842	14,396	14,972	15,571	16,194	16,841	
Vision	1,850	1,972	2,051	2,133	2,218	2,307	2,399	2,495	2,595	2,699	2,807	
Retirement Health Savings Account	11,975	12,765	13,276	13,807	14,359	14,934	15,531	16,152	16,798	17,470	18,169	
Workers Compensation	2,800	2,985	3,104	3,228	3,357	3,492	3,631	3,777	3,928	4,085	4,248	
Uniforms	475	506	527	548	570	592	616	641	666	693	721	
Health Savings Account - ER Portion	10,850	11,566	12,029	12,510	13,010	13,531	14,072	14,635	15,220	15,829	16,462	
ACWA Medical Insurance	140,200	149,453	155,431	161,649	168,115	174,839	181,833	189,106	196,670	204,537	212,719	
Life Insurance	2,000	2,132	2,217	2,306	2,398	2,494	2,594	2,698	2,806	2,918	3,035	
Long Term Disability - Management	2,925	3,118	3,243	3,372	3,507	3,648	3,794	3,945	4,103	4,267	4,438	
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	
Long Term Disability - Union	775	826	859	894	929	966	1,005	1,045	1,087	1,131	1,176	
CalPERS Classic ER Contribution	92,825	98,951	102,910	107,026	111,307	115,759	120,390	125,205	130,213	135,422	140,839	
CalPERS PEPRA ER Contribution	15,625	16,656	17,323	18,015	18,736	19,485	20,265	21,075	21,918	22,795	23,707	
Health Savings Account Administrative fee - ER	150	160	166	173	180	187	195	202	210	219	228	
Contractual Services	793,000	480,072	489,673	499,467	509,456	519,645	530,038	540,639	551,452	562,481	573,730	
Mapping	2,500	1,513	1,544	1,575	1,606	1,638	1,671	1,704	1,738	1,773	1,809	
Legal - Special Projects	50,000	30,269	30,875	31,492	32,122	32,765	33,420	34,088	34,770	35,465	36,175	
Legal - Regular	3,000	1,816	1,852	1,890	1,927	1,966	2,005	2,045	2,086	2,128	2,170	
Gasoline Expense	5,300	3,209	3,273	3,338	3,405	3,473	3,542	3,613	3,686	3,759	3,835	
Postage Expenses	175	106	108	110	112	115	117	119	122	124	127	
Office Supplies	6,050	3,663	3,736	3,811	3,887	3,965	4,044	4,125	4,207	4,291	4,377	
Subscription Expense	100	61	62	63	64	66	67	68	70	71	72	
Ads-Legal Notices	125	76	77	79	80	82	84	85	87	89	90	
Office Equipment Repair	1,000	605	617	630	642	655	668	682	695	709	723	
Service Contracts	1,100	666	679	693	707	721	735	750	765	780	796	
Grounds & Maintenance	100	61	62	63	64	66	67	68	70	71	72	
Wells	120,000	72,646	74,099	75,581	77,093	78,635	80,208	81,812	83,448	85,117	86,819	
Shop Supplies	500	303	309	315	321	328	334	341	348	355	362	
Safety Equipment - Physicals	1,500	908	926	945	964	983	1,003	1,023	1,043	1,064	1,085	
Travel - Meetings - Education	17,000	10,292	10,497	10,707	10,922	11,140	11,363	11,590	11,822	12,058	12,299	
Dues - Memberships - Certification	1,800	1,090	1,111	1,134	1,156	1,180	1,203	1,227	1,252	1,277	1,302	
Telephone	2,500	1,513	1,544	1,575	1,606	1,638	1,671	1,704	1,738	1,773	1,809	
Supplies	625	378	386	394	402	410	418	426	435	443	452	
Regulatory Operating Permits	3,475	2,104	2,146	2,189	2,232	2,277	2,323	2,369	2,417	2,465	2,514	
<b>Total Engineering</b>	<b>\$2,181,450</b>	<b>\$1,851,867</b>	<b>\$1,905,054</b>	<b>\$1,959,864</b>	<b>\$2,016,349</b>	<b>\$2,074,564</b>	<b>\$2,134,564</b>	<b>\$2,196,406</b>	<b>\$2,260,151</b>	<b>\$2,325,861</b>	<b>\$2,393,598</b>	



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Fire Flow - 6%

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	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Notes
<b>Baseline Capital Plan</b>												
Year 2 Ponderosa WL	\$175,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Sierra Blvd Imp	0	400,000	0	0	0	0	0	0	0	0	0	
Year 1 Marlette WL	750,000	0	0	0	0	0	0	0	0	0	0	
Year 2 Marlette WL	0	750,000	0	0	0	0	0	0	0	0	0	
Year 1 Keller/Heavenly	2,045,837	0	0	0	0	0	0	0	0	0	0	
Year 2 Keller/Heavenly	0	1,750,000	0	0	0	0	0	0	0	0	0	
Year 3 Keller/Heavenly	0	0	1,550,000	0	0	0	0	0	0	0	0	
Year 2 Meters III	1,000,000	0	0	0	0	0	0	0	0	0	0	
Year 1 Meters IV	2,110,000	0	0	0	0	0	0	0	0	0	0	
Year 2 Meters IV	0	2,110,000	0	0	0	0	0	0	0	0	0	
Year 1 Meters Va	0	2,110,000	0	0	0	0	0	0	0	0	0	
Year 2 Meters Va	0	0	2,110,000	0	0	0	0	0	0	0	0	
Year 1 Meters Vb	0	0	680,000	0	0	0	0	0	0	0	0	
Year 2 Meters Vb	0	0	0	680,000	0	0	0	0	0	0	0	
<b>Total Baseline Capital Plan</b>	<b>\$6,080,837</b>	<b>\$7,120,000</b>	<b>\$4,340,000</b>	<b>\$680,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	Total
<b>Scenario Capital Outlays</b>	<b>\$2,297,213</b>	<b>\$1,141,350</b>	<b>\$3,817,450</b>	<b>\$7,520,500</b>	<b>\$7,966,650</b>	<b>\$8,102,500</b>	<b>\$7,888,350</b>	<b>\$7,993,000</b>	<b>\$7,800,050</b>	<b>\$7,875,500</b>	<b>\$7,986,500</b>	\$70,389,063
<b>Total Capital Projects &amp; Engineering</b>	<b>10,559,500</b>	<b>10,113,217</b>	<b>10,062,504</b>	<b>10,160,364</b>	<b>9,982,999</b>	<b>10,177,064</b>	<b>10,022,914</b>	<b>10,189,406</b>	<b>10,060,201</b>	<b>10,201,361</b>	<b>10,380,098</b>	\$111,909,627
<b>Transfer to (From) Capital Reserve</b>	<b>\$864,027</b>	<b>\$1,661,779</b>	<b>(\$1,069,830)</b>	<b>(\$62,136)</b>	<b>\$368,339</b>	<b>(\$117,768)</b>	<b>(\$1,652,908)</b>	<b>\$1,807,847</b>	<b>\$386,005</b>	<b>\$448,984</b>	<b>(\$1,937,198)</b>	\$697,141
<b>Debt Service Principal</b>	<b>\$819,000</b>	<b>\$782,000</b>	<b>\$713,584</b>	<b>\$1,028,507</b>	<b>\$1,259,577</b>	<b>\$1,467,314</b>	<b>\$1,725,791</b>	<b>\$1,854,034</b>	<b>\$2,083,019</b>	<b>\$2,302,889</b>	<b>\$2,328,391</b>	\$16,364,105
<b>Capital Spending</b>	<b>\$12,242,527</b>	<b>\$12,556,996</b>	<b>\$9,706,258</b>	<b>\$11,126,735</b>	<b>\$11,610,915</b>	<b>\$11,526,610</b>	<b>\$10,095,796</b>	<b>\$13,851,288</b>	<b>\$12,529,224</b>	<b>\$12,953,233</b>	<b>\$10,771,291</b>	<b>\$128,970,873</b>
<b>Less: Outside Funding Sources</b>												
Operating Reserve	\$4,395,690	\$3,670,996	\$1,100,258	\$4,861,735	\$4,175,415	\$5,157,110	\$5,829,796	\$6,585,288	\$7,263,224	\$8,187,233	\$9,005,291	\$60,232,036
Debt Payment Reserve Fund	0	0	0	0	0	0	0	0	0	0	0	0
Rate Stabilization Reserve Fund	0	0	0	0	0	0	0	0	0	0	0	0
Connection Fees	0	0	0	0	0	0	0	0	0	0	0	0
Assumed Debt Issuance / Proceeds	6,080,837	7,120,000	6,840,000	4,499,000	5,669,500	4,603,500	2,500,000	5,500,000	3,500,000	3,000,000	0	49,312,837
Low Interest Loans	0	0	0	0	0	0	0	0	0	0	0	0
Revenue Bonds	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Funding Sources</b>	<b>\$10,476,527</b>	<b>\$10,790,996</b>	<b>\$7,940,258</b>	<b>\$9,360,735</b>	<b>\$9,844,915</b>	<b>\$9,760,610</b>	<b>\$8,329,796</b>	<b>\$12,085,288</b>	<b>\$10,763,224</b>	<b>\$11,187,233</b>	<b>\$9,005,291</b>	<b>\$109,544,873</b>
<b>Rate Funded Capital</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	<b>\$1,766,000</b>	

South Tahoe PUD  
Water Utility  
Revenue Requirement  
Exhibit 5 - Revenue at Present Rates  
Fire Flow - 6%

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Effective							Effective						Effective						
	July. 1 2016	9/1/2016	12/1/2016	3/1/2017	6/1/2017	Total	July. 1 2017	9/1/2017	12/1/2017	3/1/2018	6/1/2018	Total	July. 1 2018	9/1/2018	12/1/2018	3/1/2019	6/1/2019	Total	
Single Family																			
Fixed Charge	\$ / QTR						\$ / QTR						\$ / QTR						
3/4"	\$125.97	5,948	7,167	7,218	7,221	6,889	\$134.15	7,231	7,648	7,716	7,332	7,482	\$140.90	8,043	8,605	9,166	9,727	8,885	
1"	210.37	85	103	75	89	88	224.03	109	116	96	483	201	235.20	201	201	201	201	201	
1 1/2"	419.48	9	7	7	7	8	446.72	16	16	16	45	23	469.10	23	23	23	23	23	
2"	671.42	0	0	0	0	0	715.02	1	1	1	23	7	750.80	7	7	7	7	7	
3"	1,259.70	1	1	1	1	1	1,341.50	1	1	1	1	1	1,408.70	1	1	1	1	1	
Total		6,043	7,278	7,301	7,318	6,985		7,358	7,782	7,830	7,884	7,714		8,275	8,836	9,398	9,959	9,117	
Flat Rate	\$147.70	6,280	5,039	5,017	5,010	5,337	\$157.29	4,993	4,576	4,532	4,491	4,648	\$165.20	3,930	3,368	2,807	2,246	3,088	
Commodity Charge																			
Flat Rate Consumptic	\$0.00	279,709	76,191	73,098	92,347	521,344	\$0.00	222,066	75,927	57,514	87,835	443,343	\$0.00	174,772	55,887	35,621	43,918	310,198	
0 - 45 CCF	\$0.98	157,629	99,301	91,480	99,564	447,974	\$1.04	184,657	114,733	90,461	113,860	503,711	\$1.09	207,666	130,276	108,572	143,827	590,342	
45 + CCF	1.47	111,524	10,744	14,896	35,325	172,489	1.56	142,594	14,389	8,907	40,336	206,226	1.64	160,363	16,338	10,690	50,952	238,344	
Total		548,862	186,236	179,474	227,236	1,141,807		549,317	205,049	156,882	242,031	1,153,280		542,802	202,502	154,883	238,697	1,138,884	
Revenues																			
CARE	(\$4,254)		(\$3,190)	(\$3,190)	(\$3,398)	(\$9,778)		(\$3,429)	(\$3,335)	(\$3,303)	(\$3,403)	(\$13,470)		(\$3,602)	(\$3,503)	(\$3,470)	(\$3,574)	(\$14,148)	
CARE75	(2,835)		(3,805)	(3,805)	(4,053)	(11,663)		(4,133)	(4,455)	(4,549)	(4,861)	(17,999)		(4,341)	(4,680)	(4,778)	(5,106)	(18,905)	
CARE55	(1,194)		(387)		(421)	(649)		(1,720)	(360)	(412)	(774)	(3,267)		(1,803)	(377)	(432)	(812)	(3,424)	
Flat Rate	927,525	744,236	740,986	739,953	3,152,700	3,152,700	785,328	719,740	712,820	706,371	2,924,259	2,924,259	649,174	556,435	463,696	370,957	2,040,261		
Fixed Charge	772,186	928,691	929,225	932,548	3,562,651	3,562,651	1,003,662	1,061,171	1,065,812	1,129,684	4,260,329	4,260,329	1,197,747	1,276,845	1,355,942	1,435,040	5,265,574		
Commodity Charge	318,417	113,108	111,548	149,501	692,573	692,573	414,490	141,769	107,974	181,339	845,572	845,572	489,352	168,796	135,875	240,333	1,034,356		
Total Revenues		\$2,009,845	\$1,778,653	\$1,774,343	\$1,813,902	\$7,376,744		\$2,194,198	\$1,914,530	\$1,878,341	\$2,008,355	\$7,995,424		\$2,326,527	\$1,993,516	\$1,946,834	\$2,036,838	\$8,303,715	

South Tahoe PUD  
Water Utility  
Revenue Requirement  
Exhibit 5 - Revenue at Present Rates  
Fire Flow - 6%

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Effective							Effective						Effective						
	July. 1 2016	9/1/2016	12/1/2016	3/1/2017	6/1/2017	Total	July. 1 2017	9/1/2017	12/1/2017	3/1/2018	6/1/2018	Total	July. 1 2018	9/1/2018	12/1/2018	3/1/2019	6/1/2019	Total	
Multifamily																			
Fixed Charge	\$ / QTR						\$ / QTR						\$ / QTR						
5/8"	\$125.97	0	0	0	0	0	\$134.15	0	0	0	2	1	\$140.90	1	1	1	1	1	
3/4"	125.97	170	174	175	177	174	134.15	189	199	199	199	197	140.90	201	203	205	208	208	
1"	210.37	349	355	355	355	354	224.03	347	404	461	459	418	235.20	502	545	588	631	631	
1.5"	419.48	81	83	83	83	83	446.72	83	83	83	83	83	469.10	70	70	70	70	70	
2"	671.42	33	35	35	35	35	715.02	35	35	35	35	35	750.80	31	31	31	31	31	
3"	1,259.70	7	7	7	7	7	1,341.50	7	7	7	7	7	1,408.70	7	7	7	7	7	
4"	2,099.92	6	6	6	6	6	2,236.28	6	6	6	6	6	2,348.20	9	9	9	9	9	
6"	4,197.32	0	0	0	0	0	4,469.88	0	0	0	0	0	4,694.90	0	0	0	0	0	
8"	6,716.72	0	0	0	0	0	7,152.88	0	0	0	0	0	7,512.20	0	0	0	0	0	
10"	9,655.60	0	0	0	0	0	10,282.60	0	0	0	0	0	10,799.90	0	0	0	0	0	
Total		646	660	661	663	658		667	734	791	791	746		821	866	911	956	889	
Calc. Meter Equiv. Units		1,368	1,400	1,401	1,403			1,401	1,507	1,602	1,600			1,659	1,732	1,806	1,880		
Unmetered Duplex	\$262.58	159	149	150	123		\$279.63	138	80	21	17		\$293.70	15	13	11	9	9	
Unmetered Triplex	356.72	170	168	167	179		379.89	174	174	174	169		399.00	148	127	106	85	85	
Unmetered Four-Plex	461.50	154	153	152	171		491.47	157	150	150	154		516.20	135	115	96	77	77	
Add'l Unit	77.33	30	29	27	21		82.36	20	20	20	20		86.50	18	15	13	10	10	
Calc. Equiv. Flat Units		715	700	696	718			701	631	572	566			496	425	354	283		
Dwelling Units		3,703	3,723	3,718	3,773			3,729	3,756	3,793	3,784			3,731	3,704	3,677	3,649	5,390	
		1,129	1,130	1,130	1,136			1,136	1,138	1,136	1,131			1,119	1,121	1,124	1,126		
Commodity Charge	\$ / CCF						\$ / CCF						\$ / CCF						
Flat Rate Consumptic	\$0.00	37,591	24,603	23,921	25,869	111,984	\$0.00	36,428	20,239	16,657	19,761	93,085	\$0.00	25,761	13,624	10,307	9,881	59,572	
All Use	\$1.38	71,939	49,229	48,129	50,543	219,840	\$1.46	72,844	48,319	46,639	55,839	223,641	1.53	86,211	55,557	52,586	65,584	259,938	
Total		109,530	73,832	72,050	76,412	331,824		109,272	68,558	63,296	75,600	316,726		111,971	69,181	62,893	75,464	319,510	
Calculated Revenues																			
CARE DU	(\$53)	(\$53)	(\$53)	(\$56)	(\$161)		(\$56)	(\$84)	(\$56)	(\$88)	(\$284)		(\$59)	(\$88)	(\$59)	(\$93)	(\$298)		
CARE1	(98)	(119)	(119)	(127)	(365)		(172)	(172)	(172)	(180)	(695)		(180)	(180)	(180)	(189)	(730)		
CARE15	(42)	(42)	(42)	(42)	(125)		(45)	(45)	(45)	(47)	(181)		(47)	(47)	(47)	(49)	(190)		
Flat Rate	175,774	171,896	171,185	176,681	695,535		183,507	163,827	147,329	146,277	640,940		134,432	115,228	96,023	76,818	422,502		
Fixed Charge	172,386	176,334	176,460	176,712	701,892		188,004	202,116	214,885	214,706	819,711		233,627	244,011	254,394	264,778	996,809		
Commodity Charge	99,276	67,936	66,418	69,749	303,379		106,352	70,546	68,093	81,525	326,516		131,903	85,003	80,456	100,343	397,704		
Total Revenues	\$447,243	\$415,952	\$413,850	\$422,918	\$1,699,963		\$477,591	\$436,188	\$430,035	\$442,192	\$1,786,007		\$499,676	\$443,926	\$430,587	\$441,608	\$1,815,798		

South Tahoe PUD  
Water Utility  
Revenue Requirement  
Exhibit 5 - Revenue at Present Rates  
Fire Flow - 6%

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Effective							Effective						Effective						
	July. 1 2016	9/1/2016	12/1/2016	3/1/2017	6/1/2017	Total	July. 1 2017	9/1/2017	12/1/2017	3/1/2018	6/1/2018	Total	July. 1 2018	9/1/2018	12/1/2018	3/1/2019	6/1/2019	Total	
Commercial																			
Fixed Charge	\$ / QTR						\$ / QTR						\$ / QTR						
5/8"	\$125.97	2	0	0	0	1	\$134.15	0	0	0	35	9	\$140.90	20	30	41	52	36	
3/4"	125.97	92	91	93	96	93	134.15	95	84	83	12	69	140.90	23	34	44	55	39	
1"	210.37	165	167	167	172	168	224.03	174	179	178	185	179	235.20	179	179	179	179	179	
1.5"	419.48	85	84	81	86	84	446.72	87	88	85	96	89	469.10	96	96	96	96	96	
2"	671.42	132	133	133	134	133	715.02	137	140	138	150	141	750.80	141	141	141	141	141	
3"	1,259.70	16	16	16	18	17	1,341.50	17	18	24	21	20	1,408.70	20	20	20	20	20	
4"	2,099.92	19	19	19	19	19	2,236.28	19	19	19	25	21	2,348.20	21	21	21	21	21	
6"	4,197.32	7	6	6	6	6	4,469.88	7	7	7	13	9	4,694.90	9	9	9	9	9	
8"	6,716.72	9	9	10	9	9	7,152.88	10	11	11	10	11	7,512.20	11	11	11	11	11	
10"	9,655.60	1	1	1	1	1	10,282.60	1	1	1	1	1	10,799.90	1	1	1	1	1	
Total		545	544	542	545			547	547	546	548	547		520	542	563	585	553	
Calc. Meter Equv. Units		2,623	2,592	2,637	2,637			2,735	2,815	2,852	3,145			2,926	2,947	2,969	2,990		
Unmetered 3/4" Service	\$224.76	100	99	99	98		\$239.36	97	96	96	86		\$251.40	75	65	54	43	59	
Commodity Charge	\$ / CCF						\$ / CCF						\$ / CCF						
Flat Rate Consumptic	\$0.00	7,713	4,766	4,358	3,871	20,709	\$0.00	6,967	3,952	4,405	3,068	18,392	\$0.00	5,405	2,655	2,466	1,534	12,060	
All Use	\$1.37	202,288	124,780	116,073	104,171	547,312	\$1.45	196,463	115,896	130,868	112,177	555,404	1.52	210,123	121,318	136,215	106,652	574,308	
Total		210,001	129,546	120,431	108,042	568,021		203,430	119,848	135,273	115,245	573,796		215,528	123,973	138,681	108,186	586,368	
								72						72					
Revenues																			
Flat Rate Revenue		22,476	22,251	22,251	22,027	\$89,005		23,218	22,978	22,978	20,585	\$89,759		18,918	16,215	13,513	10,810	\$59,456	
Fixed Charge		\$330,376	\$326,474	\$332,184	\$332,185	\$1,321,220		\$366,943	\$377,674	\$382,595	\$421,887	\$1,549,099		\$412,125	\$415,154	\$418,183	\$421,213	\$1,666,675	
Commodity Charge		277,135	170,949	168,306	151,048	767,437		284,871	168,049	189,759	162,657	805,336		319,387	184,403	207,046	162,112	872,948	
Total Revenues		\$629,987	\$519,674	\$522,741	\$505,260	\$2,177,662		\$675,032	\$568,701	\$595,331	\$605,128	\$2,444,193		\$750,430	\$615,772	\$638,742	\$594,135	\$2,599,079	

South Tahoe PUD  
Customer Data Projection  
Revenue Requirement  
Exhibit 6 - Customer Data  
Fire Flow - 6%

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		Input	Projected										
July. 1 2018		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Notes
Single Family													
Fixed Charge													
3/4"	\$140.90	8,885	11,131	11,989	12,007	12,025	12,043	12,061	12,079	12,097	12,115	12,133	As Residential
1"	\$235.20	201	201	201	201	201	201	201	201	201	201	201	As Residential
1 1/2"	\$469.10	23	23	23	23	23	23	23	23	23	23	23	As Residential
2"	\$750.80	7	7	7	7	7	7	7	7	7	7	7	As Residential
3"	\$1,408.70	1	1	1	1	1	1	1	1	1	1	1	As Residential
Unmetered	\$165.20	3,088	842	0	0	0	0	0	0	0	1	2	As Residential
Total Single Family Cust.		12,205	12,205	12,221	12,239	12,257	12,275	12,293	12,311	12,329	12,348	12,367	
Equivalent Meters		12,963	12,576	12,448	12,466	12,484	12,502	12,520	12,538	12,556	12,576	12,595	
Commodity Charge													
0 - 45 CCF	\$1.09	590,342	722,999	822,914	824,149	825,385	826,623	827,863	829,105	830,349	831,595	832,842	As Consumption
45 + CCF	\$1.64	238,344	278,486	278,904	279,322	279,741	280,161	280,581	281,002	281,424	281,846	282,269	As Consumption
Unmetered	\$0.00	310,198	98,831	0	0	0	0	0	0	0	1	2	As Consumption
		1,138,884	1,100,316	1,101,818	1,103,471	1,105,126	1,106,784	1,108,444	1,110,107	1,111,773	1,113,442	1,115,113	
			29.34207264										
Multifamily													
Fixed Charge													
5/8"	\$140.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	As Multifamily
3/4"	\$140.90	208	208	208	208	208	208	208	208	208	208	208	As Multifamily
1"	\$235.20	631	631	632	633	634	635	636	637	638	639	640	As Multifamily
1.5"	\$469.10	70	176	245	245	245	245	245	245	245	245	245	As Multifamily
2"	\$750.80	31	31	31	31	31	31	31	31	31	31	31	As Multifamily
3"	\$1,408.70	7	7	7	7	7	7	7	7	7	7	7	As Multifamily
4"	\$2,348.20	9	9	9	9	9	9	9	9	9	9	9	As Multifamily
6"	\$4,694.90	0	1	1	1	1	1	1	1	1	1	1	As Multifamily
8"	\$7,512.20	0	1	1	1	1	1	1	1	1	1	1	As Multifamily
10"	\$10,799.90	0	0	0	0	0	0	0	0	0	0	0	As Multifamily
Unmetered Duplex	\$293.70	9	3	0	0	0	0	0	0	0	0	0	
Unmetered Triplex	\$399.00	85	32	0	0	0	0	0	0	0	0	0	
Unmetered Four-Plex	\$516.20	77	29	0	0	0	0	0	0	0	0	0	
Add'l Units	\$86.50	10	4	0	0	0	0	0	0	0	0	0	
Total Multifamily Cust.		1,136	1,133	1,135	1,136	1,137	1,138	1,139	1,140	1,141	1,142	1,143	
Dwelling Units		5,390	5,398	5,406	5,414	5,422	5,430	5,438	5,446	5,454	5,462	5,470	As Multifamily
Commodity Charge													
All Use	1.53	259,938	335,377	353,523	354,053	354,584	355,116	355,649	356,182	356,716	357,251	357,787	As Consumption
Unmetered	\$0.00	59,572	17,643	0	0	0	0	0	0	0	0	0	As Consumption
		319,510	353,020	353,523	354,053	354,584	355,116	355,649	356,182	356,716	357,251	357,787	

South Tahoe PUD  
Customer Data Projection  
Revenue Requirement  
Exhibit 6 - Customer Data  
Fire Flow - 6%

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		Input	Projected										Notes
July. 1 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029		
Commercial													
Fixed Charge													
5/8"	\$140.90	36	35	35	35	35	35	35	35	35	35	35	As Commercial
3/4"	\$140.90	39	82	98	98	98	98	98	98	98	98	98	As Commercial
1"	\$235.20	179	179	179	179	179	179	179	179	179	179	179	As Commercial
1.5"	\$469.10	96	96	96	96	96	96	96	96	96	96	96	As Commercial
2"	\$750.80	141	141	141	141	141	141	141	141	141	141	141	As Commercial
3"	\$1,408.70	20	20	20	20	20	20	20	20	20	20	20	As Commercial
4"	\$2,348.20	21	21	21	21	21	21	21	21	21	21	21	As Commercial
6"	\$4,694.90	9	9	9	9	9	9	9	9	9	9	9	As Commercial
8"	\$7,512.20	11	11	11	11	11	11	11	11	11	11	11	As Commercial
10"	\$10,799.90	1	1	1	1	1	1	1	1	1	1	1	As Commercial
Unmetered	\$251.40	59	16	0	0	0	0	0	0	0	1	2	
Total Commercial Cust.		612	611	611	611	611	611	611	611	611	612	613	
Commodity Charge													
All Usage	1.52	574,308	583,110	587,679	588,560	589,443	590,327	591,212	592,099	592,987	593,876	594,767	As Consumption
15 Unmetered	\$0.00	12,060	3,695										
		586,368	586,804	587,679	588,560	589,443	590,327	591,212	592,099	592,987	593,876	594,767	
Calculated Water Rate Revenue													
Fixed													
Single Family		\$7,305,836	\$7,087,573	\$7,015,951	\$7,026,060	\$7,036,205	\$7,046,350	\$7,056,495	\$7,066,640	\$7,076,784	\$7,087,590	\$7,098,396	
Multifamily		1,366,385	1,423,287	1,437,064	1,438,943	1,439,884	1,440,825	1,441,766	1,442,706	1,443,647	1,444,588	1,445,529	
Commercial		1,726,131	1,706,772	1,699,716	1,699,645	1,699,645	1,699,645	1,699,645	1,699,645	1,699,645	1,700,651	1,701,656	
		\$10,398,351	\$10,217,632	\$10,152,731	\$10,164,649	\$10,175,734	\$10,186,820	\$10,197,906	\$10,208,991	\$10,220,077	\$10,232,829	\$10,245,581	
Consumption Charge													
Single Family		\$1,034,356	\$1,244,786	\$1,354,379	\$1,356,410	\$1,358,445	\$1,360,483	\$1,362,524	\$1,364,568	\$1,366,616	\$1,368,666	\$1,370,719	
Multifamily		397,704	513,127	540,890	541,701	542,514	543,327	544,143	544,958	545,775	546,594	547,414	
Commercial		872,948	886,327	893,272	894,611	895,953	897,297	898,642	899,990	901,340	902,692	904,046	
		\$2,305,009	\$2,644,239	\$2,788,541	\$2,792,723	\$2,796,912	\$2,801,108	\$2,805,309	\$2,809,517	\$2,813,731	\$2,817,952	\$2,822,179	
			14.7%	5.5%	0.1%	0.1%	0.2%	0.1%	0.1%	0.2%	0.1%	0.2%	
Total Revenue													
Single Family		\$8,340,192	\$8,332,359	\$8,370,330	\$8,382,471	\$8,394,650	\$8,406,833	\$8,419,018	\$8,431,207	\$8,443,400	\$8,456,256	\$8,469,115	
Multifamily		1,764,089	1,936,414	1,977,954	1,980,644	1,982,398	1,984,152	1,985,909	1,987,665	1,989,423	1,991,182	1,992,943	
Commercial		2,599,079	2,593,099	2,592,987	2,594,256	2,595,599	2,596,942	2,598,287	2,599,636	2,600,985	2,603,342	2,605,702	
		\$12,703,360	\$12,861,872	\$12,941,272	\$12,957,372	\$12,972,646	\$12,987,928	\$13,003,214	\$13,018,508	\$13,033,808	\$13,050,780	\$13,067,760	

South Tahoe PUD  
Water Utility  
Development of Distribution Factors  
Exhibit 7 - Commodity & Capacity

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	<i>Commodity</i>				<i>Capacity - Supply</i>			<i>Capacity - Distribution</i>	
	Water (CCF)	12.0% Losses <sup>[1]</sup>	Water Flow (MGD)	% of Total	Peaking <sup>[2]</sup> Factor	Peak Day Use (MGD)	% of Total	Equiv. Meters	% of Total
<b>Single Family</b>									
Tier 1	821,830	98,620	1.89	40.3%	1.69	3.18	35.4%	12,430	69.4%
Tier 2	278,486	33,418	0.64	13.7%	3.23	2.06	23.0%	0.00	0.0%
<b>Multifamily</b>	353,020	42,362	0.81	17.3%	1.68	1.36	15.2%	2,465	13.8%
<b>Commercial</b>	586,804	70,417	1.35	28.8%	1.76	2.37	26.4%	3,016	16.8%
<b>Total</b>	<b>2,040,141</b>	<b>244,817</b>	<b>4.68</b>	<b>100.0%</b>	<b>1.92</b>	<b>8.98</b>	<b>100.0%</b>	<b>17,911</b>	<b>100.0%</b>
	<b>Actual Production <sup>[3]</sup></b>		<b>5.02</b>		<b>Actual Peak <sup>[4]</sup></b>		<b>9.30</b>		
<i>Allocation Factor</i>				<i>(COM)</i>			<i>(CAP-S)</i>		<i>(CAP-D)</i>

**Notes**

- [1] Page 2-15, 2012 Water System Optimization Plan (estimated but unknown) plus unmetered sales  
[2] \*peak factors were based on customers who had consumption in all 4 quarters in a year to factor out any affect of the Districts Metering project  
[3] W-18, W-19 Water Flow Data.xls 2017 Average Consumption  
[4] W-18, W-19 Water Flow Data.xls 2017 July Peak Month

South Tahoe PUD  
Water Utility  
Development of Distribution Factors  
Exhibit 8 - Customer

Page 2 of 3

	<i>Actual Customer</i>		<i>Dwelling Units</i>		<i>Customer Service &amp; Accounting</i>			<i>Meters &amp; Services</i>	
	Number of Billing Units	% of Total	Number of Units	% of Total	Weighting Factor	Weighted Customer	% of Total	Equiv. Meters	% of Total
Single Family	12,205	87.5%	12,205	67.0%	1.00	12,205	87.5%	12,430	69.4%
Multifamily	1,133	8.1%	5,398	29.6%	1.00	1,133	8.1%	2,465	13.8%
Commercial	611	4.4%	611	3.4%	1.00	611	4.4%	3,016	16.8%
<b>Total</b>	<b>13,948</b>	<b>100.0%</b>	<b>18,214</b>	<b>100.0%</b>		<b>13,948</b>	<b>100.0%</b>	<b>17,911</b>	<b>100.0%</b>

Allocation Factor

(AC)

(DU)

(WCA)

(WCMS)



South Tahoe PUD  
Water Utility  
Development of Distribution Factors  
Exhibit 9 - Fire Protection & Revenue Allocation

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	<i>Fire Protection</i>					<i>Revenue Related</i>	
	Equivalent	Fire Prot. Requirmt's	Duration	Total PFP Requirements	% of	FY 2020 Revenue at	% of
	Units	(gals/min) <sup>[1]</sup>	(minutes) <sup>[1]</sup>	(1,000 g/min)	Total	Present Rates	Total
Single Family	12,430	1,000	90	1,118,728	69.4%	\$8,332,359	64.8%
Multifamily	2,465	1,000	90	221,849	13.8%	\$1,936,414	15.1%
Commercial	3,016	1,000	90	271,412	16.8%	\$2,593,099	20.2%
	<b>17,911</b>			<b>1,611,989</b>	<b>100.0%</b>	<b>\$12,861,872</b>	<b>100.0%</b>
<i>Allocation Factor</i>					<i>(FP)</i>		<i>(RR)</i>

South Tahoe PUD  
Water Utility  
Development of Distribution Factors  
Exhibit 10 - Distribution Main Analysis

Page 1 of 1

Distribution Storage				Distribution Main Analysis			
	hrs	gpm	Total	Main Size	Length (ft)	Replcmt \$ <sup>[2]</sup>	Total
Fire Flow Requirements	2	1,000	90,000 ( a )	3/4"	904	\$20.00	\$18,089
				1"	8,712	26.00	226,518
Storage Capacity <sup>[1]</sup>			9,421,440 ( b )	1.5"	8,439	38.00	320,669
				2"	51,068	50.00	2,553,413
<b>Public Fire Protection</b>			1.0% <b>(FP)</b>	2.5"	346	63.00	21,797
( a ) / ( b ) = FP%				3"	2,739	75.00	205,422
				4"	142,589	99.00	14,116,327
<b>Capacity</b>			99.0% <b>(CAP-D)</b>	6"	574,748	147.00	84,488,021
1 - FP% = CAP				8"	327,753	196.00	64,239,627
				10"	74,221	244.00	18,109,984
				12"	68,182	292.00	19,909,154
				14"	24,502	341.00	8,355,233
					<b>1,284,205</b>		<b>\$212,564,255 ( e )</b>
				<b>16" and Greater</b>	37,332	\$438.00	16,351,393
Source of Supply							
<b>Capacity / Commodity</b>				<b>Customer%</b>			
Average Day	4.68 ( c )		52.0% <b>(COM)</b>	( f ) Total @ 2" Equivalent Cost			\$64,210,240
( c ) / ( d ) = COM%				( f ) / ( e ) = Cust.%			<b>30.0% (AC)</b>
Peak Day	8.98 ( d )		48.0% <b>(CAP-S)</b>	<b>Capacity</b>			
1 - ( ( c ) / ( d ) ) = CAP%				( g ) Cost for 4" - 8"			\$162,843,975
				( h ) 10" - 14" @ Equivalent 8" Cost			32,713,464
				( g + h - f ) / ( e ) = CAP%			<b>61.8% (CAP-D)</b>
				<b>Fire Protection</b>			
				1 - CUST.% - CAP% = FP%			<b>8.2% (FP)</b>

Notes

[1] - Sept 2014 - Water System Optimization Plan Table B2 - 6B

[2] - Based on the 2014 Water System Optimization Plan Estimation of Cost

South Tahoe PUD  
Water Utility  
Functionalization and Allocation  
Exhibit 11 - Plant In Service

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	Total Plant  2017 Rplmt	Customer Related										Basis of Classification
		Commodity  (COM)	Supply  (CAP-S)	Capacity - Distribution  (CAP-D)	Actual Customer  (AC)	Dwelling Units  (DU)	Weighted for:		Revenue Related  (RR)	Fire Protection  (FP)	Direct Assign.  (DA)	
							Customer	Meters &				
							Acct/Svcs  (WCA)	Svcs  (WCMS)				
Plant In Service												
Source of Supply	\$14,146,658	\$7,356,262	\$6,790,396	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	52% (COM)/ 48% (CAP-S)
Water Rights	1,668,308	867,520	800,788	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Treatment Plant Facilities	5,216,701	2,712,685	2,504,017	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Pumping Facilities/Force Mains	8,620,301	4,482,557	4,137,744	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Trans & Dist. - All Lines	79,703,025	0	0	49,249,904	0	0	0	23,910,908	0	6,542,214	0	62% (CAP-D)/ 30% (WCMS)/ 8% (FP)
Land & Easement	1,738,432	245,118	226,263	782,933	0	0	0	380,115	0	104,002	0	As Plant Above
Other Land Rights	164,324	23,170	21,387	74,006	0	0	0	35,930	0	9,831	0	As Plant Above
Plant Before General	\$111,257,749	\$15,687,311	\$14,480,595	\$50,106,843	\$0	\$0	\$0	\$24,326,953	\$0	\$6,656,047	\$0	
Construction In progress	1,951,978	275,228	254,057	879,107	0	0	0	426,808	0	116,778	0	as Plant Before General Plant
G&A Equipment	19,494,393	2,748,704	2,537,265	8,779,635	0	0	0	4,262,527	0	1,166,261	0	as Plant Before General Plant
Total Plant	132,704,119	18,711,244	17,271,917	59,765,585	0	0	0	29,016,288	0	7,939,086	0	
Depreciation												
Subsurface Collection Lines	\$3,026,552	0	0	1,870,160	0	0	0	907,966	0	248,427	0	as Transmission/Distribution
Pumping Facilities	2,820,861	1,466,848	1,354,013	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains
General Plant and Admin	7,620,982	1,074,556	991,898	3,432,240	0	0	0	1,666,358	0	455,929	0	as Plant Before General Plant
Treatment Plant	20,466,619	10,642,642	9,823,977	0	0	0	0	0	0	0	0	as Treatment Plant
Source of Supply	7,795,695	4,053,761	3,741,933	0	0	0	0	0	0	0	0	as Source of Supply
Net Plant in Service	\$41,730,707	17,237,807	15,911,822	5,302,400	0	0	0	2,574,324	0	704,355	0	

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Exhibit 12 - Revenue Requirement											
Total Expenses FY 2020	Customer Related										
	Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:		Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
						Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)				
Operations & Maintenance Expenses											
Electric											
Regular Salaries - Wages	\$180,718	\$93,973	\$86,745	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0 52% (COM)/ 48% (CAP-S)
Wages Overtime	3,167	1,647	1,520	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Wages Double Time	53	27	25	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
FICA Taxes	14,068	7,315	6,753	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Dental Self Insured	3,651	1,899	1,753	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Vision	613	319	294	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Retirement Health Savings Account	2,878	1,497	1,382	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Workers Compensation	6,796	3,534	3,262	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Uniforms	933	485	448	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Health Savings Account - ER Portion	3,838	1,996	1,842	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
ACWA Medical Insurance	54,952	28,575	26,377	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Life Insurance	453	236	217	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Long Term Disability - Union	480	249	230	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
CalPERS Classic ER Contribution	17,696	9,202	8,494	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
CalPERS PEPPRA ER Contribution	5,250	2,730	2,520	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Health Savings Account Administrative fee - ER Portion	53	28	26	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Gasoline Expense	2,533	1,317	1,216	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Office Supplies	583	303	280	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Buildings	8,106	4,215	3,891	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Wells	5,066	2,634	2,432	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Pump Stations	42,554	22,128	20,426	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Repair - Maintenance Water Tanks	2,178	1,133	1,046	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Radio Repairs - Replacement	228	119	109	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Shop Supplies	2,660	1,383	1,277	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Small Tools	1,317	685	632	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Safety Equipment - Physicals	2,026	1,054	973	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Travel - Meetings - Education	3,647	1,897	1,751	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Dues - Memberships - Certification	177	92	85	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Telephone	1,013	527	486	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Supplies	456	237	219	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
SCADA RTIJ - Water (Location TBD)	0	0	0	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Total Electric	\$368,143	\$191,434	\$176,708	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

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Exhibit 12 - Revenue Requirement												
	Total Expenses FY 2020	Customer Related										
		Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:		Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
							Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)				
<b>Heavy Maintenance</b>												
Service Contracts	\$4,255	\$2,213	\$2,043	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	52% (COM)/ 48% (CAP-S)
Buildings	14,134	7,350	6,784	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
<b>Total Heavy Maintenance</b>	<b>\$18,389</b>	<b>\$9,562</b>	<b>\$8,827</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
<b>Field Operations</b>												
Regular Salaries - Wages	\$71,026	\$36,933	\$34,092	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	52% (COM)/ 48% (CAP-S)
FICA Taxes	5,332	2,772	2,559	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Dental Self Insured	906	471	435	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Vision	160	83	77	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Retirement Health Savings Account	107	55	51	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Workers Compensation	293	152	141	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
ACWA Medical Insurance	11,833	6,153	5,680	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
life Insurance	187	97	90	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Long Term Disability - Management	426	222	205	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
CalPERS Classic ER Contribution	12,312	6,402	5,910	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Legal-Regular	1,013	527	486	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Gasoline Expense	507	263	243	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Office Supplies	507	263	243	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Safety Equipment - Physicals	101	53	49	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Travel - Meetings - Education	1,520	790	729	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Dues - Memberships - Certification	253	132	122	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Supplies	101	53	49	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Regulatory Operating Permits	80,929	42,083	38,846	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
<b>Total Field Operations</b>	<b>\$187,511</b>	<b>\$97,506</b>	<b>\$90,005</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	

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Exhibit 12 - Revenue Requirement												
Total Expenses FY 2020	Customer Related								Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
	Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:						
						Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)					
<b>Underground Repair</b>												
Regular Salaries - Wages	\$832,960	\$0	\$0	\$514,701	\$0	\$0	\$0	\$249,888	\$0	\$68,371	\$0	as Transmission/Distribution
Wages Overtime	47,509	0	0	29,356	0	0	0	14,253	0	3,900	0	as Transmission/Distribution
Wages Double Time	3,378	0	0	2,088	0	0	0	1,014	0	277	0	as Transmission/Distribution
Wages - Part Time	87,601	0	0	54,130	0	0	0	26,280	0	7,190	0	as Transmission/Distribution
Wages - Part Time Overtime	5,279	0	0	3,262	0	0	0	1,584	0	433	0	as Transmission/Distribution
FICA Taxes	74,721	0	0	46,171	0	0	0	22,416	0	6,133	0	as Transmission/Distribution
Dental Self Insured	18,229	0	0	11,264	0	0	0	5,469	0	1,496	0	as Transmission/Distribution
Vision	3,038	0	0	1,877	0	0	0	911	0	249	0	as Transmission/Distribution
Retirement Health Savings Account	14,338	0	0	8,860	0	0	0	4,301	0	1,177	0	as Transmission/Distribution
Workers Compensation	33,739	0	0	20,848	0	0	0	10,122	0	2,769	0	as Transmission/Distribution
Uniforms	3,198	0	0	1,976	0	0	0	959	0	262	0	as Transmission/Distribution
Health Savings Account - ER Portion	1,386	0	0	856	0	0	0	416	0	114	0	as Transmission/Distribution
ACWA Medical Insurance	271,350	0	0	167,672	0	0	0	81,405	0	22,273	0	as Transmission/Distribution
Life Insurance	2,132	0	0	1,317	0	0	0	640	0	175	0	as Transmission/Distribution
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	as Transmission/Distribution
Long Term Disability - Union	2,185	0	0	1,350	0	0	0	656	0	179	0	as Transmission/Distribution
CalPERS Classic ER Contribution	88,718	0	0	54,820	0	0	0	26,615	0	7,282	0	as Transmission/Distribution
CalPERS PEPPRA ER Contribution	19,614	0	0	12,120	0	0	0	5,884	0	1,610	0	as Transmission/Distribution
Health Savings Account Administrative fee - ER Portion	53	0	0	33	0	0	0	16	0	4	0	as Transmission/Distribution
Contractual Services	0	0	0	0	0	0	0	0	0	0	0	as Transmission/Distribution
Miscellaneous Liability Claims	3,040	0	0	1,878	0	0	0	912	0	249	0	as Transmission/Distribution
Gasoline Expense	14,185	0	0	8,765	0	0	0	4,255	0	1,164	0	as Transmission/Distribution
Diesel	25,330	0	0	15,652	0	0	0	7,599	0	2,079	0	as Transmission/Distribution
Office Supplies	1,013	0	0	626	0	0	0	304	0	83	0	as Transmission/Distribution
Equipment Rental- Lease	507	0	0	313	0	0	0	152	0	42	0	as Transmission/Distribution
Mobile Equipment	507	0	0	313	0	0	0	152	0	42	0	as Transmission/Distribution
Office Equipment Repair	203	0	0	125	0	0	0	61	0	17	0	as Transmission/Distribution
Service Contracts	507	0	0	313	0	0	0	152	0	42	0	as Transmission/Distribution
Caltrans - City - County - Improvements	46,607	0	0	28,799	0	0	0	13,982	0	3,826	0	as Transmission/Distribution
Pipe - Covers & Manholes	354,616	0	0	219,124	0	0	0	106,385	0	29,108	0	as Transmission/Distribution
Radio Repairs - Replacement	1,013	0	0	626	0	0	0	304	0	83	0	as Transmission/Distribution
Shop Supplies	8,612	0	0	5,322	0	0	0	2,584	0	707	0	as Transmission/Distribution
Small Tools	18,744	0	0	11,582	0	0	0	5,623	0	1,539	0	as Transmission/Distribution
Safety Equipment - Physicals	5,066	0	0	3,130	0	0	0	1,520	0	416	0	as Transmission/Distribution
Standby Accomodations	3,040	0	0	1,878	0	0	0	912	0	249	0	as Transmission/Distribution
Travel - Meetings - Education	7,092	0	0	4,382	0	0	0	2,128	0	582	0	as Transmission/Distribution
Dues - Memberships - Certification	2,026	0	0	1,252	0	0	0	608	0	166	0	as Transmission/Distribution
Telephone	3,546	0	0	2,191	0	0	0	1,064	0	291	0	as Transmission/Distribution
Propane	304	0	0	188	0	0	0	91	0	25	0	as Transmission/Distribution
Supplies	507	0	0	313	0	0	0	152	0	42	0	as Transmission/Distribution
Construction & Excavation Permit	30,396	0	0	18,782	0	0	0	9,119	0	2,495	0	as Transmission/Distribution
<b>Total Underground Repair</b>	<b>\$2,036,287</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,258,257</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$610,886</b>	<b>\$0</b>	<b>\$167,143</b>	<b>\$0</b>	

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	Total Expenses FY 2020	Customer Related								Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
		Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:						
							Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)					
<b>Pumps</b>													
Regular Salaries - Wages	\$558,756	\$290,553	\$268,203	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	as Pumping Facilities/Force Mains	
Wages Overtime	12,669	6,588	6,081	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Wages Double Time	4,777	2,484	2,293	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Wages - Part Time	17,605	9,154	8,450	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Wages - Part Time Overtime	0	0	0	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
FICA Taxes	45,424	23,620	21,803	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Dental Self Insured	10,927	5,682	5,245	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Vision	1,839	956	883	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Retirement Health Savings Account	8,608	4,476	4,132	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Workers Compensation	23,452	12,195	11,257	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Uniforms	3,198	1,663	1,535	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Health Savings Account - ER Portion	3,251	1,691	1,561	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
ACWA Medical Insurance	151,106	78,575	72,531	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Life Insurance	1,279	665	614	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Long Term Disability - Union	1,412	734	678	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
CalPERS Classic ER Contribution	80,083	41,643	38,440	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
CalPERS PEPPRA ER Contribution	5,676	2,952	2,725	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Health Savings Account Administrative fee - ER Portion	53	28	26	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Contractual Services	0	0	0	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Gasoline Expense	9,625	5,005	4,620	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Diesel	4,559	2,371	2,188	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Oil & Lubricants	557	290	267	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Hypochlorite	22,290	22,290	0	0	0	0	0	0	0	0	0	100% (COM)	
Office Supplies	709	369	340	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Land and Buildings	6,079	3,161	2,918	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Mobile Equipment	152	79	73	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Buildings	3,647	1,897	1,751	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Grounds & Maintenance	1,469	764	705	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Wells	15,198	7,903	7,295	0	0	0	0	0	0	0	0	as Source of Supply	
Pump Stations	17,326	9,009	8,316	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Repair - Maintenance Water Tanks	15,198	0	0	9,391	0	0	0	4,559	0	1,247	0	62% (CAP-D)/ 30% (WCMS)/ 8% (FP)	
Radio Repairs - Replacement	279	145	134	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Shop Supplies	4,103	2,134	1,970	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Small Tools	4,103	2,134	1,970	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Safety Equipment - Physicals	5,066	2,634	2,432	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Standby Accomodations	6,079	3,161	2,918	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Travel - Meetings - Education	2,533	1,317	1,216	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Dues - Memberships - Certification	2,026	1,054	973	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Telephone	1,520	790	729	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Supplies	329	171	158	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
Regulatory Operating Permits	0	0	0	0	0	0	0	0	0	0	0	as Pumping Facilities/Force Mains	
<b>Total Pumps</b>	<b>\$1,052,964</b>	<b>\$550,338</b>	<b>\$487,429</b>	<b>\$9,391</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,559</b>	<b>\$0</b>	<b>\$1,247</b>	<b>\$0</b>		

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Exhibit 12 - Revenue Requirement												
Total Expenses FY 2020	Customer Related								Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
	Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:						
						Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)					
<b>Equipment Repair</b>												
Regular Salaries - Wages	\$134,344	\$18,942	\$17,485	\$60,504	\$0	\$0	\$0	\$29,375	\$0	\$8,037	\$0	as G&A Equipment
Wages Overtime	6,862	968	893	3,091	0	0	0	1,500	0	411	0	as G&A Equipment
Wages Double Time	528	74	69	238	0	0	0	115	0	32	0	as G&A Equipment
FICA Taxes	10,848	1,530	1,412	4,886	0	0	0	2,372	0	649	0	as G&A Equipment
Dental Self Insured	2,745	387	357	1,236	0	0	0	600	0	164	0	as G&A Equipment
Vision	480	68	62	216	0	0	0	105	0	29	0	as G&A Equipment
Retirement Health Savings Account	2,159	304	281	972	0	0	0	472	0	129	0	as G&A Equipment
Workers Compensation	5,437	767	708	2,448	0	0	0	1,189	0	325	0	as G&A Equipment
Uniforms	480	68	62	216	0	0	0	105	0	29	0	as G&A Equipment
ACWA Medical Insurance	40,162	5,663	5,227	18,087	0	0	0	8,781	0	2,403	0	as G&A Equipment
Life Insurance	320	45	42	144	0	0	0	70	0	19	0	as G&A Equipment
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	as G&A Equipment
Long Term Disability - Union	346	49	45	156	0	0	0	76	0	21	0	as G&A Equipment
CalPERS Classic ER Contribution	17,163	2,420	2,234	7,729	0	0	0	3,753	0	1,027	0	as G&A Equipment
CalPERS PEPRA ER Contribution	2,159	304	281	972	0	0	0	472	0	129	0	as G&A Equipment
Gasoline Expense	1,013	143	132	456	0	0	0	222	0	61	0	as G&A Equipment
Diesel	1,013	143	132	456	0	0	0	222	0	61	0	as G&A Equipment
Oil & Lubricants	4,559	643	593	2,053	0	0	0	997	0	273	0	as G&A Equipment
Office Supplies	811	114	105	365	0	0	0	177	0	48	0	as G&A Equipment
Automotive	34,246	4,829	4,457	15,423	0	0	0	7,488	0	2,049	0	as G&A Equipment
Mobile Equipment	253	36	33	114	0	0	0	55	0	15	0	as G&A Equipment
Generators	2,533	357	330	1,141	0	0	0	554	0	152	0	as G&A Equipment
Service Contracts	9,625	1,357	1,253	4,335	0	0	0	2,105	0	576	0	as G&A Equipment
Shop Supplies	3,040	429	396	1,369	0	0	0	665	0	182	0	as G&A Equipment
Small Tools	1,520	214	198	684	0	0	0	332	0	91	0	as G&A Equipment
Safety Equipment - Physicals	608	86	79	274	0	0	0	133	0	36	0	as G&A Equipment
Travel - Meetings - Education	2,026	286	264	913	0	0	0	443	0	121	0	as G&A Equipment
Dues - Memberships - Certification	203	29	26	91	0	0	0	44	0	12	0	as G&A Equipment
Supplies	304	43	40	137	0	0	0	66	0	18	0	as G&A Equipment
<b>Total Equipment Repair</b>	<b>\$285,785</b>	<b>\$40,296</b>	<b>\$37,196</b>	<b>\$128,708</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$62,488</b>	<b>\$0</b>	<b>\$17,097</b>	<b>\$0</b>	



South Tahoe PUD  
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Exhibit 12 - Revenue Requirement

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	Total Expenses FY 2020	Customer Related										Basis of Classification
		Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:		Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	
							Customer	Meters &				
							Acct/Svcs (WCA)	Svcs (WCMS)				
Laboratory												
Regular Salaries - Wages	\$270,193	\$140,500	\$129,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	52% (COM)/ 48% (CAP-S)
Wages Overtime	4,223	2,196	2,027	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Wages Double Time	3,167	1,647	1,520	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Wages - Part Time	8,446	4,392	4,054	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Wages - Part Time Overtime	53	27	25	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Wages - Part Time Double Time	211	110	101	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
FICA Taxes	21,907	11,392	10,515	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Dental Self Insured	4,557	2,370	2,187	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Vision	773	402	371	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Retirement Health Savings Account	3,971	2,065	1,906	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Workers Compensation	6,263	3,257	3,006	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Uniforms	720	374	345	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Health Savings Account - ER Portion	4,637	2,411	2,226	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
ACWA Medical Insurance	46,105	23,974	22,130	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Life Insurance	583	303	280	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Long Term Disability - Management	453	236	217	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Long Term Disability - Union	480	249	230	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
CalPERS Classic ER Contribution	46,638	24,252	22,386	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Health Savings Account Administrative fee - ER Portion	80	42	38	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Contractual Services	5,066	2,634	2,432	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Gasoline Expense	1,621	843	778	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Laboratory Supplies	29,585	15,384	14,201	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Other Supplies	1,013	527	486	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Postage Expenses	760	395	365	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Office Supplies	2,026	1,054	973	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Laboratory Equipment	6,586	3,425	3,161	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Service Contracts	4,559	2,371	2,188	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Buildings	507	263	243	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Grounds & Maintenance	101	53	49	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Radio Repairs - Replacement	152	79	73	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Safety Equipment - Physicals	811	421	389	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Monitoring	55,725	28,977	26,748	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Travel - Meetings - Education	9,119	4,742	4,377	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Dues - Memberships - Certification	912	474	438	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Supplies	101	53	49	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Regulatory Operating Permits	4,053	2,107	1,945	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Total Laboratory	\$546,155	\$284,000	\$262,154	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

South Tahoe PUD  
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Functionalization and Allocation  
Exhibit 12 - Revenue Requirement

	Total Expenses FY 2020	Customer Related										
		Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:		Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
							Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)				
<b>Administration</b>												
Regular Salaries - Wages	\$219,411	\$90,633	\$83,661	\$27,879	\$0	\$0	\$0	\$13,535	\$0	\$3,703	\$0	as Net Plant in Service
Wages Overtime	26	11	10	3	0	0	0	2	0	0	0	as Net Plant in Service
FICA Taxes	13,382	5,528	5,102	1,700	0	0	0	825	0	226	0	as Net Plant in Service
Dental Self Insured	2,745	1,134	1,047	349	0	0	0	169	0	46	0	as Net Plant in Service
Vision	480	198	183	61	0	0	0	30	0	8	0	as Net Plant in Service
Retirement Health Savings Account	3,731	1,541	1,423	474	0	0	0	230	0	63	0	as Net Plant in Service
Workers Compensation	800	330	305	102	0	0	0	49	0	13	0	as Net Plant in Service
Health Savings Account - ER Portion	693	286	264	88	0	0	0	43	0	12	0	as Net Plant in Service
ACWA Medical Insurance	32,886	13,584	12,539	4,179	0	0	0	2,029	0	555	0	as Net Plant in Service
Life Insurance	613	253	234	78	0	0	0	38	0	10	0	as Net Plant in Service
Long Term Disability - Management	1,199	495	457	152	0	0	0	74	0	20	0	as Net Plant in Service
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	as Net Plant in Service
Long Term Disability - Union	107	44	41	14	0	0	0	7	0	2	0	as Net Plant in Service
CalPERS Classic ER Contribution	27,609	11,405	10,527	3,508	0	0	0	1,703	0	466	0	as Net Plant in Service
CalPERS PEPRA ER Contribution	4,317	1,783	1,646	549	0	0	0	266	0	73	0	as Net Plant in Service
Health Savings Account Administrative fee - ER Portion	27	11	10	3	0	0	0	2	0	0	0	as Net Plant in Service
Contractual Services	507	209	193	64	0	0	0	31	0	9	0	as Net Plant in Service
Legal-Regular	253	105	97	32	0	0	0	16	0	4	0	as Net Plant in Service
Gasoline Expense	1,115	460	425	142	0	0	0	69	0	19	0	as Net Plant in Service
Office Supplies	1,824	753	695	232	0	0	0	113	0	31	0	as Net Plant in Service
Subscription Expense	152	63	58	19	0	0	0	9	0	3	0	as Net Plant in Service
Printing	101	42	39	13	0	0	0	6	0	2	0	as Net Plant in Service
Service Contracts	659	272	251	84	0	0	0	41	0	11	0	as Net Plant in Service
Safety Equipment - Physicals	101	42	39	13	0	0	0	6	0	2	0	as Net Plant in Service
Travel - Meetings- Education	4,965	2,051	1,893	631	0	0	0	306	0	84	0	as Net Plant in Service
Dues - Memberships - Certification	507	209	193	64	0	0	0	31	0	9	0	as Net Plant in Service
Supplies	1,266	523	483	161	0	0	0	78	0	21	0	as Net Plant in Service
Incentive & Recognition Program	4,559	1,883	1,738	579	0	0	0	281	0	77	0	as Net Plant in Service
<b>Total Administration</b>	<b>\$324,034</b>	<b>\$133,850</b>	<b>\$123,553</b>	<b>\$41,173</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$19,989</b>	<b>\$0</b>	<b>\$5,469</b>	<b>\$0</b>	
<b>Board of Directors</b>												
Regular Salaries - Wages	\$12,421	\$0	\$0	\$0	\$0	\$0	\$0	\$12,421	\$0	\$0	\$0	100% (WCMS)
FICA Taxes	977	0	0	0	0	0	0	977	0	0	0	100% (WCMS)
Dental Self Insured	4,557	0	0	0	0	0	0	4,557	0	0	0	100% (WCMS)
Vision	773	0	0	0	0	0	0	773	0	0	0	100% (WCMS)
Workers Compensation	133	0	0	0	0	0	0	133	0	0	0	100% (WCMS)
ACWA Medical Insurance	66,359	0	0	0	0	0	0	66,359	0	0	0	100% (WCMS)
Life Insurance	133	0	0	0	0	0	0	133	0	0	0	100% (WCMS)
CalPERS Classic ER Contribution	480	0	0	0	0	0	0	480	0	0	0	100% (WCMS)
Legal-Special Projects	253	0	0	0	0	0	0	253	0	0	0	100% (WCMS)
Legal-Regular	21,277	0	0	0	0	0	0	21,277	0	0	0	100% (WCMS)
Office Supplies	963	0	0	0	0	0	0	963	0	0	0	100% (WCMS)
Travel - Meetings - Education	10,132	0	0	0	0	0	0	10,132	0	0	0	100% (WCMS)
Dues - Memberships - Certification	45,594	0	0	0	0	0	0	45,594	0	0	0	100% (WCMS)
Supplies	253	0	0	0	0	0	0	253	0	0	0	100% (WCMS)
Election Expense	6,282	0	0	0	0	0	0	6,282	0	0	0	100% (WCMS)
<b>Total Board of Directors</b>	<b>\$170,585</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$170,585</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	

Exhibit 12 - Revenue Requirement												
Total Expenses FY 2020	Customer Related								Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
	Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:						
						Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)					
Human Resources												
Regular Salaries - Wages	\$120,699	\$49,857	\$46,022	\$15,336	\$0	\$0	\$0	\$7,446	\$0	\$2,037	\$0	as Net Plant in Service
Wages Overtime	1,425	589	543	181	0	0	0	88	0	24	0	as Net Plant in Service
Wages - Part Time	0	0	0	0	0	0	0	0	0	0	0	as Net Plant in Service
FICA Taxes	8,921	3,685	3,402	1,134	0	0	0	550	0	151	0	as Net Plant in Service
Dental Self Insured	1,839	760	701	234	0	0	0	113	0	31	0	as Net Plant in Service
Vision	320	132	122	41	0	0	0	20	0	5	0	as Net Plant in Service
Retirement Health Savings Account	1,945	804	742	247	0	0	0	120	0	33	0	as Net Plant in Service
Workers Compensation	506	209	193	64	0	0	0	31	0	9	0	as Net Plant in Service
Health Savings Account - ER Portion	1,386	572	528	176	0	0	0	85	0	23	0	as Net Plant in Service
ACWA Medical Insurance	25,771	10,645	9,826	3,274	0	0	0	1,590	0	435	0	as Net Plant in Service
Life Insurance	320	132	122	41	0	0	0	20	0	5	0	as Net Plant in Service
Long Term Disability - Management	506	209	193	64	0	0	0	31	0	9	0	as Net Plant in Service
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	as Net Plant in Service
Long Term Disability - Union	133	55	51	17	0	0	0	8	0	2	0	as Net Plant in Service
CalPERS Classic ER Contribution	21,080	8,708	8,038	2,678	0	0	0	1,300	0	356	0	as Net Plant in Service
Health Savings Account Administrative fee - ER Portion	27	11	10	3	0	0	0	2	0	0	0	as Net Plant in Service
Contractual Services	19,707	8,140	7,514	2,504	0	0	0	1,216	0	333	0	as Net Plant in Service
Personnel Legal	5,066	2,093	1,932	644	0	0	0	313	0	86	0	as Net Plant in Service
Postage Expenses	76	31	29	10	0	0	0	5	0	1	0	as Net Plant in Service
Office Supplies	1,115	460	425	142	0	0	0	69	0	19	0	as Net Plant in Service
Subscription Expense	127	52	48	16	0	0	0	8	0	2	0	as Net Plant in Service
Printing	101	42	39	13	0	0	0	6	0	2	0	as Net Plant in Service
Ads-Legal Notices	8,359	0	0	0	0	0	0	8,359	0	0	0	100% (WCMS)
Service Contracts	10,284	4,248	3,921	1,307	0	0	0	634	0	174	0	as Net Plant in Service
Safety Equipment - Physicals	2,280	942	869	290	0	0	0	141	0	38	0	as Net Plant in Service
Safety Programs	33,739	13,937	12,865	4,287	0	0	0	2,081	0	569	0	as Net Plant in Service
Travel - Meetings - Education	3,799	1,569	1,449	483	0	0	0	234	0	64	0	as Net Plant in Service
Staff Development	10,892	4,499	4,153	1,384	0	0	0	672	0	184	0	as Net Plant in Service
Dues - Memberships - Certification	912	377	348	116	0	0	0	56	0	15	0	as Net Plant in Service
Supplies	152	63	58	19	0	0	0	9	0	3	0	as Net Plant in Service
Personnel Expense	1,900	785	725	241	0	0	0	117	0	32	0	as Net Plant in Service
Total Human Resources	\$283,386	\$113,606	\$104,867	\$34,946	\$0	\$0	\$0	\$25,325	\$0	\$4,642	\$0	
District Information												
Contractual Services	\$83,082	\$0	\$0	\$0	\$0	\$0	\$0	\$83,082	\$0	\$0	\$0	100% (WCMS)
Postage Expenses	4,559	0	0	0	0	0	0	4,559	0	0	0	100% (WCMS)
Subscription Expense	101	0	0	0	0	0	0	101	0	0	0	100% (WCMS)
Printing	10,132	0	0	0	0	0	0	10,132	0	0	0	100% (WCMS)
Travel - Meetings - Education	3,040	0	0	0	0	0	0	3,040	0	0	0	100% (WCMS)
Dues - Memberships - Certification	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
Supplies	25	0	0	0	0	0	0	25	0	0	0	100% (WCMS)
Public Relations Expense	25,330	0	0	0	0	0	0	25,330	0	0	0	100% (WCMS)
Total District Information	\$126,269	\$0	\$0	\$0	\$0	\$0	\$0	\$126,269	\$0	\$0	\$0	

South Tahoe PUD  
Water Utility  
Functionalization and Allocation  
Exhibit 12 - Revenue Requirement

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		Customer Related										Basis of Classification	
		Total Expenses FY 2020	Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:		Revenue Related (RR)	Fire Protection (FP)		Direct Assign. (DA)
								Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)				
Finance													
	Regular Salaries - Wages	\$185,416	\$0	\$0	\$0	\$0	\$0	\$0	\$185,416	\$0	\$0	\$0	100% (WCMS)
	Wages Overtime	33,256	0	0	0	0	0	0	33,256	0	0	0	100% (WCMS)
	Wages Double Time	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
	Wages - Part Time	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
	FICA Taxes	15,071	0	0	0	0	0	0	15,071	0	0	0	100% (WCMS)
	Dental Self Insured	2,745	0	0	0	0	0	0	2,745	0	0	0	100% (WCMS)
	Vision	453	0	0	0	0	0	0	453	0	0	0	100% (WCMS)
	Retirement Health Savings Account	2,985	0	0	0	0	0	0	2,985	0	0	0	100% (WCMS)
	Workers Compensation	720	0	0	0	0	0	0	720	0	0	0	100% (WCMS)
	Uniforms	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
	Health Savings Account - ER Portion	1,386	0	0	0	0	0	0	1,386	0	0	0	100% (WCMS)
	ACWA Medical Insurance	33,659	0	0	0	0	0	0	33,659	0	0	0	100% (WCMS)
	Life Insurance	506	0	0	0	0	0	0	506	0	0	0	100% (WCMS)
	Long Term Disability - Management	640	0	0	0	0	0	0	640	0	0	0	100% (WCMS)
	AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
	Long Term Disability - Union	240	0	0	0	0	0	0	240	0	0	0	100% (WCMS)
	CalPERS Classic ER Contribution	32,406	0	0	0	0	0	0	32,406	0	0	0	100% (WCMS)
	calPERS PEPPRA ER Contribution	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
	Health Savings Account Administrative fee - ER Portion	27	0	0	0	0	0	0	27	0	0	0	100% (WCMS)
	Contractual Services	15,451	0	0	0	0	0	0	15,451	0	0	0	100% (WCMS)
	Advisory	38,577	0	0	0	0	0	0	38,577	0	0	0	100% (WCMS)
	Auditing	28,876	0	0	0	0	0	0	28,876	0	0	0	100% (WCMS)
	Legal - Special Projects	6,079	0	0	0	0	0	0	6,079	0	0	0	100% (WCMS)
	Legal - Regular	2,026	0	0	0	0	0	0	2,026	0	0	0	100% (WCMS)
	Gasoline Expense	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
	Diesel	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
	Postage Expenses	51	0	0	0	0	0	0	51	0	0	0	100% (WCMS)
	Office Supplies	2,533	0	0	0	0	0	0	2,533	0	0	0	100% (WCMS)
	Subscription Expense	1,013	0	0	0	0	0	0	1,013	0	0	0	100% (WCMS)
	Printing	709	0	0	0	0	0	0	709	0	0	0	100% (WCMS)
	Ads-Legal Notices	811	0	0	0	0	0	0	811	0	0	0	100% (WCMS)
	Office Equipment Repair	76	0	0	0	0	0	0	76	0	0	0	100% (WCMS)
	Service Contracts	1,469	0	0	0	0	0	0	1,469	0	0	0	100% (WCMS)
	Safety Equipment - Physicals	101	0	0	0	0	0	0	101	0	0	0	100% (WCMS)
	Travel - Meetings - Education	4,053	0	0	0	0	0	0	4,053	0	0	0	100% (WCMS)
	Dues - Memberships - Certification	15,097	0	0	0	0	0	0	15,097	0	0	0	100% (WCMS)
	Supplies	355	0	0	0	0	0	0	355	0	0	0	100% (WCMS)
Total Finance		\$426,786	\$0	\$0	\$0	\$0	\$0	\$0	\$426,786	\$0	\$0	\$0	

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Functionalization and Allocation  
Exhibit 12 - Revenue Requirement

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Exhibit 12 - Revenue Requirement											
Total Expenses FY 2020	Customer Related										
	Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:		Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
						Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)				
<b>Accounting</b>											
Regular Salaries - Wages	\$190,668	\$0	\$0	\$0	\$0	\$0	\$0	\$190,668	\$0	\$0	\$0 100% (WCMS)
Wages Overtime	4,751	0	0	0	0	0	0	4,751	0	0	0 100% (WCMS)
Wages - Part Time	0	0	0	0	0	0	0	0	0	0	0 100% (WCMS)
FICA Taxes	14,596	0	0	0	0	0	0	14,596	0	0	0 100% (WCMS)
Dental Self Insured	3,651	0	0	0	0	0	0	3,651	0	0	0 100% (WCMS)
Vision	613	0	0	0	0	0	0	613	0	0	0 100% (WCMS)
Retirement Health Savings Account	3,251	0	0	0	0	0	0	3,251	0	0	0 100% (WCMS)
Workers Compensation	773	0	0	0	0	0	0	773	0	0	0 100% (WCMS)
Health savings Account - ER Portion	1,386	0	0	0	0	0	0	1,386	0	0	0 100% (WCMS)
ACWA Medical Insurance	49,782	0	0	0	0	0	0	49,782	0	0	0 100% (WCMS)
Life Insurance	533	0	0	0	0	0	0	533	0	0	0 100% (WCMS)
Long Term Disability - Management	453	0	0	0	0	0	0	453	0	0	0 100% (WCMS)
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0 100% (WCMS)
Long Term Disability - Union	373	0	0	0	0	0	0	373	0	0	0 100% (WCMS)
CalPERS Classic ER Contribution	33,366	0	0	0	0	0	0	33,366	0	0	0 100% (WCMS)
Health Savings Account Administrative fee - ER Portion	27	0	0	0	0	0	0	27	0	0	0 100% (WCMS)
Contractual Services	20,517	0	0	0	0	0	0	20,517	0	0	0 100% (WCMS)
Advisory	760	0	0	0	0	0	0	760	0	0	0 100% (WCMS)
Postage Expenses	25	0	0	0	0	0	0	25	0	0	0 100% (WCMS)
Office Supplies	507	0	0	0	0	0	0	507	0	0	0 100% (WCMS)
Subscription Expense	735	0	0	0	0	0	0	735	0	0	0 100% (WCMS)
Printing	279	0	0	0	0	0	0	279	0	0	0 100% (WCMS)
Ads-Legal Notices	25	0	0	0	0	0	0	25	0	0	0 100% (WCMS)
Service Contracts	24,443	0	0	0	0	0	0	24,443	0	0	0 100% (WCMS)
Safety Equipment - Physicals	1,013	0	0	0	0	0	0	1,013	0	0	0 100% (WCMS)
Travel - Meetings - Education	4,559	0	0	0	0	0	0	4,559	0	0	0 100% (WCMS)
Tuition & Reimbursement Program	507	0	0	0	0	0	0	507	0	0	0 100% (WCMS)
Dues - Memberships - Certification	152	0	0	0	0	0	0	152	0	0	0 100% (WCMS)
Supplies	1,013	0	0	0	0	0	0	1,013	0	0	0 100% (WCMS)
<b>Total Accounting</b>	<b>\$358,758</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$358,758</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

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Exhibit 12 - Revenue Requirement												
	Total Expenses FY 2020	Customer Related										
		Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:		Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
							Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)				
<b>Purchasing</b>												
Regular Salaries - Wages	\$100,059	\$52,031	\$48,028	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	52% (COM)/ 48% (CAP-S)
Wages Overtime	158	82	76	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
FICA Taxes	7,654	3,980	3,674	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Dental Self Insured	1,839	956	883	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Vision	320	166	154	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Retirement Health Savings Account	1,732	901	831	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Workers Compensation	400	208	192	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Uniforms	187	97	90	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
ACWA Medical Insurance	32,300	16,796	15,504	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Life Insurance	293	152	141	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Long Term Disability - Management	426	222	205	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Long Term Disability - Union	133	69	64	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
CalPERS Classic ER Contribution	17,429	9,063	8,366	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Advisory	507	263	243	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Legal-Regular	507	263	243	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Gasoline Expense	253	132	122	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Diesel	51	26	24	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Postage Expenses	25	13	12	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Office Supplies	1,013	527	486	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Subscription Expense	25	13	12	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Printing	203	105	97	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Ads-Legal Notices	101	53	49	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Janitorial Supplies	2,736	1,423	1,313	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Janitorial Services	19,960	10,379	9,581	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Safety Equipment - Physicals	101	53	49	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Travel - Meetings - Education	304	158	146	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Dues - Memberships - Certification	76	40	36	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
Supplies	51	26	24	0	0	0	0	0	0	0	0	52% (COM)/ 48% (CAP-S)
<b>Total Purchasing</b>	<b>\$188,842</b>	<b>\$98,198</b>	<b>\$90,644</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	

Exhibit 12 - Revenue Requirement											
Total Expenses FY 2020	Customer Related										
	Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:		Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
						Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)				
<b>Information Technology</b>											
Regular Salaries - Wages	\$200,724	\$104,377	\$96,348	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0 52% (COM)/ 48% (CAP-S)
Wages Overtime	2,534	1,318	1,216	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Wages Double Time	106	55	51	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
FICA Taxes	15,546	8,084	7,462	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Dental Self Insured	3,651	1,899	1,753	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Vision	613	319	294	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Retirement Health Savings Account	3,198	1,663	1,535	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Workers Compensation	826	430	397	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Health Savings Account - ER Portion	1,972	1,025	947	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
ACWA Medical Insurance	45,811	23,822	21,989	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Life Insurance	506	263	243	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Long Term Disability - Management	426	222	205	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Long Term Disability - Union	346	180	166	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
CalPERS Classic ER Contribution	29,155	15,161	13,994	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
CalPERS PEPRA ER Contribution	2,425	1,261	1,164	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Health Savings Account Administrative fee - ER Portion	53	28	26	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Contractual Services	15,198	7,903	7,295	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Postage Expenses	76	40	36	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Office Supplies	3,040	1,581	1,459	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Subscription Expense	177	92	85	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
District Computer Supplies	32,422	16,859	15,563	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Computer Purchases	22,797	11,854	10,942	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Printing	304	158	146	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Service Contracts	103,573	53,858	49,715	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Safety Equipment - Physicals	203	105	97	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Travel - Meetings - Education	10,790	5,611	5,179	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Dues - Memberships - Certification	608	316	292	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Telephone	659	342	316	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
Supplies	253	132	122	0	0	0	0	0	0	0	0 52% (COM)/ 48% (CAP-S)
<b>Total Information Technology</b>	<b>\$297,269</b>	<b>\$154,580</b>	<b>\$142,689</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	

Total Expenses FY 2020		Customer Related										
		Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:		Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
							Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)				
Customer Service												
Regular Salaries - Wages	\$242,981	\$0	\$0	\$0	\$0	\$0	\$0	\$242,981	\$0	\$0	\$0	100% (WCMS)
Wages Overtime	1,689	0	0	0	0	0	0	1,689	0	0	0	100% (WCMS)
FICA Taxes	18,713	0	0	0	0	0	0	18,713	0	0	0	100% (WCMS)
Dental Self Insured	5,463	0	0	0	0	0	0	5,463	0	0	0	100% (WCMS)
Vision	906	0	0	0	0	0	0	906	0	0	0	100% (WCMS)
Retirement Health Savings Account	4,690	0	0	0	0	0	0	4,690	0	0	0	100% (WCMS)
Workers Compensation	986	0	0	0	0	0	0	986	0	0	0	100% (WCMS)
Uniforms	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
Health Savings Account - ER Portion	3,358	0	0	0	0	0	0	3,358	0	0	0	100% (WCMS)
ACWA Medical Insurance	67,451	0	0	0	0	0	0	67,451	0	0	0	100% (WCMS)
Life Insurance	853	0	0	0	0	0	0	853	0	0	0	100% (WCMS)
Long Term Disability - Management	453	0	0	0	0	0	0	453	0	0	0	100% (WCMS)
AFLAC Administrative fee - ER Portion	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
Long Term Disability - Union	533	0	0	0	0	0	0	533	0	0	0	100% (WCMS)
CalPERS Classic ER Contribution	31,474	0	0	0	0	0	0	31,474	0	0	0	100% (WCMS)
CalPERS PEPPRA ER Contribution	4,344	0	0	0	0	0	0	4,344	0	0	0	100% (WCMS)
Health Savings Account Administrative fee - ER Portion	53	0	0	0	0	0	0	53	0	0	0	100% (WCMS)
Contractual Services	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
Legal-Special Projects	1,520	0	0	0	0	0	0	1,520	0	0	0	100% (WCMS)
Legal Litigation Confidential	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
Legal-Regular	2,533	0	0	0	0	0	0	2,533	0	0	0	100% (WCMS)
Miscellaneous Liability Claims	1,013	0	0	0	0	0	0	1,013	0	0	0	100% (WCMS)
CSRMA Liability Claims	1,013	0	0	0	0	0	0	1,013	0	0	0	100% (WCMS)
Gasoline Expense	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
Postage Expenses	20,264	0	0	0	0	0	0	20,264	0	0	0	100% (WCMS)
Office Supplies	2,330	0	0	0	0	0	0	2,330	0	0	0	100% (WCMS)
Printing	7,244	0	0	0	0	0	0	7,244	0	0	0	100% (WCMS)
Ads-Legal Notices	1,520	0	0	0	0	0	0	1,520	0	0	0	100% (WCMS)
Equipment Rental - Lease	1,064	0	0	0	0	0	0	1,064	0	0	0	100% (WCMS)
Office Equipment Repair	101	0	0	0	0	0	0	101	0	0	0	100% (WCMS)
Service Contracts	31,915	0	0	0	0	0	0	31,915	0	0	0	100% (WCMS)
Water Meters & Parts	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
Shop Supplies	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
Small Tools	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
Safety Equipment - Physicals	203	0	0	0	0	0	0	203	0	0	0	100% (WCMS)
Travel - Meetings - Education	6,282	0	0	0	0	0	0	6,282	0	0	0	100% (WCMS)
Dues - Memberships - Certification	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
Telephone	127	0	0	0	0	0	0	127	0	0	0	100% (WCMS)
Supplies	253	0	0	0	0	0	0	253	0	0	0	100% (WCMS)
Bad Debt Expense	9,119	0	0	0	0	0	0	9,119	0	0	0	100% (WCMS)
Water Conservation Expense	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
Meter Tester	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)
Total Customer Service	\$470,449	\$0	\$0	\$0	\$0	\$0	\$0	\$470,449	\$0	\$0	\$0	



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	Total Expenses FY 2020	Customer Related									Direct Assign. (DA)	Basis of Classification
		Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:		Revenue Related (RR)	Fire Protection (FP)		
							Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)				
Inspections												
Regular Salaries - Wages	\$246,993	\$102,026	\$94,178	\$31,383	\$0	\$0	\$0	\$15,237	\$0	\$4,169	\$0 as Net Plant in Service	
Wages Overtime	5,068	2,093	1,932	644	0	0	0	313	0	86	0 as Net Plant in Service	
Wages - Part Time	0	0	0	0	0	0	0	0	0	0	0 as Net Plant in Service	
FICA Taxes	19,294	7,970	7,357	2,452	0	0	0	1,190	0	326	0 as Net Plant in Service	
Dental Self Insured	5,463	2,257	2,083	694	0	0	0	337	0	92	0 as Net Plant in Service	
Vision	906	374	345	115	0	0	0	56	0	15	0 as Net Plant in Service	
Retirement Health Savings Account	4,291	1,772	1,636	545	0	0	0	265	0	72	0 as Net Plant in Service	
Workers Compensation	400	165	152	51	0	0	0	25	0	7	0 as Net Plant in Service	
Uniforms	1,093	451	417	139	0	0	0	67	0	18	0 as Net Plant in Service	
Health Savings Account - ER Portion	2,079	859	793	264	0	0	0	128	0	35	0 as Net Plant in Service	
ACWA Medical Insurance	74,327	30,702	28,341	9,444	0	0	0	4,585	0	1,255	0 as Net Plant in Service	
Life Insurance	640	264	244	81	0	0	0	39	0	11	0 as Net Plant in Service	
Long Term Disability - Union	720	297	274	91	0	0	0	44	0	12	0 as Net Plant in Service	
CalPERS Classic ER Contribution	24,438	10,095	9,318	3,105	0	0	0	1,508	0	412	0 as Net Plant in Service	
CalPERS PEPRA ER Contribution	7,382	3,049	2,815	938	0	0	0	455	0	125	0 as Net Plant in Service	
Health Savings Account Administrative fee - ER Portion	53	22	20	7	0	0	0	3	0	1	0 as Net Plant in Service	
Contractual Services	24,317	10,044	9,272	3,090	0	0	0	1,500	0	410	0 as Net Plant in Service	
Gasoline Expense	3,647	1,507	1,391	463	0	0	0	225	0	62	0 as Net Plant in Service	
Office Supplies	1,925	795	734	245	0	0	0	119	0	32	0 as Net Plant in Service	
Service Contracts	887	366	338	113	0	0	0	55	0	15	0 as Net Plant in Service	
Water Meters & Parts	72,063	29,767	27,477	9,157	0	0	0	4,445	0	1,216	0 as Net Plant in Service	
Shop Supplies	3,040	1,256	1,159	386	0	0	0	188	0	51	0 as Net Plant in Service	
Small Tools	507	209	193	64	0	0	0	31	0	9	0 as Net Plant in Service	
Safety Equipment - Physicals	253	105	97	32	0	0	0	16	0	4	0 as Net Plant in Service	
Travel - Meetings - Education	7,903	3,264	3,013	1,004	0	0	0	488	0	133	0 as Net Plant in Service	
Dues - Memberships - Certification	963	398	367	122	0	0	0	59	0	16	0 as Net Plant in Service	
Telephone	2,710	1,120	1,033	344	0	0	0	167	0	46	0 as Net Plant in Service	
Supplies	51	21	19	6	0	0	0	3	0	1	0 as Net Plant in Service	
Total Inspections	\$511,409	\$211,249	\$194,999	\$64,981	\$0	\$0	\$0	\$31,548	\$0	\$8,632	\$0	

Exhibit 12 - Revenue Requirement											
Total Expenses FY 2020	Customer Related										
	Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:		Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
						Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)				
<b>Water Conservation</b>											
Regular Salaries - Wages	\$43,101	\$0	\$43,101	\$0	\$0	\$0	\$0	\$0	\$0	\$0	100% (CAP-S)
Wages Overtime	264	0	264	0	0	0	0	0	0	0	100% (CAP-S)
FICA Taxes	3,326	0	3,326	0	0	0	0	0	0	0	100% (CAP-S)
Dental Self Insured	906	0	906	0	0	0	0	0	0	0	100% (CAP-S)
Vision	160	0	160	0	0	0	0	0	0	0	100% (CAP-S)
Retirement Health Savings Account	720	0	720	0	0	0	0	0	0	0	100% (CAP-S)
Workers Compensation	187	0	187	0	0	0	0	0	0	0	100% (CAP-S)
Health Savings Account - ER Portion	1,279	0	1,279	0	0	0	0	0	0	0	100% (CAP-S)
ACWA Medical Insurance	12,925	0	12,925	0	0	0	0	0	0	0	100% (CAP-S)
Life Insurance	107	0	107	0	0	0	0	0	0	0	100% (CAP-S)
Long Term Disability - Union	133	0	133	0	0	0	0	0	0	0	100% (CAP-S)
CalPERS Classic ER Contribution	7,622	0	7,622	0	0	0	0	0	0	0	100% (CAP-S)
Health Savings Account Administrative fee - ER Portion	27	0	27	0	0	0	0	0	0	0	100% (CAP-S)
Contractual Services	55,396	0	55,396	0	0	0	0	0	0	0	100% (CAP-S)
Gasoline Expense	405	0	405	0	0	0	0	0	0	0	100% (CAP-S)
Office Supplies	3,040	0	3,040	0	0	0	0	0	0	0	100% (CAP-S)
Printing	1,697	0	1,697	0	0	0	0	0	0	0	100% (CAP-S)
Ads-Legal Notices	4,762	0	4,762	0	0	0	0	0	0	0	100% (CAP-S)
Safety Equipment - Physicals	101	0	101	0	0	0	0	0	0	0	100% (CAP-S)
Travel - Meetings - Education	5,066	0	5,066	0	0	0	0	0	0	0	100% (CAP-S)
Dues - Memberships - Certification	2,913	0	2,913	0	0	0	0	0	0	0	100% (CAP-S)
Supplies	101	0	101	0	0	0	0	0	0	0	100% (CAP-S)
Water Conservation Expense	0	0	0	0	0	0	0	0	0	0	100% (CAP-S)
Toilet Rebate Program	7,599	0	7,599	0	0	0	0	0	0	0	100% (CAP-S)
Clothes Washer Rebate Program	7,599	0	7,599	0	0	0	0	0	0	0	100% (CAP-S)
Turf Buy-Back Program	73,431	0	73,431	0	0	0	0	0	0	0	100% (CAP-S)
<b>Total Water Conservation</b>	<b>\$232,866</b>	<b>\$0</b>	<b>\$232,866</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	

	Total Expenses FY 2020	Customer Related								Revenue Related (RR)	Fire Protection (FP)	Direct Assign. (DA)	Basis of Classification
		Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:						
							Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)					
<b>Non Crew</b>													
Insurance Expense	\$122,596	\$17,286	\$15,956	\$55,213	\$0	\$0	\$0	\$26,806	\$0	\$7,334	\$0	as Plant Before General Plant	
Postage Expenses	507	71	66	228	0	0	0	111	0	30	0	as Plant Before General Plant	
Equipment Rental - Lease	0	0	0	0	0	0	0	0	0	0	0	as Plant Before General Plant	
Safety Equipment - Physicals	1,520	214	198	684	0	0	0	332	0	91	0	as Plant Before General Plant	
Telephone	11,145	1,571	1,451	5,019	0	0	0	2,437	0	667	0	as Plant Before General Plant	
Electricity	743,681	104,859	96,793	334,930	0	0	0	162,609	0	44,491	0	as Plant Before General Plant	
Natural Gas	20,264	2,857	2,637	9,126	0	0	0	4,431	0	1,212	0	as Plant Before General Plant	
Propane	507	71	66	228	0	0	0	111	0	30	0	as Plant Before General Plant	
Refuse Disposal	3,040	429	396	1,369	0	0	0	665	0	182	0	as Plant Before General Plant	
Other Utilities	6,890	971	897	3,103	0	0	0	1,506	0	412	0	as Plant Before General Plant	
Miscellaneous Corrections	0	0	0	0	0	0	0	0	0	0	0	as Plant Before General Plant	
Supplies	203	29	26	91	0	0	0	44	0	12	0	as Plant Before General Plant	
LAFCO Administrative Costs	13,171	1,857	1,714	5,932	0	0	0	2,880	0	788	0	as Plant Before General Plant	
Low Income Rate Discount	36,070	5,086	4,695	16,245	0	0	0	7,887	0	2,158	0	as Plant Before General Plant	
Contingency Fund	151,978	21,429	19,781	68,446	0	0	0	33,231	0	9,092	0	as Plant Before General Plant	
Loss on Retired Assets	0	0	0	0	0	0	0	0	0	0	0	as Plant Before General Plant	
<b>Total Non Crew</b>	<b>\$1,111,570</b>	<b>\$156,731</b>	<b>\$144,675</b>	<b>\$500,615</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$243,049</b>	<b>\$0</b>	<b>\$66,500</b>	<b>\$0</b>		
<b>Total Operations &amp; Maintenance Expense</b>	<b>\$9,198,182</b>	<b>\$2,145,727</b>	<b>\$2,192,961</b>	<b>\$2,038,070</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,550,692</b>	<b>\$0</b>	<b>\$270,731</b>	<b>\$0</b>		
<b>Rate Funded Capital (Capital Improvement Charge)</b>	1,766,000	0	0	1,766,000	0	0	0	0	0	0	0	100% (CAP-D)	
<b>Debt Service</b>													
2001, 2013, & 2017 Amortization	\$9,051	\$0	\$0	\$9,051	\$0	\$0	\$0	\$0	\$0	\$0	\$0	100% (CAP-D)	
2013 Waterline / Refunding Loan	622,769	0	0	384,820	0	0	0	186,831	0	51,118	0	as Transmission/Distribution	
Meter Loan I	120,198	0	0	0	0	0	0	120,198	0	0	0	100% (WCMS)	
Meter Loan II	64,621	0	0	0	0	0	0	64,621	0	0	0	100% (WCMS)	
Waterline - Replacement Program	155,342	0	0	95,989	0	0	0	46,603	0	12,751	0	as Transmission/Distribution	
Meter Loan III-V	0	0	0	0	0	0	0	0	0	0	0	100% (WCMS)	
Keller/Heavenly	0	0	0	0	0	0	0	0	0	0	0	as Transmission/Distribution	
Customer Refunds	2,000	0	0	0	0	0	0	0	2,000	0	0	100% (RR)	
Scenario E - Increased Borrowing	0	0	0	0	0	0	0	0	0	0	0	as Transmission/Distribution	
New Low Interest Loan	0	0	0	0	0	0	0	0	0	0	0	as Plant Before General Plant	
New Revenue Bond	0	0	0	0	0	0	0	0	0	0	0	as Plant Before General Plant	
<b>Total Debt Service</b>	<b>\$973,981</b>	<b>\$0</b>	<b>\$0</b>	<b>\$489,859</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$418,252</b>	<b>\$2,000</b>	<b>\$63,869</b>	<b>\$0</b>		

South Tahoe PUD  
Water Utility  
Functionalization and Allocation  
Exhibit 12 - Revenue Requirement

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		Customer Related										Basis of Classification	
		Total Expenses FY 2020	Commodity (COM)	Capacity - Supply (CAP-S)	Capacity - Distribution (CAP-D)	Actual Customer (AC)	Dwelling Units (DU)	Weighted for:		Revenue Related (RR)	Fire Protection (FP)		Direct Assign. (DA)
								Customer Acct/Svcs (WCA)	Meters & Svcs (WCMS)				
To / (From) Reserves													
To / (From) Capital Reserve		\$3,670,996	\$0	\$0	\$3,670,996	\$0	\$0	\$0	\$0	\$0	\$0	\$0	100% (CAP-D)
To / (From) Capital Reserve for DS Principal		(782,000)	0	0	(782,000)	0	0	0	0	0	0	0	100% (CAP-D)
To / (From) Sewer Fund		0	0	0	0	0	0	0	0	0	0	0	100% (CAP-D)
To / (From) Operating Reserve		0	0	0	0	0	0	0	0	0	0	0	100% (CAP-D)
To / (From) Rate Stabilization		(63,019)	0	0	(63,019)	0	0	0	0	0	0	0	100% (CAP-D)
To / (From) Debt Reserve		(155,342)	0	0	(155,342)	0	0	0	0	0	0	0	100% (CAP-D)
Total To / (From) Reserves		\$2,670,636	\$0	\$0	\$2,670,636	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total Revenue Requirements		\$14,608,798	\$2,145,727	\$2,192,961	\$6,964,565	\$0	\$0	\$0	\$2,968,944	\$2,000	\$334,601	\$0	
Less: Other Income													
Repairs		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	100% (WCMS)
Sale/Resale Service Charge Revenue		0	0	0	0	0	0	0	0	0	0	0	as O&M Expense
Interfund Service Charge Revenue		0	0	0	0	0	0	0	0	0	0	0	as O&M Expense
Service Call - Water Exemption Fees		0	0	0	0	0	0	0	0	0	0	0	as O&M Expense
Capacity Charge		318,000	74,182	75,815	70,460	0	0	0	88,183	0	9,360	0	as O&M Expense
Fire Service Capacity Charge		1,005	0	0	0	0	0	0	0	0	1,005	0	100% (FP)
Physical Connection Fee		216,075	216,075	0	0	0	0	0	0	0	0	0	100% (COM)
Secured Taxes		30,150	30,150	0	0	0	0	0	0	0	0	0	100% (COM)
Sale of Surplus Assets		0	0	0	0	0	0	0	0	0	0	0	100% (COM)
Realized Gain - Loss on Investment		0	0	0	0	0	0	0	0	0	0	0	100% (COM)
Interest Income		201,000	201,000	0	0	0	0	0	0	0	0	0	100% (COM)
Fair Market Value Unrealized Gain/Loss		0	0	0	0	0	0	0	0	0	0	0	100% (COM)
Rents and Leases		192,960	192,960	0	0	0	0	0	0	0	0	0	100% (COM)
Federal Aid		0	0	0	0	0	0	0	0	0	0	0	100% (COM)
State Aid		0	0	0	0	0	0	0	0	0	0	0	100% (COM)
Interest /Pentalty Charges		100,500	0	0	0	0	0	0	100,500	0	0	0	100% (WCMS)
Fire Hydrant Permits		30,150	0	0	0	0	0	0	0	0	30,150	0	100% (FP)
Admin Fee - New Service		10,050	0	0	0	0	0	0	10,050	0	0	0	100% (WCMS)
Contractor Plans & Specs Fee		1	0	0	0	0	0	0	0	0	0	0	as O&M Expense
Other Miscellaneous Income		98,792	23,046	23,553	21,890	0	0	0	27,395	0	2,908	0	as O&M Expense
Lab Monitoring Revenue		30,150	30,150	0	0	0	0	0	0	0	0	0	100% (COM)
Water & Fire Meter Sales		10,050	0	0	0	0	0	0	10,050	0	0	0	100% (WCMS)
Local Aid		0	0	0	0	0	0	0	0	0	0	0	as O&M Expense
Investment Interest		0	0	0	0	0	0	0	0	0	0	0	as O&M Expense
Total Other Income		\$1,238,883	\$767,563	\$99,369	\$92,350	\$0	\$0	\$0	\$236,178	\$0	\$43,423	\$0	
Net Revenue Requirements		\$13,369,916	\$1,378,164	\$2,093,593	\$6,872,215	\$0	\$0	\$0	\$2,732,766	\$2,000	\$291,178	\$0	

South Tahoe PUD  
Water Utility  
Cost of Service Summary  
Exhibit 13 - Allocation by Component - COM, CAP & DA

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Classification Components	FY 2020	Single Family		Multifamily	Commercial
		Tier 1	Tier 2		
Commodity	\$1,378,164	\$555,166	\$188,124	\$238,474	\$396,400 (COM)
Supply	\$2,093,593	\$741,848	\$480,810	\$317,462	\$553,473 (CAP-S)
Direct Assignment	\$0	\$0	\$0	\$0	\$0 (DA)
Total	\$3,471,757	\$1,297,014	\$668,934	\$555,936	\$949,873

South Tahoe PUD  
Water Utility  
Cost of Service Summary  
Exhibit 14 - Allocation by Component - Cust. Fire, Rev.

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Classification Components	FY 2020	Single Family	Multifamily	Commercial	Allocation Factor
Capacity - Distribution	\$6,872,215	\$4,769,350	\$945,782	\$1,157,083	(CAP-D)
Customer Related					
Actual Customer	\$0	\$0	\$0	\$0	(AC)
Dwelling Units	0	0	0	0	(DU)
Customer Acct/Svcs	0	0	0	0	(WCA)
Meters & Svcs	2,732,766	1,896,552	376,094	460,119	(WCMS)
Total Customer Related	\$2,732,766	\$1,896,552	\$376,094	\$460,119	
Revenue Related	\$2,000	\$1,296	\$301	\$403	(RR)
Fire Protection	\$291,178	\$202,079	\$40,073	\$49,026	(FP)
<b>Net Revenue Requirement</b>	<b>\$9,898,159</b>	<b>\$6,869,277</b>	<b>\$1,362,251</b>	<b>\$1,666,631</b>	

South Tahoe PUD  
Water Utility  
Cost of Service Summary  
Exhibit 15 - Summary of Cost Allocation

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	<b>FY 2020 Total</b>	<b>Single Family</b>	<b>Multifamily</b>	<b>Commercial</b>	<b>Source</b>
Revenues at Present Rates	\$12,861,872	\$8,332,359	\$1,936,414	\$2,593,099	
Allocated Revenue Requirement	\$13,369,916	\$8,835,317	\$1,918,161	\$2,616,438	
Subtotal Balance/(Deficiency) of Funds	(\$508,044)	(\$502,958)	\$18,253	(\$23,338)	
<b>% Change Over Present Rates</b>	<b>4.0%</b>	<b>6.0%</b>	<b>-0.9%</b>	<b>0.9%</b>	

South Tahoe PUD  
Water Utility  
Cost of Service Summary  
Exhibit 15 - Average Unit Cost

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	FY 2020	Single Family		Multifamily	Commercial
	Total	Tier 1	Tier 2		
Commodity Costs - \$/CCF	\$0.68	\$0.68	\$0.68	\$0.68	\$0.68
Capacity Costs - \$/CCF	\$1.03	\$0.90	\$1.73	\$0.90	\$0.94
Direct Assign. Costs - \$/CCF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Allocated Costs - \$/CCF	\$1.70	\$1.58	\$2.40	\$1.57	\$1.62
Current Consumption Rates		\$1.09	\$1.64	\$1.53	\$1.52
Customer - \$ / Equiv. Mtrs / Qtr	\$134.09				
Fire Protection - \$ / Equiv. Mtrs / Qtr	4.06				
Total - \$ / Month	\$138.16				
Customer - \$ / Units / Qtr					
Current Fixed Charge (3/4")		\$140.90		\$140.90	\$140.90
Rate Rev \$/CCF	\$6.30	\$10.14		\$5.49	\$4.42
Allocated Rev Req \$/CCF	\$6.55	\$10.75		\$5.43	\$4.46
Basic Data					
Annualized Water Flows - CCF	2,040,141	821,830	278,486	353,020	586,804
No. of Customers	13,948	12,205		1,133	611
No. of Units	NA	12,205		5,398	611
Equivalent Meters	17,911	12,430		2,465	3,016



South Tahoe PUD  
Customer Data Projection  
Rate Design  
Exhibit 16 - Summary of Rate Design  
Fire Flow - 6%

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	Current	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>Residential</b>						
<b>Rate Adjustment</b>		<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>
<b>Fixed Charge (\$/Quarter)</b>						
3/4"	\$140.90	\$138.16	\$146.45	\$155.23	\$164.55	\$174.42
1"	235.20	230.62	244.46	259.13	274.67	291.16
1 1/2"	469.10	459.97	487.57	516.82	547.83	580.70
2"	750.80	736.19	780.36	827.18	876.81	929.42
3"	1,408.70	1,381.28	1,464.16	1,552.01	1,645.13	1,743.84
Unmetered	165.20	175.17	185.68	196.82	208.63	221.15
<b>Commodity Charge (\$/CCF)</b>						
0 - 45 CCF	\$1.09	\$1.58	\$1.67	\$1.77	\$1.88	\$1.99
45 + CCF	1.64	2.40	2.55	2.70	2.86	3.03

South Tahoe PUD  
Customer Data Projection  
Rate Design  
Exhibit 16 - Summary of Rate Design  
Fire Flow - 6%

Page 2 of 3

	Current	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>Multi-Family</b>						
<b>Rate Adjustment</b>		<b>-0.9%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>
<b>Fixed Charge (\$/Quarter)</b>						
5/8" & 3/4"	\$140.90	\$138.16	\$146.45	\$155.23	\$164.55	\$174.42
1"	235.20	230.62	244.46	259.13	274.67	291.16
1 1/2"	469.10	459.97	487.57	516.82	547.83	580.70
2"	750.80	736.19	780.36	827.18	876.81	929.42
3"	1,408.70	1,381.28	1,464.16	1,552.01	1,645.13	1,743.84
4"	2,348.20	2,302.50	2,440.65	2,587.08	2,742.31	2,906.85
6"	4,694.90	4,603.52	4,879.73	5,172.52	5,482.87	5,811.84
8"	7,512.20	7,365.99	7,807.95	8,276.42	8,773.01	9,299.39
10"	10,799.90	10,589.70	11,225.08	11,898.58	12,612.50	13,369.25
<b>Unmetered (\$/Quarter)</b>						
Duplex	\$293.70	\$290.93	\$308.39	\$326.89	\$346.50	\$367.29
Triplex	399.00	395.24	418.95	444.09	470.74	498.98
Four-Plex	516.20	511.33	542.01	574.54	609.01	645.55
Additional Units	86.50	85.68	90.83	96.28	102.05	108.17
<b>Commodity Charge (\$/CCF)</b>	\$1.53	\$1.57	\$1.67	\$1.77	\$1.88	\$1.99

South Tahoe PUD  
Customer Data Projection  
Rate Design  
Exhibit 16 - Summary of Rate Design  
Fire Flow - 6%

Page 3 of 3

	Current	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>Commercial</b>						
<b>Rate Adjustment</b>		<b>0.9%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>
<b>Fixed Charge (\$/Quarter)</b>						
5/8" & 3/4"	\$140.90	\$138.16	\$146.45	\$155.23	\$164.55	\$174.42
1"	235.20	230.62	244.46	259.13	274.67	291.16
1 1/2"	469.10	459.97	487.57	516.82	547.83	580.70
2"	750.80	736.19	780.36	827.18	876.81	929.42
3"	1,408.70	1,381.28	1,464.16	1,552.01	1,645.13	1,743.84
4"	2,348.20	2,302.50	2,440.65	2,587.08	2,742.31	2,906.85
6"	4,694.90	4,603.52	4,879.73	5,172.52	5,482.87	5,811.84
8"	7,512.20	7,365.99	7,807.95	8,276.42	8,773.01	9,299.39
10"	10,799.90	10,589.70	11,225.08	11,898.58	12,612.50	13,369.25
Unmetered	251.40	253.66	268.88	285.02	302.12	320.24
<b>Commodity Charge (\$/CCF)</b>	\$1.52	\$1.62	\$1.72	\$1.82	\$1.93	\$2.04

South Tahoe PUD  
Water Utility  
Rate Design  
Exhibit 17 - Residential Bill Comparison

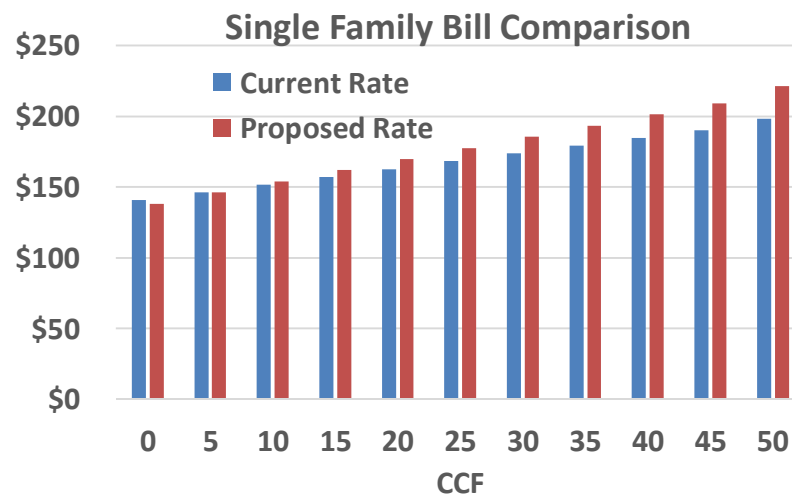
Consumption	Current Rate	Proposed Rate	\$ Change	% Change
0	\$140.90	\$138.16	(\$2.74)	-1.9%
5	\$146.35	\$146.05	(0.30)	-0.2%
10	\$151.80	\$153.94	2.14	1.4%
15	\$157.25	\$161.83	4.58	2.9%
20	\$162.70	\$169.72	7.02	4.3%
25	\$168.15	\$177.61	9.46	5.6%
30	\$173.60	\$185.50	11.90	6.9%
35	\$179.05	\$193.39	14.34	8.0%
40	\$184.50	\$201.29	16.79	9.1%
45	\$189.95	\$209.18	19.23	10.1%
50	\$198.15	\$221.19	23.04	11.6%

Meter Size	Current	Proposed
5/8" & 3/4"	\$140.90	\$138.16
1"	235.20	230.62
1 1/2"	469.10	459.97
2"	750.80	736.19
3"	1,408.70	1,381.28

Unmetered	\$165.20	\$175.17
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**Commodity Charge**

0 - 45 CCF	\$1.09	\$1.58
45 + CCF	\$1.64	\$2.40



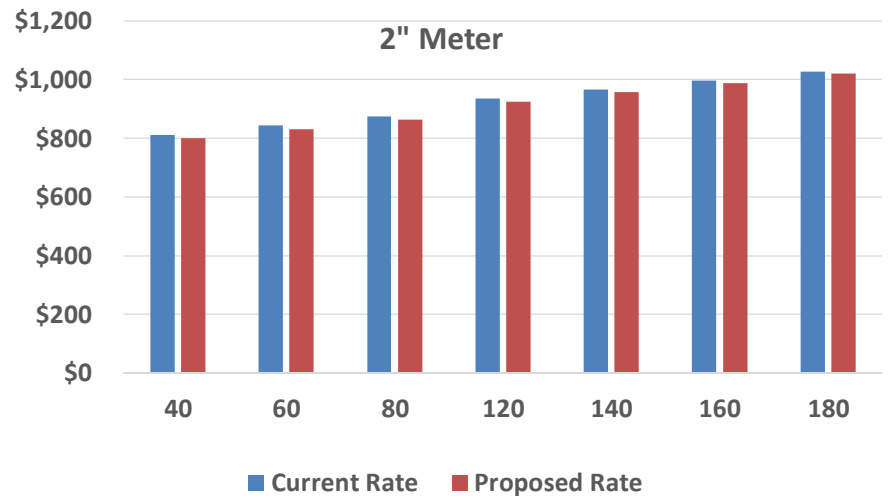
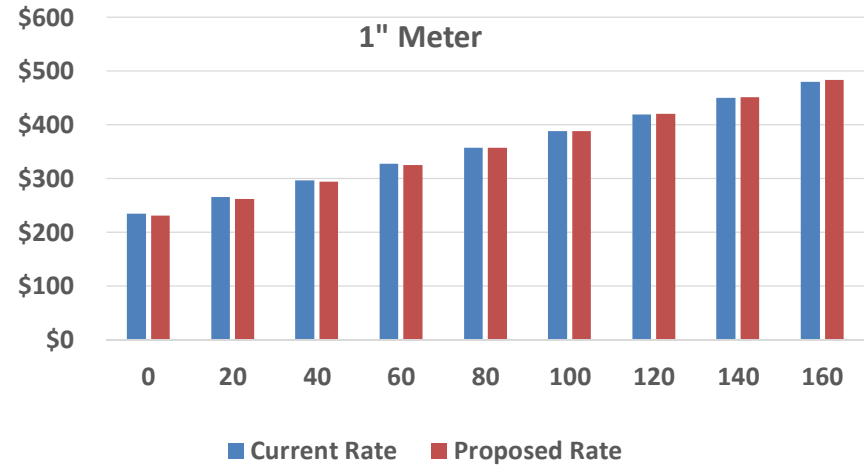
South Tahoe PUD  
Water Utility  
Rate Design  
Exhibit 18 - Multifamily Bill Comparison

Consumption	Current Rate	Proposed Rate	\$ Change	% Change
<b>1" Meter</b>				
0	\$235.20	\$230.62	(\$4.58)	-1.9%
20	\$265.80	\$262.12	(3.68)	-1.4%
40	\$296.40	\$293.61	(2.79)	-0.9%
60	\$327.00	\$325.11	(1.89)	-0.6%
80	\$357.60	\$356.61	(0.99)	-0.3%
100	\$388.20	\$388.10	(0.10)	0.0%
120	\$418.80	\$419.60	0.80	0.2%
140	\$449.40	\$451.09	1.69	0.4%
160	\$480.00	\$482.59	2.59	0.5%
<b>2" Meter</b>				
40	\$812.00	\$799.18	(12.82)	-1.6%
60	842.60	830.67	(11.93)	-1.4%
80	873.20	862.17	(11.03)	-1.3%
120	934.40	925.16	(9.24)	-1.0%
140	965.00	956.66	(8.34)	-0.9%
160	995.60	988.15	(7.45)	-0.7%
180	1,026.20	1,019.65	(6.55)	-0.6%

Meter Size	Current	Proposed
5/8" & 3/4"	\$140.90	\$138.16
1"	235.20	230.62
1 1/2"	469.10	459.97
2"	750.80	736.19
3"	1,408.70	1,381.28
4"	2,348.20	2,302.50
6"	4,694.90	4,603.52
8"	7,512.20	7,365.99
10"	10,799.90	10,589.70

**Commodity Charge**  
All Consumption /CCF

\$1.53      \$1.57



South Tahoe PUD  
Water Utility  
Rate Design  
Exhibit 19 - Commercial Bill Comparison

Consumption	Present Rate	Proposed Rate	\$ Change	% Change
<b>1" Meter</b>				
0	\$235.20	\$230.62	(\$4.58)	-1.9%
100	387.20	392.49	5.29	1.4%
200	539.20	554.37	15.17	2.8%
300	691.20	716.24	25.04	3.6%
400	843.20	878.11	34.91	4.1%
500	995.20	1,039.98	44.78	4.5%
600	1,147.20	1,201.86	54.66	4.8%
700	1,299.20	1,363.73	64.53	5.0%
800	1,451.20	1,525.60	74.40	5.1%

<b>2" Meter</b>				
50	\$826.80	\$817.12	(9.68)	-1.2%
150	978.80	979.00	0.20	0.0%
300	1,206.80	1,221.80	15.00	1.2%
450	1,434.80	1,464.61	29.81	2.1%
600	1,662.80	1,707.42	44.62	2.7%
750	1,890.80	1,950.23	59.43	3.1%
900	2,118.80	2,193.04	74.24	3.5%

Meter Size	Current	Proposed
5/8" & 3/4"	\$140.90	\$138.16
1"	235.20	230.62
1 1/2"	469.10	459.97
2"	750.80	736.19
3"	1,408.70	1,381.28
4"	2,348.20	2,302.50
6"	4,694.90	4,603.52
8"	7,512.20	7,365.99
10"	10,799.90	10,589.70

**Commodity Charge**

All Consumption /CCF	\$1.52	\$1.62
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