FINAL REPORT

City of Stockton
Municipal Utilities Department
May 2016 Water Rate Study

June 16, 2016

Ms. Regina Rubier
Water Resources Program Manager III
Department of Stockton
Municipal Utilities Department
2500 Navy Drive
Stockton, CA 95206

Subject: Comprehensive Water Rate Study Final Report

Dear Ms. Rubier:

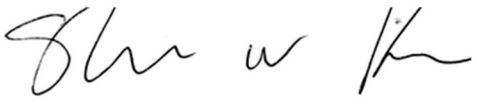
HDR Engineering, Inc. (HDR) is pleased to present to the City of Stockton, Municipal Utilities Department (Department) the final report for the 2016 comprehensive water rate study. The Department's comprehensive water rate study was developed to provide a financial plan and rates that generate sufficient revenue to fund the operating and capital needs and develop cost-based and equitable rates for the Department's customers. This report outlines the overall approach used to achieve these objectives, along with our findings, conclusions and recommendations.

The Department owns and operates a water supply, transmission, and distribution system. The Department utilizes ground water, surface water, along with purchasing water from Stockton East Water District (SEWD) to supplement other supplies. The costs associated with developing and purchasing water supplies, plus the costs of distributing water to customers has been developed based on Department provided information and included within the development of the proposed water rates.

This study was developed utilizing industry recognized water rate setting principles and methodologies. This report provides the basis for developing and implementing water rates which are cost-based, equitable and defensible to the Department's customers.

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

Sincerely yours,
HDR Engineering, Inc.



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Executive Summary

Introduction

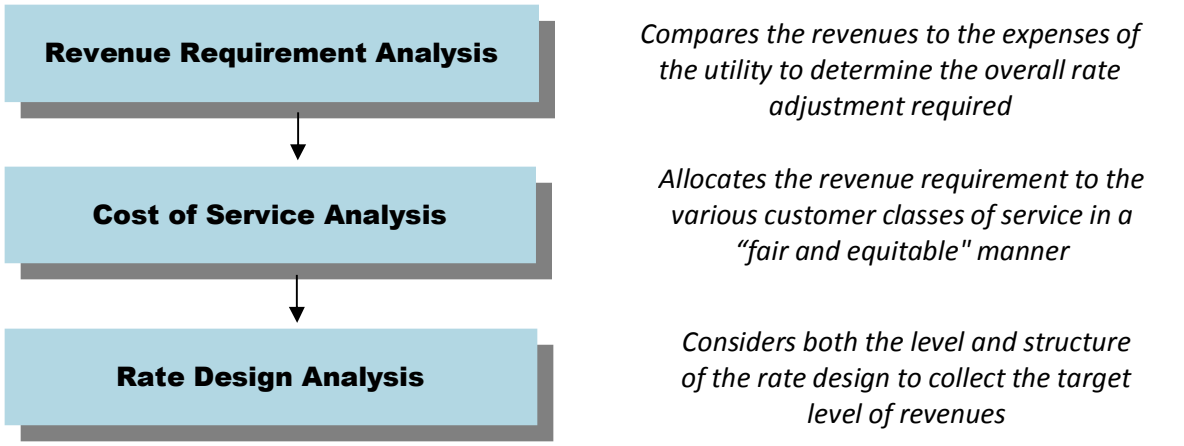
HDR was retained by the City of Stockton Municipal Utilities Department (Department) to conduct a comprehensive water rate study. The objective of the rate study was to review the Department's operating and capital costs in order to develop a financial plan and cost-based rates for the Department's water system customers. This study determined the adequacy of the existing water rates and provides the framework and cost basis for any needed future adjustments.

The Department owns and operates a water transmission and distribution system as well as production and treatment from ground and surface water sources. The Department also purchases water from Stockton East Water District (SEWD) to supplement local ground water and surface water resources. The costs associated with providing water supply, plus the costs of distributing water to customers for the system has been developed based on Department provided information and included within the development of the proposed rates.

Overview of the Rate Study Process

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

Figure ES – 1
Overview of the Comprehensive Water Rate Analyses



The above framework for reviewing and evaluating the Department's water rates and was utilized in the development of this study.

Key Water Rate Study Results

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

- A revenue requirement analysis was developed for the projected time period of FY 2016 through FY 2026.
- The Department's FY 2016 and projected FY 2017 budget were used as the starting point of the analysis.
- The cost of purchased water from Stockton East Water District (SEWD) has increased substantially, which in turn has added to the overall need for a rate adjustment.
- Operation and maintenance expenses are projected to increase at inflationary levels with no assumed changes to levels of service or anticipated extraordinary expenses.
- The current drought has impacted customer consumption levels, which in turn has considerably reduced overall revenues for the Department.
- The water system has average annual net debt service payments of approximately $16.5 million. Annual debt service payments have been structured to remain relatively level over the review period based on the debt service schedules.
- Annual rate adjustments over the next five-year time period are needed to meet legally required debt service coverage ratios and support annual operating and necessary capital expenditures.
- The proposed water rate adjustments are 18.5% for FY 2017, 11.0% in FY 2018, and 3.0% adjustments annually in FY 2019 through FY 2021.
- A cost of service analysis was developed to review the equity of the existing rates and proportionally allocate the revenue requirement between the various customer classes.
- The results of the cost of service analysis provided the unit costs (i.e., cost basis) which were used to establish the proposed rates.
- The study has developed proposed rates for the FY 2017 – FY 2021 time period, by class of service.
- Drought surcharges have been developed for the Department to attempt to maintain sufficient revenues during mandatory conservation efforts or water shortage events.
- The drought surcharges may be implemented by the City Council as drought stages are declared and changed as drought conditions change.

Summary of the Water Revenue Requirement Analysis

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

For this study, the revenue requirement was developed for a projected time period (FY 2016 – FY 2025). A multi-year time frame is recommended to better anticipate future financial

requirements and allow the Department to begin planning for these changes sooner, thereby minimizing short-term rate impacts and overall long-term rates. For the revenue requirement analysis a "cash basis" approach was utilized. The "cash basis" approach is the most commonly used methodology by municipal utilities to set their revenue requirement and it includes an analysis of O&M expenses, transfer payments, debt service, and capital projects funded from rates. The primary financial inputs in the development of the revenue requirement analysis were the Department's FY 2016 and projected FY 2017 budgets, FY 2014 and FY 2015 billed customer and consumption data, and the Department's water system capital improvement plan.

Once the operating and maintenance expenses have been projected over the time period, the next step is to develop the capital improvement funding plan. The proper and adequate funding of capital projects is important to help minimize rates 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 rates. Currently, the Department is not funding annual depreciation expense but rate funded capital is increased annually. Provided below in Table ES - 1 is a summary of the capital funding plan over the five-year rate setting period.

Table ES – 1
Summary of the Annual Rate Funded Capital ($000)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Total Capital Improvement Projects	$2,414	$3,205	$3,059	$3,450	$3,900
Less: Other Funding	64	705	59	0	0
Total Rate Funded Capital	$2,350	$2,500	$3,000	$3,450	$3,900

As a point of reference, the Department's annual depreciation expense is approximately $7.4 million (FY 2014). This financial plan has placed the Department's rate funding for CIP at $3.9 million by FY 2021. As can be seen, the difference between annual capital improvement needs and rate funded capital is being funded through existing reserves as rate funded capital is increased over time. The Department's capital plan reflects only the critical projects needed to maintain the existing system and replace deteriorating infrastructure.

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

Table ES - 2
Summary of the Revenue Requirement Analysis ($000)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Revenues					
Rate Revenues	$34,283	$34,454	$34,626	$34,800	$35,061
Misc. Revenues	1,513	1,505	1,520	1,538	1,558
Total Revenues	**$35,796**	**$35,959**	**$36,147**	**$36,337**	**$36,619**
Expenses					
O & M	$15,927	$16,413.82	$16,917	$17,437	$17,976
Purchased Water	9,938	10,584	11,272	12,005	12,785
Net Debt Service	12,164	16,651	16,643	16,437	15,681
Rate Funded Capital	2,350	2,500	3,000	3,450	3,900
Change in Working Capital	1,131	675	600	770	1,609
Total Expenses	**$41,511**	**$46,824**	**$48,433**	**$50,099**	**$51,951**
Bal./(Def.) of Funds	**($5,715)**	**($10,865)**	**($12,286)**	**($13,762)**	**($15,333)**
Bal. as a % of Rate Rev.	*16.7%*	*31.5%*	*35.5%*	*39.5%*	*43.7%*
Proposed Rate Adjustment	**18.5%**	**11.0%**	**3.0%**	**3.0%**	**3.0%**
Additional Rev. from Rate Adj.	**$5,715**	**$10,865**	**$12,286**	**$13,762**	**$15,333**
Total Bal./(Def.) of Funds	**$0**	**($0)**	**$0**	**$0**	**$0**

As can be seen, the revenue requirement has summed O&M, rate funded capital, net debt service and change in working capital. As a note, the City is planning on a principal defeasance for the FY 2017 annual debt service. This reduces the annual payments as it is funded through existing reserves. The total revenue requirement is then compared to the total sources of funds which are the rate revenues, at present rate levels, and other miscellaneous revenues. From this comparison a balance or deficiency of funds in each year can be determined. This balance or deficiency of funds is then compared to the rate revenues to determine the level of rate adjustment needed to meet the revenue requirement. It is important to note the "Bal./(Def.) of Funds" row is cumulative. That is, any adjustments in the initial years will reduce the deficiency in the later years. Over this project time period, the total deficiency of rates is 43.7% for the water utility. To meet the overall revenue needs of the five year rate period, the following rate adjustments are proposed:

- FY 2016/17 – 18.5%
- FY 2017/18 – 11.0%
- FY 2018/19 – 3.0%
- FY 2019/20 – 3.0%
- FY 2020/21 – 3.0%

It should also be noted that the rate adjustment in FY 2017 will not be implemented for a full year given the timing needs for implementation. The above rate adjustments, on a cumulative basis, meet the overall need for a 43.7% rate adjustment over the time period reviewed. Based

on the revenue requirement analysis developed, HDR has concluded that the Department will need to adjust the level of water rate revenues as noted above to maintain cost-based rates. HDR has reached this conclusion for the following reasons:

- Rate adjustments are necessary to meet the legally required debt service coverage ratios. Failure to meet these required debt service coverage ratios can result in a technical default, and if rates are left unadjusted long enough could ultimately result in a payment default.
- Rate adjustments are necessary to reflect the reduction in annual water consumption due to the drought and State mandated conservation.
  - This new level of consumption may be reflective of the new level of water consumption for the foreseeable future.
- The proposed rate adjustments maintain the Department's financial health and provide long-term sustainable funding levels.
- The rate adjustments are based on the Department completing a defeasance of bond principle payments.
- Prior to the implementation of the fifth, and final, proposed rate adjustment the Department should complete a review of the water rates.

In reaching this conclusion, HDR would recommend that the Department adopt the proposed rate adjustments through FY 2021 in order to provide sufficient funding for the projected operating and capital needs of the system. Detailed technical exhibits of the revenue requirement analysis have been included within the Technical Appendix.

Summary of the Water Cost of Service Analysis

A cost of service analysis determines the equitable allocation of the revenue requirement to the various customer classes of service (e.g., single family, multi-family, non-residential, and irrigation). The objective of the cost of service analysis is different from determining the revenue requirement analysis. A revenue requirement analysis determines the utility's overall financial needs, while the cost of service analysis determines the fair and equitable manner to collect that revenue requirement from each class.

In summary form, the cost of service analysis began by functionalizing the revenue requirement for the water utility. The functionalized revenue requirement was then classified into their various cost components. The individual classification totals were then allocated to the various customer classes of service based on the appropriate allocation factors. The allocated expenses for each customer class were then aggregated to determine each customer class's overall revenue responsibility. Table ES - 3 provides the summary of the cost of service analysis for the FY 2017 test year.

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

Class of Service	Present Revenues (FY 2017)	Allocated Costs	$ Difference	% Difference
Single Family	$23,649	$27,280	($3,631)	15.4%
Multi-Family	3,751	4,382	(630)	16.8%
Non-Residential[1]	4,411	5,191	(781)	17.7%
Irrigation	2,472	3,144	(672)	27.2%
Total	**$34,283**	**$39,998**	**($5,715)**	**16.7%**

[1] – "Non-Residential" class includes commercial, institutional, and industrial customers

The cost of service study allocates the proportional share of the revenue requirement to each customer class based on their use of the system and facilities. The results of the analysis indicate that some cost differences exist between the various customer classes of service. It is important to understand that a cost of service analysis is based on a projection of customer consumption data based on recent year's consumption history. While the results of the analysis appear to be reasonable, the key outcome of the cost of service analysis is the unit costs (e.g., $/CCF). The unit costs provide the cost basis for the development of the proposed water rates. Provided in Table ES - 4 is a summary of the consumption related unit costs derived in the cost of service analysis that will be used to develop the proposed rate designs.

Table ES – 4
Summary of the Consumption Related Unit Costs ($ / CCF)

	Single Family	Multi-Family	Non-Residential	Irrigation
Tier 1	$2.00	N/A	N/A	N/A
Tier 2	$2.39	N/A	N/A	N/A
Winter	N/A	$1.70	$1.70	$1.78
Summer	N/A	$1.85	$1.98	$2.26

[1] – Winter: Oct – Apr; Summer: May – Sept

Section 4 of this report provides a detailed discussion of the cost of service analysis conducted for the Department and the development of the unit costs provided in Table ES - 4. The Technical Appendix contains the various exhibits and additional details associated with the cost of service analysis.

Summary of the Present and Proposed Water Rate Designs

The final step of the comprehensive rate study process is the design of water rates to collect the desired levels of revenue, based on the results of the revenue requirement and cost of

service analyses. The revenue requirement analysis provided a set of recommendations related to annual rate adjustments, or the level of total revenues necessary to provide sufficient funding, while the cost of service analysis resulted in recommendations as to how the revenue is collected proportionally from the customer classes of service.

Developing cost-based and equitable rates is of paramount importance in developing proposed water rates. Given this, the Department's proposed water rates have been developed with the intent of meeting the legal requirements of California constitution article XIII D, section 6 (Article XIII D). 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 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 rates, consequently, HDR developed the Department's proposed water rates based on the AWWA M1 manual methodology to meet the requirements of Article XIII D and recent legal decisions to provide an administrative record of the steps taken to establish the Department'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 Department'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 Department's water rates are used exclusively to operate and maintain the Department'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, etc.) that reflect the varying consumption patterns and system requirements of each customer class of service. The grouping of customers and rates into these classes of service creates the equity and fairness 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 Department's the water system and water resources.

The Department currently has established customer classes of service that were developed in the 2009 rate study. However, the current rate structure is the same for all customers which includes a variable meter charge and uniform consumption charge. Given the prior discussion of the need to develop rates based on cost of service principles, the unit costs in Table ES - 4

were used to develop the proposed water rates for the Department's customer classes of service.

One of the rate structure goals of this study was the development of a more conservation-oriented rate structure while still maintaining the revenue stability of the current structure. Given this, HDR and Department staff developed the proposed single family rate structure that includes a variable meter charge and a two block tiered rate structure. The block sizes are based on the typical customer consumption patterns and provide 15 CCF per month (billing period) in the first tier. This level of usage, based on the Department's customer specific data, provides ample consumption in the winter period, or when outside watering needs are minimal. All consumption over the first tier is charged at a higher rate to provide the conservation signal based on the increased costs associated with providing the additional capacity needed for higher water consumption. Provided below in Table ES - 5 is a summary of the current and proposed single family water rates over the five year rate setting period.

Table ES - 5
Summary of the Proposed Single Family Water Rates

	Present Rate	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Fixed Charge	***$/Acct/Mo***					
5/8"	$18.94	N/A	N/A	N/A	N/A	N/A
3/4"	22.25	N/A	N/A	N/A	N/A	N/A
1"	29.24	N/A	N/A	N/A	N/A	N/A
1" & less	N/A	$28.00	$31.00	$31.95	$32.90	$33.90
1 1/2"	42.17	56.00	62.00	63.90	65.80	67.80
2"	54.49	89.60	99.20	102.24	105.28	108.48
3"	96.36	168.00	186.00	191.70	197.40	203.40
4"	138.53	280.00	310.00	319.50	329.00	339.00
6"	228.20	560.00	620.00	639.00	658.00	678.00
8"	330.87	896.00	992.00	1,022.40	1,052.80	1,084.80
10"	412.91	1,288.00	1,426.00	1,469.70	1,513.40	1,559.40
12"	581.32	1,890.00	2,092.50	2,156.63	2,220.75	2,288.25
Consumption Charge	***$/CCF***					
All Usage	$1.67	N/A	N/A	N/A	N/A	N/A
0 - 15 CCF	N/A	$2.00	$2.23	$2.31	$2.39	$2.47
15 + CCF	N/A	2.39	2.66	2.76	2.86	2.95

As can be seen, the proposed rates have been adjusted to reflect the overall revenue needs of the water utility based on the revenue requirement and cost of service analysis. Single family consumption charges have been transitioned to a two tiered rate structure to better align with how costs are incurred by the Department and more closely mirror how a customers' usage impacts those costs. It should also be noted that the variable meter charge will now start at a 1-inch or less meter size. This revision was made as the minimum size for all customers will be a

1-inch meter. As the department replaces older meters on the system, they will be replaced with a 1-inch meter.

While tiered rates can be developed for the single family customer class of service, it is more technically challenging to develop equitable tiered rates for other customer types given the variation in the consumption patterns. For example, a small multi-family complex can have vastly different consumption patterns and levels than much larger multi-family complex. Given this, a tiered rate structure is more difficult to develop that is equitable to all customers. To meet the conservation and revenue stability goals of the study, the proposed rates for the multi-family customers is proposed to be a seasonal rate structure. The "winter" period has been identified as October through April and the "summer" period is May through September. Provided in Table ES - 6 is a summary of the current and proposed water rates for the multi-family customer class of service.

Table ES - 6
Summary of the Proposed Multi-Family Water Rates

	Present Rate	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Fixed Charge	***$/Acct/Mo***					
5/8"	$18.94	N/A	N/A	N/A	N/A	N/A
3/4"	22.25	N/A	N/A	N/A	N/A	N/A
1"	29.24	N/A	N/A	N/A	N/A	N/A
1" & less	N/A	$28.00	$31.00	$31.95	$32.90	$33.90
1 1/2"	42.17	56.00	62.00	63.90	65.80	67.80
2"	54.49	89.60	99.20	102.24	105.28	108.48
3"	96.36	168.00	186.00	191.70	197.40	203.40
4"	138.53	280.00	310.00	319.50	329.00	339.00
6"	228.20	560.00	620.00	639.00	658.00	678.00
8"	330.87	896.00	992.00	1,022.40	1,052.80	1,084.80
10"	412.91	1,288.00	1,426.00	1,469.70	1,513.40	1,559.40
12"	581.32	1,890.00	2,092.50	2,156.63	2,220.75	2,288.25
Consumption Charge	***$/CCF***					
All Usage	$1.67	N/A	N/A	N/A	N/A	N/A
Winter (Oct - Apr)	N/A	$1.70	$1.90	$1.97	$2.04	$2.11
Summer (May - Sept)	N/A	1.85	2.07	2.14	2.22	2.30

Table ES – 6 above shows that the variable meter charge for the multi-family customers is the same as single family. However, the consumption charge is proposed to change from a uniform rate to a seasonal rate structure which reflects how the Department incurs costs on a seasonal basis and provides a conservation incentive based on the allocation of costs provided in the cost of service analysis.

The current rate structure for the non-residential customers is the same as the rest of the Department's customers with a fixed monthly meter charge and a uniform consumption charge. As with multi-family customers, the non-residential customer consumption patterns and level of consumption varies significantly from customer to customer. The proposed rate structure for non-residential maintains the fixed meter charge at the same level as all other customers, however, the consumption charge is proposed to be a seasonal (winter/summer) rate structure as in multi-family. Although the structure is the same as multi-family, the proposed rates for the non-residential customers are different than multi-family as they are based on the cost of service analysis unit costs and reflect the specific usage characteristics unique to the non-residential customer class. Provided in Table ES - 7 is a summary of the current and proposed rates for non-residential customers.

Table ES - 7
Summary of the Proposed Non-Residential[1] Water Rates

	Present Rate	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Fixed Charge	***$/Acct/Mo***					
5/8"	$18.94	N/A	N/A	N/A	N/A	N/A
3/4"	22.25	N/A	N/A	N/A	N/A	N/A
1"	29.24	N/A	N/A	N/A	N/A	N/A
1" & less	N/A	$28.00	$31.00	$31.95	$32.90	$33.90
1 1/2"	42.17	56.00	62.00	63.90	65.80	67.80
2"	54.49	89.60	99.20	102.24	105.28	108.48
3"	96.36	168.00	186.00	191.70	197.40	203.40
4"	138.53	280.00	310.00	319.50	329.00	339.00
6"	228.20	560.00	620.00	639.00	658.00	678.00
8"	330.87	896.00	992.00	1,022.40	1,052.80	1,084.80
10"	412.91	1,288.00	1,426.00	1,469.70	1,513.40	1,559.40
12"	581.32	1,890.00	2,092.50	2,156.63	2,220.75	2,288.25
Consumption Charge	***$/CCF***					
All Usage	$1.67	N/A	N/A	N/A	N/A	N/A
Winter (Oct - Apr)	N/A	$1.70	$1.90	$1.97	$2.04	$2.11
Summer (May - Sept)	N/A	1.98	2.21	2.29	2.38	2.46

[1] "Non-residential" includes commercial, institutional, and industrial customers

Table ES – 7 shows the proposed rates for non-residential over the five year period based on the results of the cost of service analysis and non-residential customer characteristics.

The current rate structure for the irrigation customers is also a fixed monthly meter charge and a uniform consumption charge. The proposed rate structure maintains the fixed meter charge equal to the other classes. However, similar to the non-residential customers the proposed consumption charge is a seasonal (winter/summer) rate structure. Although the structure is the same as all others, the rates for the irrigation customers reflect the costs allocated to the

irrigation customers and the usage characteristics unique to the irrigation customer class. Provided in Table ES - 8 is a summary of the current and proposed rates for irrigation customers.

Table ES - 8
Summary of the Proposed Irrigation Water Rates

	Present Rate	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Fixed Charge	***$/Acct/Mo***					
5/8"	$18.94	N/A	N/A	N/A	N/A	N/A
3/4"	22.25	N/A	N/A	N/A	N/A	N/A
1"	29.24	N/A	N/A	N/A	N/A	N/A
1" & less	N/A	$28.00	$31.00	$31.95	$32.90	$33.90
1 1/2"	42.17	56.00	62.00	63.90	65.80	67.80
2"	54.49	89.60	99.20	102.24	105.28	108.48
3"	96.36	168.00	186.00	191.70	197.40	203.40
4"	138.53	280.00	310.00	319.50	329.00	339.00
6"	228.20	560.00	620.00	639.00	658.00	678.00
8"	330.87	896.00	992.00	1,022.40	1,052.80	1,084.80
10"	412.91	1,288.00	1,426.00	1,469.70	1,513.40	1,559.40
12"	581.32	1,890.00	2,092.50	2,156.63	2,220.75	2,288.25
Consumption Charge	***$/CCF***					
All Usage	$1.67	N/A	N/A	N/A	N/A	N/A
Winter (Oct - Apr)	N/A	$1.78	$1.99	$2.06	$2.13	$2.20
Summer (May - Sept)	N/A	2.26	2.53	2.62	2.70	2.79

Section 5 of this report provides a detailed discussion of the current and proposed water rates along with a component by component summary of the water rates for FY 2017 – FY 2021.

Summary of the Proposed Drought Surcharges

As part of the water rate study, the Department requested the development of drought surcharges to maintain sufficient revenues during drought or water shortage periods. Drought surcharges are an important tool that allows the Department to maintain adequate revenues when consumption declines due to voluntary or mandatory conservation resulting from drought conditions, such as the current drought California is experiencing, or other water shortage emergencies (e.g., supply constraints due to infrastructure failure).

When properly designed, drought surcharges address the issues of the financial/revenue impacts of decreased consumption. When a utility enters a drought stage, it is not uncommon for a utility to have a set of drought surcharges to maintain sufficient revenues due to reductions in usage. For purposes of establishing drought surcharges, the Department has five different levels reflecting water restrictions which are defined within the Department's Urban

Water Management Plan. These five levels are summarized below along with the estimated consumption reductions resulting from additional conservation restrictions.

- Level 1 – Limited Irrigation/Outdoor Use
  - Approximately a 10% reduction in consumptive use
- Level 2 – Minimal Irrigation/Outdoor Use
  - Approximately a 20% reduction in consumptive use
- Level 3 – Limited Irrigation/Outdoor Use
  - Approximately a 30% reduction in consumptive use
- Level 4 – Limited Irrigation/Outdoor Use
  - Approximately a 40% reduction in consumptive use
- Level 5 – No Irrigation/Outdoor Use
  - Approximately a 50% reduction in consumptive use

In developing the proposed drought surcharges, the monthly meter charge remains fixed at the same level regardless of the drought stage. Based on the conservation savings estimated for each drought level, the drought surcharges were developed to maintain the current level of revenues for each customer class of service. Provided below in Table ES - 9 is a summary of the drought surcharges for each level.

Table ES – 9
Summary of the Drought Surcharges – $/CCF

	Stage 1	Stage 2	Level 3	Level 4	Level 5
	10%	20%	30%	40%	50%
Single Family					
0 – 15 CCF	$0.23	$0.53	$0.90	$1.40	$2.10
15 +CCF	0.23	0.53	0.90	1.40	2.10
Multi-Family					
Winter (Oct – Apr)	$0.20	$0.44	$0.76	$1.18	$1.77
Summer (May – Sept)	0.20	0.44	0.76	1.18	1.77
Non-Residential					
Winter (Oct – Apr)	$0.21	$0.46	$0.79	$1.23	$1.85
Summer (May – Sept)	0.21	0.46	0.79	1.23	1.85
Irrigation					
Winter (Oct – Apr)	$0.23	$0.52	$0.90	$1.39	$2.09
Summer (May – Sept)	0.23	0.52	0.90	1.39	2.09

The drought rates in Table ES - 9 are added to the adopted rates in place at the time the drought stage is declared. The drought surcharges would be applied to each tier of the Department's rates. For example, the single family proposed rate for the first tier is currently $2.00/CCF and if the Department declares a Stage 2 drought; the first tier rate will change to $2.53/CCF ($2.00 + $0.53). These drought surcharges can be added to the Department's proposed rates, as requested by the Department staff and approved by the City Council.

Implementation of these drought surcharges will help the Department maintain revenue levels during drought related consumption reductions.

A more detailed discussion of the drought surcharges is provided in Section 5 of this report.

Water Rate Study Recommendations

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

- Rate adjustments are necessary to meet legally required debt service coverage ratios and prudently fund operating and necessary capital renewal and replacement expenses.
- Water rates should be adjusted 18.5% based on the proposed rates as part of this study starting in FY 2017. The proposed rate adjustment is 11.0% in FY 2018 and 3.0% from FY 2019 through FY 2021.
- 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.
- Drought surcharges should be adopted based on the need to maintain sufficient revenues for operating and capital needs during drought or water shortage events.
- Drought surcharges should be implemented at the appropriate level in FY 2017 along with the proposed rates.
- Drought surcharges should be adjusted when water rates are adjusted during the proposed time period (FY 2018 – FY 2021).
- Prior to the implementation of the fifth, and final, proposed rate adjustment the Department should complete a review of the water rates.

Summary of the Water Rate Study

This completes the summary of the development of the comprehensive water rate study for the Department. The focus of this study has been the prudent and adequate funding of the utility, particularly as it relates to meeting the legally required debt service coverage ratios. A full and complete discussion of the development of the comprehensive water rate study can be found in following sections of this report.

1. Introduction and Overview

1.1 Introduction

HDR was retained by the City of Stockton Municipal Utilities Department (Department) to conduct a comprehensive water rate study. The objective of the rate study was to review the Department's operating and capital costs in order to develop a financial plan and cost-based rates for the water system's customers. This study determined the adequacy of the existing water rates and provides the framework and cost basis for any needed future adjustments.

The Department owns and operates a water supply, transmission, and distribution system. The Department purchases water from Stockton East Water District (SEWD) and supplements its purchased water with local ground water and surface water resources. The costs associated with providing water supply, plus the costs of distributing water to customers, has been developed based on Department provided information and included within the development of the proposed rates.

1.2 Goals and Objectives

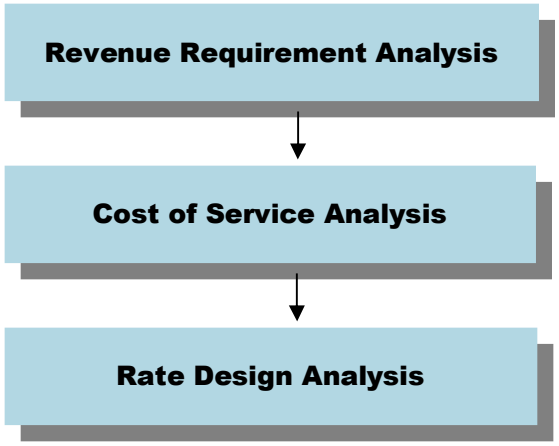
The Department had a number of key objectives in developing the water rate study. These key objectives provided a framework for policy decisions in the analysis that follows. These key objectives were as follows:

- Develop the study in a manner that is consistent with the principles and methodologies established by the American Water Works Association (AWWA), M1 Manual, Principles of Water Rates, Fees, and Charges.
- In financial planning and establishing the Department's rates, review and utilize best industry practices, while recognizing and acknowledging the specific and unique characteristics of the Department's system.
- Review the Department's rates utilizing "generally accepted" rate making methodologies to determine adequacy and equity of the utility rates.
- Meet the Department's financial planning criteria, particularly as it relates to legally required debt service coverage ratios, adequate funding of capital infrastructure, and maintenance of adequate and prudent reserve levels.
- Develop a final proposed financial plan which adequately supports the 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 rates that provide additional conservation incentive that is cost-based while reflecting the Department's specific costs while maintaining the revenue stability of the current rate structure.

1.3 Overview of the Rate Study Process

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

Figure 1–1
Overview of the Comprehensive Water Rate Analyses



Compares the revenues to the expenses of the utility to determine the overall rate adjustment required

Allocates the revenue requirement to the various customer classes of service in a "fair and equitable" manner

Considers both the level and structure of the rate design to collect the target level of revenues

The above framework for reviewing and evaluating rates was utilized for the Department's water system.

1.4 Organization of the Study

This report is organized in a sequential manner that first provides an overview of utility rate setting principles, followed by sections that detail the specific steps used to review the Department's water rates. The following sections comprise the Department's water rate study report:

- **Section 2** – Overview of Water Rate Setting Principles
- **Section 3** – Development of the Revenue Requirement Analysis
- **Section 4** – Development of Cost of Service Analysis
- **Section 5** – Development of the Proposed Rate Designs

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

1.5 Summary

This report will review the comprehensive water rate analyses prepared for the Department. This report has been prepared utilizing generally accepted water rate setting techniques.

2. Overview of Water Rate Setting Principles

2.1 Introduction

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

2.2 Generally Accepted Rate Setting Principles

As a practical matter, all utilities should consider setting their rates around some generally accepted or global principles and guidelines. Utility rates 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 to "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 that is stable from year-to-year from a customer's perspective.

2.3 Determining the Revenue Requirement

Most public utilities 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 totals its cash expenditures for a period of time to determine required revenues. The revenue requirement for a public utility is usually comprised of the following costs or expenses:

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

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

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. At the same time, it is often difficult to pay for capital expenditures on a "pay-as-you-go" basis given that some major capital projects may have significant rate impacts upon a utility, even when financed with long-term debt. Many utilities have found that some combination of pay-as-you-go funding and long-term financing will often lead to minimization of rate increases over time.

Public utilities typically use the "cash basis"[1] approach to establish their revenue requirements. 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 Table 2 - 1) regarding earning a fair return on its investment.

Table 2 – 1
Cash versus Utility Basis Comparison

	Cash Basis		Utility Basis (Accrual)
+	O&M Expenses	+	O&M Expenses
+	Taxes/Transfer Payments	+	Taxes/Transfer Payments
+	Capital Improv. Funded From Rates (≥ Depreciation Expense)	+	Depreciation Expense
+	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 equitably allocated to the users of the service. The allocation, usually analyzed through a cost of service analysis, reflects the cost relationships for producing and delivering water services. A cost of service analysis requires three analytical steps:

1. Costs are ***functionalized*** or grouped into the various cost categories related to providing service (supply, distribution, pumping, etc.). This step is largely accomplished by the utility's accounting system.
2. The functionalized costs are then ***classified*** to specific cost components. Classification refers to the arrangement of the functionalized data into cost components. For example, a water utility's costs are typically classified as average day, peak day, or customer-related.

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

3. Once the costs are classified into components, they are proportionally ***allocated*** to the customer classes of service (residential, multi-family, non-residential, irrigation). The allocation is based on each customer class' relative contribution to the cost component (i.e., benefits received from and burdens placed on the system and its resources). For example, customer-related costs are allocated to each class of service based on the total number of customers in that class of service. Once costs are allocated, the revenues from each customer class of service required to achieve cost-based rates can be determined.

2.6 Designing Water Rates

Rates that meet the utility's objectives are designed based on both the revenue requirement and the cost of service analysis. This approach results in rates that are strictly cost-based and does not consider other non-cost based goals and objectives (conservation, economic development, ability to pay, revenue stability, etc.). 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 typically be taken into consideration. However, the proposed rates must take into consideration each customer class's proportional share of costs allocated through the cost of service analysis to meet the legal requirements.

2.7 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 lawn 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. This price-equals-cost concept provides the basis for the subsequent analysis and comments.

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

2.8 Summary

This section of the report has provided a brief introduction to the general principles, techniques, and economic theory used to set water rates. These principles and techniques will become the basis for the Department's water rate study.

3. Development of the Revenue Requirement

3.1 Introduction

This section describes the development of the revenue requirement for the Department's water utility. The Department has provided detailed revenue and expenses data for the water system that allowed for the development of the revenue requirement. The revenue requirement analysis is the first analytical step in the comprehensive rate study process. This analysis determines the adequacy of the Department's overall water rates at current rate levels. From this analysis, a determination can be made as to the overall level of rate adjustment needed to provide adequate and prudent funding for both operating and capital needs. HDR developed an independent analysis based on information provided by the Department as part of the review of proposed rate adjustments.

3.2 Determining the Revenue Requirement

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

3.3 Establishing a Time Frame and Approach

The first step in calculating the revenue requirement for the Department's water utility was to establish a time frame for the revenue requirement analysis. For this study, the revenue requirement was developed for a 10-year time period (FY 2016 – FY 2025). This time frame was composed of the FY 2016 and the projected FY 2017 budgets projected through FY 2025, with the focus for rate setting purposes on FY 2017 – FY 2021. Reviewing a multi-year time period is recommended since it attempts to identify any major expenses that may be on the horizon. By anticipating future financial requirements, the Department can begin planning for these changes sooner, thereby minimizing short-term rate impacts and overall long-term rates.

The second step in determining the revenue requirement was to decide on the basis of accumulating costs. In this particular case, for the revenue requirement analysis a "cash basis" approach was utilized. The "cash basis" approach is the most common methodology used by municipal utilities to set their revenue requirement. This is also the methodology that the Department has historically used to establish its water revenue requirement. Table 3 - 1 provides a summary of the "cash basis" approach and cost components used to develop the Department's water revenue requirement.

Table 3 – 1
Overview of the Department's "Cash Basis" Revenue Requirements

+	Water Operation and Maintenance Expenses
+	Rate Funded Capital
+	Debt Service (Principal + Interest) – Existing and Future
±	Change in Working Capital
=	Total Water Revenue Requirement
–	Miscellaneous Revenues
=	Net Revenue Requirement (Balance Required from water Rates)

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

The primary financial inputs in the development of the revenue requirement were the Department's FY 2016 and projected FY 2017 budget documents, FY 2014 and FY 2015 billed customer and consumption data, and the current water capital improvement plan. Presented below is a detailed discussion of the steps and key assumptions contained in the development of the projections of the Department's water revenue requirement analysis.

3.4 Projecting Rate and Other Miscellaneous Revenues

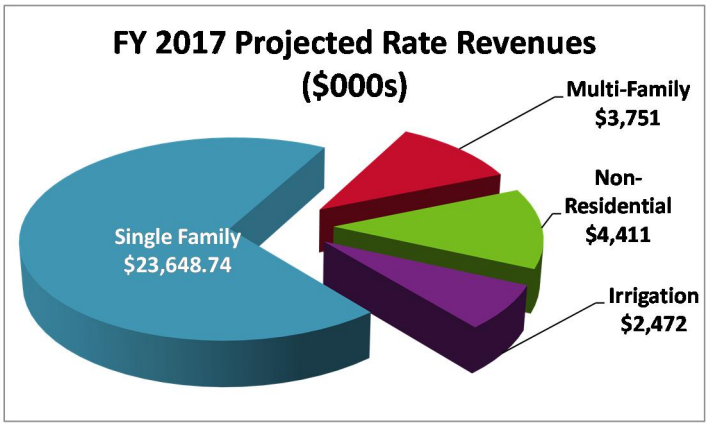
Once the method and time period for developing the revenue requirement was established, the next step is to develop a projection of the water rate revenues, at present rate levels. In general, this process involved developing projected billing units for each customer group (e.g., single family, non-residential). The billing units for each customer group were then multiplied by the applicable current water rates. This method of independently calculating revenues links the projected revenues used within the analysis to the projected billing units. It also helps to confirm that the billing units used within the study are reasonable for purposes of projecting future revenues, allocating costs and, ultimately, establishing proposed rates.

". . . the State of California has recently implemented additional required conservation savings for 2015 which will impact the level of consumption and resulting consumption based revenues."

A key aspect of the projection of water rate revenues was to develop a projection of consumption levels considering the current drought. In addition, the State of California has recently implemented additional required conservation savings for 2015 which impacted the level of consumption and resulting consumption-based revenues. The last two fiscal years of consumption data was reviewed to obtain a better projection of future customer consumption characteristics. In an effort to reflect anticipated future consumption levels, and in discussion with Department staff, it was determined that the average consumption levels of

the last two fiscal years would be used as they appear to reflect "normal" consumption for the next several years.

The Department currently has separate rate schedules for all its customers, although the rates and structure are the same for each. The majority of the Department's rate revenues are derived from the single-family residential customers. The Department also serves a variety of non-residential customers which includes the commercial, institutional, and industrial customers, as well as irrigation customers. In total, and at currently rate levels, the Department is projected to receive approximately $34.2 million in rate revenue in FY 2017 assuming "normal" water consumption levels. Over time, the study has assumed a conservative level of customer growth that is less than 1%/year. By FY 2021, the rate revenues, assuming no rate adjustments, are projected to be approximately $35.1 million.



In addition to rate revenues, the Department also receives miscellaneous revenues. These are revenues related to fire protection charges, interest earnings, penalties/fees and other miscellaneous revenues. In total, the Department is projected to receive approximately $1.5 million in miscellaneous revenues in FY 2016. This amount is anticipated to remain relatively flat over the projected five year time period.

On a combined basis, taking into account the rate revenues and the miscellaneous revenues, the Department's water utility has total projected revenues of approximately $35.8 million in FY 2017, increasing to approximately $36.6 million by FY 2021.

3.5 Projecting Operation and Maintenance Expenses

Operation and maintenance (O&M) expenses are incurred by the Department to provide water service (supply, treatment, and distribution of water), operate and maintain the existing infrastructure, as well as purchase water from Stockton East Water District (SEWD). It is important to note that the agreement that the Department has with SEWD for water purchase is a take or pay type agreement. That means that regardless of if the Department uses the entire amount of water that they're allotted for under the terms, they must pay for the entire amount. As previously mentioned, the Department provided detailed O&M expenses and capital improvement needs for the water utility. The budgeted O&M expenses were projected over the time period based on annual inflationary factors experienced by the Department and the general economy.

The total O&M expenses for the Department are approximately $25.9 million based on the FY 2017 budget. Over the planning horizon, the total O&M expenses for the Department are projected to increase to approximately $30.8 million by FY 2021 based on assumed inflationary

impacts. The majority of the annual increase is due to the purchased water costs increasing substantially from SEWD. This single line item accounts for approximately 30% of the Department's annual O&M expenses for the water utility.

3.6 Projecting Capital Funding Needs and Transfer Payments

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

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

- Renewal & replacement projects
- Growth/capacity expansion projects
- Regulatory-related projects

A renewal and replacement project is essentially a project required for maintaining the existing system that is in place today. As the existing plant or pipelines become worn out, obsolete, etc., the utility should be making continuous investments to maintain the integrity of the facilities. In contrast to this, a utility may make capital investments to expand the capacity of facilities to accommodate future capacity needs (customers). Finally, certain projects may be a function of a regulatory requirement in which the Federal or State government mandates the need for an improvement to the system to meet a regulatory standard. Understanding these different types of capital projects is important because it may help to explain why costs are increasing and the cost drivers for any needed rate adjustment. In addition, and more importantly, the way in which projects are funded may vary by the type of capital project. For example, renewal and replacement projects may be paid for via rates and funded on a "pay-as-you-go basis." In contrast to this, growth or capacity expansion projects may be funded via the collection of development or water connection fees (i.e., growth-related charges) in which new development pays a proportional and equitable share of the cost of facilities necessary to serve their development(impact). Finally, regulatory projects may be funded by a variety of different means, which may include rates, long-term debt, grants, etc.

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

For purposes of developing the capital funding plan the Department provided its long-term capital improvement plan (CIP). Provided in Table 3 - 2 is a summary of the capital funding plan. As noted, the focus of the rate study was on the next five-year period for rate setting purposes.

It should be noted that the capital plan has been reduced to reflect only those capital improvements that are necessary to maintain the system over the five year period.

Table 3 – 2
Summary of the Capital Improvement Plan ($000)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Capital Projects					
423 Fund	$2,114	$2,548	$2,559	$2,579	$2,323
424 Fund	300	300	500	500	0
427 Fund	0	357	0	106	540
Future Unidentified Projects	0	0	0	266	1,038
Total Capital Projects	**$2,414**	**$3,205**	**$3,059**	**$3,450**	**$3,900**
Less: Outside Funding Sources					
Operating Cash	$64	$705	$59	$0	$0
Previously Set Aside Funding	0	0	0	0	0
Capital Reserves	0	0	0	0	0
Connection Fees	0	0	0	0	0
New Revenue Bonds	0	0	0	0	0
Total Outside Funding Sources	**$64**	**$705**	**$59**	**$0**	**$0**
Rate Funded Capital	**$2,350**	**$2,500**	**$3,000**	**$3,450**	**$3,900**

As can be seen in Table 3 - 2, there are a number of projects which vary from year-to-year. The capital improvements are primarily related to renewal and replacement needs. While the total amount required to fund projects may vary from year-to-year, the rate study capital funding plan has attempted to provide a consistent funding source for capital improvements. In this case, rates will annually fund an amount ranging from $2.2 million to $3.9 million (as highlighted in Table 3 - 2). As a point of reference, the Department's annual depreciation expense was approximately $7.4 million for FY 2014. A desirable and recommended minimum funding target for rate funded capital is an amount equal to or greater than annual depreciation expense. While this financial plan has not fully met that target funding level of rates, the level of funding has been increased to a more prudent level. It is important to note and understand that depreciation expense is not the same as replacement cost. Thus, funding an amount which exceeds depreciation expense (i.e. $7.4 million) is both prudent and appropriate. In developing this financial plan, HDR and the Department have attempted to minimize rate impacts while funding the planned capital improvement projects of the Department. As a result, the Department has delayed several major projects to minimize rates to the greatest extent possible. These projects will be funded in future years as revenues are available or funding sources (i.e., grants) become available.

3.7 Projection of Debt Service

The Department currently has six outstanding debt issues for the water utility: the 2002 A Revenue Bond, 2005 Revenue Bond, the 2009 "A" Revenue Bond, the 2009 "B" Revenue Bond, the 2010 "A" Revenue Bond (remarketed in 2013), and the Drought Relief Loan. In total, these six issues have an annual debt service payment of approximately $16.5 million per year.

Currently, the Department's water utility has difficulty meeting the minimum debt service ratio (DSC) which is part of the bond covenants. This is primarily due to the decrease in rate revenues from the decline in consumption due to drought conditions. As a result, the Department is projecting to enter into a defeasance of annual debt service principle in FY 2017 to minimize the annual debt service impact to rates and minimize the need for additional rate increases to meet required debt service coverage ratios. The defeasance is being funded through current reserve fund balances. The annual debt service payments related to past expansion of the water system is further offset by any available connection fees or surface water supply fees received from new customers connecting to the system as these revenues are available.

As shown in Table 3 - 2, no additional (new) long-term debt issues are assumed over the FY 2017 – FY 2021 period. However, additional long-term debt issues may be necessary in the future years in order to adequately fund the Department's capital improvement program related to expanding the system to meet future growth needs. If the growth does not materialize then the system improvements are not necessary and these projects will be delayed resulting in no additional long-term debt issuances. HDR is not providing municipal advice as it relates to bonds, terms, or structures of debt issuance. Rather, this study is simply identifying the existing annual debt service payments and projections of future funding needs and utilizing the most conservative terms for modeling purposes.

3.8 Change in Working Capital

The final component of the revenue requirement analysis is the change in working capital, or additional transfers to, or from, reserve funds to maintain prudent ending fund balances or for future funding of specific projects. Also, any additional balance of funds after the transfers are made is transferred to the operating fund to maintain minimum fund balances. However, as shown below in Table 3-3, in FY 2017 reserves are being used to meet operating and capital needs. Then, in future years as rates are at sufficient levels, funds are being transferred back to reserves to meet minimum target levels.

3.9 Summary of the Revenue Requirement

Given the above projections of revenues and expenses, a summary of the Department's water revenue requirement analysis can be developed. In developing the revenue requirement analysis, consideration was given to the financial planning considerations of the Department. In particular, emphasis was placed on minimizing rates, yet still having adequate funds to support the operational activities and capital improvement needs throughout the projected time period. Given the reduction in revenues due to the drought and declining consumption another key aspect of the study was to develop a financial plan that meets the requirements of the

bond covenants. Presented below in Table 3 - 3 is a summary of the Department's revenue requirement based on projected expenses and current rates. Detailed exhibits of this analysis can be found in the Technical Appendices.

Table 3 - 3
Summary of the Revenue Requirement Analysis ($000)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Revenues					
Rate Revenues	$34,283	$34,454	$34,626	$34,800	$35,061
Misc. Revenues	1,513	1,505	1,520	1,538	1,558
Total Revenues	**$35,796**	**$35,959**	**$36,147**	**$36,337**	**$36,619**
Expenses					
O & M	$15,927	$16,413.82	$16,917	$17,437	$17,976
Purchased Water	9,938	10,584	11,272	12,005	12,785
Net Debt Service	12,164	16,651	16,643	16,437	15,681
Rate Funded Capital	2,350	2,500	3,000	3,450	3,900
Change in Working Capital	1,131	675	600	770	1,609
Total Expenses	**$41,511**	**$46,824**	**$48,433**	**$50,099**	**$51,951**
Bal./(Def.) of Funds	**($5,715)**	**($10,865)**	**($12,286)**	**($13,762)**	**($15,333)**
Bal. as a % of Rate Rev.	*16.7%*	*31.5%*	*35.5%*	*39.5%*	*43.7%*
Proposed Rate Adjustment	**18.5%**	**11.0%**	**3.0%**	**3.0%**	**3.0%**
Additional Rev. from Rate Adj.	**$5,715**	**$10,865**	**$12,286**	**$13,762**	**$15,333**
Total Bal./(Def.) of Funds	**$0**	**($0)**	**$0**	**$0**	**$0**

As can be seen, the revenue requirement has summed the O&M, rate funded capital, net debt service, and change in working capital. The total revenue requirement is then compared to the total sources of funds which are the rate revenues, at present rate levels, and other miscellaneous revenues. From this comparison a balance or deficiency of funds in each year can be determined. This balance or deficiency of funds is then compared to the rate revenues to determine the level of rate adjustment needed to meet the revenue requirement. It is important to note the "Bal./(Def.) of Funds" row is cumulative. That is, any adjustments in the initial years will reduce the deficiency in the later years. In FY 2017 the proposed rate adjustment is projected to be implemented in August of 2016, which is 1 month after the fiscal year begins in July. As a result, the rate adjustment will only be in effect for 11 months of FY 2017. Over this project time period, the total deficiency of rates is 43.7% for the Department's water utility. This deficiency is primarily driven by the decreased rate revenue from declining consumption due to drought conditions as well as increased O&M costs due to large SEWD cost increases.

Based on the revenue requirement analysis developed herein, HDR has concluded that the Department will need to adjust their rates over the next five years (FY 2017 – FY 2021) to

maintain cost-based rates. Based on the rate transition plan, as can be seen above in Table 3 – 3, the proposed annual rate adjustments (yellow shaded line) have been developed to meet the operating and capital needs of the Department's water utility as well as provide sufficient DSC.

3.10 Reserve Levels

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

For the Department, there are four primary funds for the water utility. These are the operating, rate stabilization, connection fee, and surface water supply fee funds. Each of these is discussed further below.

- **Operating Reserve –** The operating reserve is in place to meet the Department's annual cash flow needs. The typical minimum ending balance for an operating reserve ranges from 90 – 365 days of annual O&M expenses. For the Department, the target was set during the 2009 rate study at 180 days of O&M expenses. This target results in a minimum ending balance of approximately $15 million on average over the five year rate setting period. This was done to provide sufficient operating reserves during the life of the long-term debt for the Delta Water Supply Project. Over the five year rate setting period the operating reserve maintains an ending balance slightly greater than the target minimum.
- **Rate Stabilization –** The rate stabilization reserve is part of the overall bond covenants of the Department and was established as part of the overall financing of the Delta Water Supply Project during the 2009 study. Transfers from this fund can be made to provide debt service coverage and meet the required funding levels. During the 2009 study, approximately $8 million was transferred to the rate stabilization fund to provide funding for future years to meet coverage requirements. During the past several years, the rate stabilization fund has been used to meet coverage requirements. At this time there is approximately $500,000 available to use in FY 2017 as these funds have been expended in FY 2015 and FY 2016. After these funds are used to meet coverage, no additional funds can be transferred to the rate stabilization fund until the utility has a positive fund balance. As a result, rate stabilization funds are not available in future years to meet debt service coverage requirements.
- **Connection Fee –** The connection fee fund is used to track the collection of connection fee revenues from new customers connecting to the system. When funds are available, this fund is then used to pay a proportional share of annual debt service payments related to providing new growth on the system and/or fund new growth-related capital improvements. At this time, given the lack of new customer growth on the Department's

water system, this fund does not have a balance. As future growth occurs, this fund will begin to accumulate a balance that will be used to fund growth-related annual debt service payments or growth-related capital projects.

- **Surface Water Supply Fee –** The surface water supply fee fund is similar to the connection fee fund. This fund was established during the 2009 rate study for the fee developed for the growth component of the Delta Water Supply Project. Similar to the connection fee fund, this fund does not have a balance given the recent lack of growth and new connections on the system. When funds are available, this fund is used to offset annual debt service payments related to the Delta Water Supply Project.

Each of these funds was reviewed during the development of the rate study process with the focus being on the operating reserve given the minimum growth on the system and expending the rate stabilization funds.

3.11 Debt Service Coverage Ratios

When long-term debt was issued, and specifically for municipal revenue bonds, the Department entered into agreements that require a specific level of revenue be generated each year in excess of O&M expenses and annual debt service payments. As noted previously the Department has several outstanding debt issuances. These are further split between senior and subordinate debt. The debt service coverage ratio is developed separately for senior and subordinate debt service. For the senior debt, which includes the 2002 "A", 2005 "A", 2010 "A" (remarketed), and Drought Relief Loan, the debt service coverage calculation is determined first. Then the remaining revenues after senior debt is funded and used to develop the calculation for the subordinate debt service which includes the 2009 "A" and 2009 "B" issue less the BABs subsidy. Provided in Table 3 - 4 is a summary of the senior and subordinate debt service coverage calculations for the Department.

Table 3 - 4
Summary of the Debt Service Coverage Ratios

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Senior Debt Service	3.53	3.66	3.73	3.81	4.05
Subordinate Debt Service	1.53	1.32	1.36	1.40	1.52

As can be seen in Table 3 - 4, with the proposed rate adjustments, the Department is meeting the debt service coverage ratios for both the senior and subordinate debt service. While the coverage calculation for the senior debt is exceeding the target, the subordinate debt service is just slightly over the minimum level of 1.15. As a result, the Department will need to monitor revenues and expenses closely in the next several years to maintain sufficient debt service coverage ratios. The Department has issued bonds which require that the minimum DSC is met. If it is not met, the bonds may be callable and the Department would be in default.

3.12 Consultant's Conclusions

The revenue requirement developed above has indicated the need for annual revenue increases to adequately fund the Department's operating and capital needs for the water utility. The proposed revenue adjustments are a 18.5% in FY 2017, a 11.0% in FY 2018, and 3.0% in FY 2019 through FY 2021. HDR has reached this conclusion for the following reasons:

- Rate adjustments are necessary to meet the legally required debt service coverage ratios. Failure to meet these required debt service coverage ratios can result in a technical default, and if rates are left unadjusted long enough could ultimately result in a payment default.
- Rate adjustments are necessary to reflect the reduction in annual water consumption due to the drought and State mandated conservation (reductions).
  - This new level of consumption may be reflective of the new level of water consumption for the foreseeable future.
- The proposed rate adjustments maintain the Department's financial health and provide long-term sustainable funding levels.
- The rate adjustments are based on the Department completing a defeasance of bond principle payments.
- Prior to the implementation of the fifth, and final, proposed rate adjustment the Department should complete a review of the water rates.

In reaching this conclusion, HDR would recommend that the Department adopt the proposed annual rate adjustments through FY 2021 in order to provide the funding for the operating expenses and capital improvement program.

4. Development of the Cost of Service Analysis

4.1 Introduction

In the previous section, the revenue requirement analysis focused on the total sources and application of funds required to adequately fund the Department's water utility. This section will provide an overview of the cost of service analysis developed for the Department.

A cost of service analysis determines the equitable allocation of the total revenue requirement between the various customer classes of service (e.g., residential, multi-family, commercial, irrigation). The previously developed revenue requirement was utilized in the development of the cost of service analysis.

4.2 Objectives of a Cost of Service Study

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

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

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

The results of the cost of service analysis determine the unit costs which are used in the development of the final proposed rate designs. The cost of service analysis provides a per unit cost of water consumption based on each customer class's equitable (proportional) share of costs. For example, a water utility incurs costs related to demand, average day, peak day, fire protection, and customer-related cost components. A water utility must build sufficient capacity[2] to meet summer peak capacity needs. Therefore, those customers contributing to those peak demands on the system should pay their proportionately higher share of the costs to provide the capacity in the system. The unit costs provide the relationship between these components which are then used to set cost-based rates.

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

4.3 Determining the Customer Classes of Service

The first step in a cost of service analysis is to determine the customer classes of service. Based on discussion with Department staff, the classes of service used within the cost of service analysis were:

- Single Family
- Multi-Family
- Non-Residential
- Irrigation

To note, the "Non-Residential" class includes commercial, institutional, and industrial. In determining classes of service for cost of service purposes, the objective is to group customers together into similar or homogeneous groups based upon similar facility requirements and/or demand characteristics.

4.4 General Cost of Service Procedures

In order to determine the cost to serve each customer class of service on the Department's water system, a cost of service analysis is conducted. A cost of service analysis utilizes a three-step approach to review costs. These steps take the form of functionalization, classification, and allocation. Provided below is a detailed discussion of the water cost of service study conducted for the Department, and the specific steps taken within the analysis. The approach used for the Department's study conforms to generally accepted cost of service methodologies as outlined in the AWWA M1 manual.

4.4.1 Functionalization of Costs

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

4.4.2 Classification of Costs

The second analytical task performed in a water cost of service study is the classification of the costs. The classification of costs examines why the expenses were incurred or what type of need is being met. The following cost classifiers were used to develop the cost of service analysis:

- **Commodity Related Costs:** Commodity costs are those costs which tend to vary with the total quantity of water consumed by a customer. Commodity costs are those incurred under average load (demand) conditions and are generally specified for a period 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.
- **Capacity Related Costs:** Capacity costs are those which vary with peak demand, or the maximum rates of flow to customers. System capacity is required when there are large demands for water placed upon the system (e.g., summer lawn watering). For water

utilities, capacity related costs are generally related to the sizing of facilities needed to meet a customer's maximum water demand at any point in time. For example, portions of distribution storage reservoirs and mains (pipes) must be adequately sized to meet for this particular type of requirement.

- **Customer Related Costs:** Customer costs are those costs which vary with the number of customers on the water system. They do not vary with system output or consumption levels. These costs are also sometimes referred to as readiness to serve or availability costs. Customer costs may also sometimes be further classified as either actual or weighted. Actual customer costs vary proportionally, from customer to customer, with the addition or deletion of a customer regardless of the size of the customer. An example of an actual customer cost is postage for mailing bills. This cost does not vary from customer to customer, regardless of the size or consumption characteristics of the customer. In contrast, a weighted customer cost reflects a disproportionate cost, from customer to customer, with the addition or deletion of a customer. Examples of weighted customer costs are items such as meter maintenance expenses, where a large commercial customer requires a significantly more expensive meter than a typical residential customer.
- **Fire Protection Related Costs:** Fire protection costs are those costs related to the public fire protection functions. Usually, such costs are those related to public fire hydrants and the over-sizing of mains and distribution storage reservoirs for fire protection purposes
- **Revenue Related Costs:** Some costs associated with the utility may vary with the amount of revenue received by the utility. An example of a revenue related cost would be a utility tax which is based on the gross utility revenue.

Water Cost of Service Analysis Terminology

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

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

Allocation – Allocating the classified 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 demand of water (e.g., chemical use at a treatment plant).

Capacity Costs – Costs classified as capacity related vary with peak day or peak hour usage. Facilities are often designed and sized around meeting peak demands.

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

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

4.4.3 Development of Allocation Factors

Once the classification process is complete, and the customer groups have been defined, the various classified costs were allocated to each customer group. The Department's classified costs were allocated to the previously identified customer groups using the following allocation factors.

- **Commodity Allocation Factor:** As noted earlier, commodity-related costs vary with the total water consumption. Therefore, the commodity allocation factor was based on the projected total metered consumption plus losses for each class of service for the projected test period. As noted, the consumption reflects the projected new baseline consumption levels. These projected levels are based on estimates of customer behavior changing due to the current drought.
- **Capacity Allocation Factor:** The capacity allocation factor was developed based on the assumed contribution to peak day use of each class. Peak day use by customer class of service was estimated using peaking factors for each customer group. 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 usage. Given an estimated peaking factor, the peak day contribution for each class of service was developed.
- **Customer Allocation Factor:** Customer costs vary with the number of customers on the system. Two basic types of customer allocation factors were identified – actual and weighted. The allocation factors for actual customers were based on the projection of the number of customers developed within the revenue requirement. The weighted customer allocation factors is also broken down further into two factors which attempt to reflect the disproportionate costs associated with serving different types of customers. The first weighted customer factor is for customer service and accounting. This weighted customer allocation factor takes into account the fact that it may take more time to read a meter and process a bill for various customers. The second weighted customer allocation factor is for meters and services. This factor attempts to reflect the different costs associated with providing larger sized meters. For example, there is a significant cost difference associated with replacing a 3/4" meter compared to a 6" meter. This cost difference is reflected within the allocation factor.
- **Public Fire Protection Allocation Factor:** The development of the allocation 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 allocation 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.
- **Revenue Related Allocation Factor:** The revenue related allocation factor was developed from the projected rate revenues for FY 2017 for each customer class of service. These same revenues were used within the revenue requirement analysis discussed previously.

As mentioned before, in a typical cost of service study, the allocation factors represent a group of similar customers such as non-residential. For this analysis, however, additional cost detail was needed when allocating costs. This meant that the commodity and capacity allocation factors had the classes further broken down; single family has a factor for each of the two tiers and multi-family, commercial, institutional, industrial, and irrigation is separated into the seasonal periods of winter and summer for the development of the proposed rates to provide

the cost basis for the rates (i.e., Proposition 218). Further discussion related to the allocation of costs to a greater cost level is discussed in more detail in the rate design analysis provided in Section 5 of this report.

4.5 Functionalization and Classification of Plant in Service

As noted, one of the first steps of the cost of service is the functionalization and classification of plant in service. In performing the functionalization of plant in service, HDR utilized the Department's historical plant (asset) records. Once the plant assets were functionalized, the analysis shifted to the classification of the asset. The classification process included reviewing each group of assets and determining which cost classifiers the assets were related to. For example, the Department's assets were classified as: capacity-related, commodity-related, customer-related, revenue-related, public 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 classified as both average day and peak day related. Based on the operation of the system, the source of supply assets were 58.0% to commodity related costs (average day) and 42.0% to capacity related costs (peak day). This classification reflects the Department's system peak demand (capacity needs) in relation to the system average day use (base needs).

Treatment – Treatment was classified the same as supply; 58.0% to commodity and 42.0% to capacity. This reflects the operation of the treatment facilities either as meeting average day and peak day needs on the system.

Pumping – Pumping was classified as 100% capacity. This is due to pumping costs being incurred to meet peak day needs.

Storage – Storage reservoirs, or water tanks, are typically designed to meet at least two types of needs –peak use demands and fire protection. The total storage capacity of the Department's reservoirs was examined and consideration given to the capacity required for fire protection under a fire event scenario. This amount of capacity, in relation to the total storage capacity, is considered fire protection related. The balance of storage capacity is considered to be in place to meet peak use demands. This resulted in 94.7% of the storage costs being assigned to peak day, or the capacity cost component and the remaining 5.3% to be assigned to the fire protection component.

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 and allocated on an equivalent meter basis which reflects the capacity, or demand, that can be placed on the system by customers with varying meter sizes. 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 public fire protection-related. Based upon an analysis of the Department's mains, the assignment of the distribution mains was therefore 36.0% customer-related, 54.3% weighted customer meter and services-related, and 9.7% fire protection related. Transmission mains were assigned on an average day and capacity based on equivalent meters with 58.0% going to commodity cost and 42.0% going to weighted for meters and services to reflect the demands customers can place on the system.

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

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

Category	Commodity Related	Capacity Related	Customer Related	Equivalent Meters	Fire Protection
Source of Supply - Wells	58.0%	42.0%	0.0%	0.0%	0.0%
Treatment	58.0%	42.0%	0.0%	0.0%	0.0%
Pumping	0.0%	100.0%	0.0%	0.0%	0.0%
Transmission & Distribution	15.2%	0.0%	24.1%	54.0%	6.8%
General Plant	45.7%	34.9%	17.5%	0.0%	1.9%
Total Net Plant In Service	**45.7%**	**30.3%**	**6.8%**	**15.3%**	**1.9%**

4.6 Functionalization and Classification of Operating Expenses

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

For the Department's study, the revenue requirement for FY 2017 was functionalized, classified, and allocated. As noted in Section 3, the Department utilized a cash basis revenue requirement, which was comprised of operation and maintenance expenses, debt service, and change in working capital. A more detailed review of the functionalization and classification of the revenue requirement can be found in the Technical Appendix in Exhibits 13 - 15.

4.7 Major Assumptions of the Cost of Service Study

A number of key assumptions were used within the Department's 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 2017. The revenue and expense data was previously developed within the revenue requirement study.

- A cash basis approach was utilized which conforms to generally accepted water cost of service approaches and methodologies.
- The classification of plant in service was developed based upon generally accepted cost allocation techniques. Furthermore, they were developed using the Department's specific data.
- Consumption by cost or class of service used within this study were developed for each class of service from historical usage information provided by the Department.
- Peak day capacity allocation factors were estimated based upon each customer group's average to peak month relationship.

4.8 Summary Results of the Cost of Service Analysis

In summary form, the cost of service analysis began by functionalizing the Department's revenue requirement. The functionalized revenue requirement was then classified into their various cost components. The individual classification totals were then allocated to the various customer classes of service based on the appropriate allocation factors. The allocated expenses for each customer class were then aggregated to determine each customer class's overall revenue responsibility.

Table 4 - 2
Summary of the Cost of Service Analysis ($000)

Class of Service	Present Rate Revenues	Allocated Costs	$ Difference	% Difference
Residential	$23,649	$27,280	($3,631)	15.4%
Multi-Family	3,751	4,382	(630)	16.8%
Non-Residential	4,411	5,191	(781)	17.7%
Irrigation	2,472	3,144	(672)	27.2%
Total	**$34,283**	**$39,998**	**($5,715)**	**16.7%**

The cost of service study attempted to equitably align the operating and capital costs to each customer class with their respective benefit received from and burdens placed on the water system (proportional allocation). The results of the analysis show that some cost differences exist between the various customer classes of service. It is important to understand that a cost of service analysis is based on one year's O&M expense data and projected customer usage information. Given this, the results of the cost of service analysis may change from year to year. As the Department continues to monitor rates and cost of service results through future studies, future cost of service adjustments may be necessary to reflect consumption patterns at that time.

4.9 Consultant's Conclusions and Recommendations

While some cost differences exist, the overall allocation of costs between customers appears to be reasonable and reflect the impacts each customer class of service places on the system. However, given the requirements of Article XIII D, section 6 the results of the cost of service will

be used to establish the proposed rate designs for each of the Department's customer classes of service. A more detailed discussion of the use of the cost of service results is provided in the rate design section (Section 5) of this report.

4.10 Summary of the Cost of Service Analysis

This section of the report has provided the recommendations resulting from the cost of service analysis developed for the Department's water utility. This analysis was prepared using generally accepted cost of service techniques as provided in the AWWA M1 Manaul. The following section of the report will provide a summary of the present and proposed rates for the Department's water utility.

5. Development of the Rate Designs

5.1 Introduction

The final step of the Department's water 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 Department's rates, consideration is given to the level of the rates as well as the structure of the rates. The level of rates reflects the amount of revenues that should be collected while the structure of the rates is how it is collected (charged) from the customers.

The overall revenue level for the department has been established in the revenue requirement analysis (Section 3) while the equitable allocation of costs between the various customer classes has been developed in the cost of service analysis (Section 4) which provides the revenue levels to be collected from each class of service.

5.2 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 Department 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)
- Legally Defensible

It is important that the Department provide its customers with a proper price signal as to what their consumption and peaking (demand) requirements are costing. This goal may be approached through rate level and structure. When developing the proposed rate designs, all the above listed criteria were taken into consideration. However, it should be noted that it is difficult, if not impossible, to design a rate that meets all the goals and objectives listed above. 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 these various goals and objectives.

5.3 Overview of the Proposed Rate Structures

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

- Cost-based
- Revenue stability
- Conservation

The first goal was to provide the cost basis, or justification, for the proposed rate structure to reflect the legal rate setting requirements in California. This was accomplished through the development of the cost of service analysis using industry standard approaches (i.e., AWWA M1 Manual).

The second goal was to maintain the revenue stability of the current rate structure. This was incorporated into the proposed rates by maintaining the current level of revenues collected through the monthly fixed meter charge and the volume charge. In other words, the ratio of fixed revenue collected through the current rate structure would be maintained in the proposed rate structures. This was also further addressed through the development of the proposed drought surcharges. The drought surcharges are designed to maintain the target level of revenues during times of drought or water shortage events.

The final goal was to promote conservation or efficient use. The current rate is a uniform rate structure where the rate (charge) remains the same regardless of the amount of usage or timing of the usage. This was accomplished through the proposed tiered rate structure for single family customers and a seasonal (winter/summer) rate for all other customers.

The final proposed change to the water rate structure was to combine the fixed charge for all meter sizes 1-inch or less. This was done as all new meters being placed in service will be 1-inch meters. In addition, as the Department continues to replace aging meters, they will be replaced by 1-inch meters. It should be noted, that the approximately 53% of the customers have a 3/4-inch meter, 43% have a 1-inch meter, and the remaining customers have either a 5/8-inch meter or larger than 1-inch meter. This modification will help simplify the fixed meter charges as all customers are moved to a 1-inch meter.

5.4 Development of Cost-Based Water 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 Department'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 Department'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 Department'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:

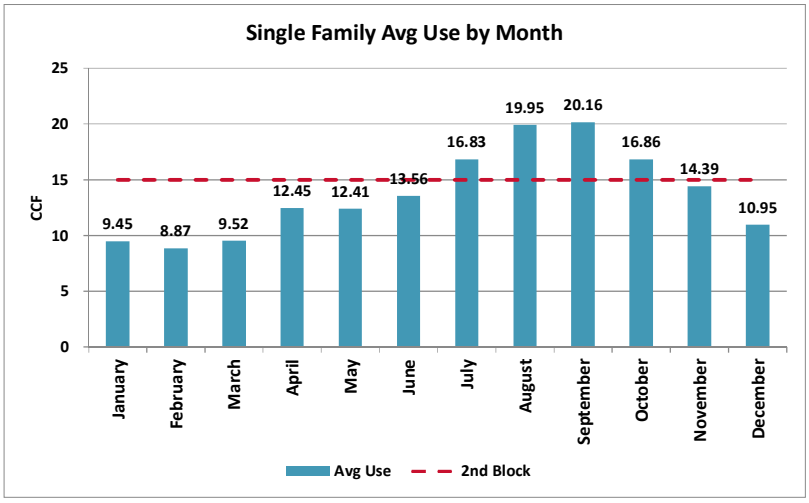
- **The revenue derived from water rates does not exceed the funds required to provide the property related service (i.e., water service).** The proposed rates are designed to collect the overall revenue requirements of the Department's water utility.
- **The revenues derived from water rates shall not be used for any purpose other than that for which the fee or charge is imposed.** The revenues derived from the Department's water rates are used exclusively to operate and maintain the Department'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, etc.) that reflect the varying consumption patterns and system requirements of each customer class of service. The grouping of customers and rates into these classes of service creates the equity and fairness 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 Department's the water system.

The Department currently has established customer classes of service that were developed as a part of the 2009 rate study. The current rate structure is the same for all customers and includes a variable meter charge and uniform consumption charge. Given the prior discussion on the California legal requirements of setting rates, and the development of a cost of service analysis for the Department, and specifically the unit costs, was the basis for the development of the proposed water rates for the Department.

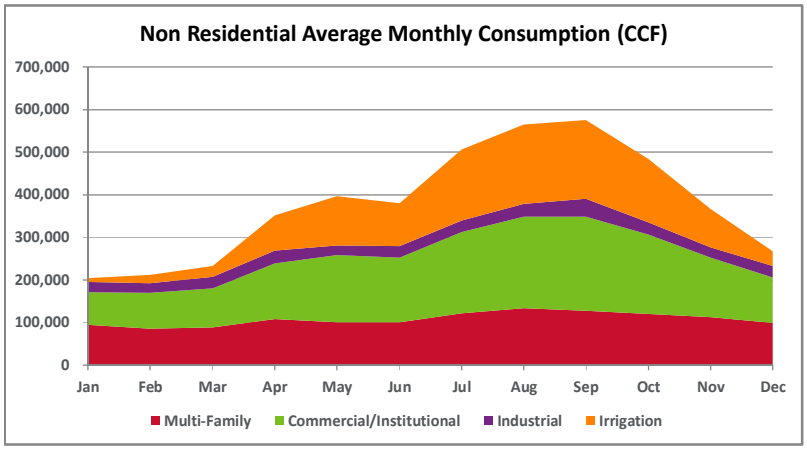
As a part of this study, HDR developed a water rate design discussion to clearly demonstrate and support the proposed water rates and tiered/seasonal pricing. The following discussion provides a more detailed analysis of the costing techniques and methodologies used to support the Department's proposed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

5.4.1 Determination of Sizing and Number of Tiers

The first step of moving to a tiered rate structure for the single family consumption charge is to identify the number of tiers and determine the size of the tiers. After reviewing this issue, it was decided that there would be two consumption tiers. The sizing of the tiers is based on actual consumption data from the Department for the last two years. The goal of the tiers was to target typical monthly customer average annual consumption levels (14.32 CCF) in the first block and all usage above that block in the second block. In reviewing the individual customer consumption data, it was determined that the tiers reflected those targeted consumption levels. Shown in the chart is the average consumption by month for single family customers. As can be seen in the chart, the proposed block sizes correspond to customers' average monthly water usage for the winter period (tier one) and the additional use in the summer period (tier two).



The proposed rate structure for the non-residential customers (multi-family, non-residential, irrigation) is a seasonal rate structure. This rate structure was proposed to provide a conservation-based rate structure. A tiered rate structure is typically not used for non-residential customers as the usage characteristics between these customers can vary significantly. As a result, it is difficult to develop an equitable tier size that reflects the various types of customer's usage characteristics. The seasonal rate structure was also based around the non-residential customer usage patterns as shown in the chart. Based on this data from the last two years, the winter period was identified as October through April and the summer period is May through September.



After the number and size of tiers and the seasonal periods have been identified, the pricing of the tiers and seasons is the next analytical step.

5.4.2 Establishing the Cost-Basis for Pricing Tiers

While there remains much discussion in the legal and rate community as to the impacts and stricter technical (legal) requirements as a result of the *Capistrano* decision, 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 (e.g., conservation program costs, etc.).

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

The second possible source of cost differences for the pricing of tiers is related to high-peak use (peak demand) customers. Customers that use more water 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 Department's study, the focus of the analysis was on the second method of determining the cost impacts and cost differences associated with high peak use customers. The pricing of the tiers was developed to provide the cost-basis and meet the requirements of Prop. 218.

5.5 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 classifies the revenue requirement between the various cost components of average use (commodity), peak use (capacity), and customer (actual and weighted). However, the results previously shown 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., fixed charge, consumption tiers, seasons).

Provided in Table 5 – 1 is a summary of the classification of the FY 2017 revenue requirement from the cost of service analysis.

Table 5 - 1
Summary of the Classification of the Revenue Requirement ($000)

Class of Service	Total	Commodity Related	Capacity Related	Customer Related	Fire Prot.	Revenue Related	Direct Assign.
Net Revenue Requirement	**$39,998**	**$11,861**	**$10,317**	**$17,582**	**$238**	**$0**	**$0**

The total of the above classified costs, of approximately $40.0 million, is the same as the total costs allocated in Table 4-2 of the cost of service analysis. This classification of the total revenue requirement for FY 2017 is then allocated to the various customer classes of service. Prior to the recent legal decisions, the analyses would have been complete. However, with the legal requirement to provide the cost-basis for tiered pricing, the classified costs are further allocated between the various rate structure components based on the appropriate allocation factors. The allocation factors were discussed for the costs of service in Section 4 of this report. 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.

5.5.1 Commodity Allocation Factor

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

- Single Family – Tier 1
- Single Family – Tier 2
- Multi-Family – Winter
- Multi-Family - Summer
- Non-Residential – Winter
- Non-Residential – Summer
- Irrigation – Winter
- Irrigation – Summer

As stated in Section 4, the “Non-Residential” class includes commercial, institutional, and industrial customers. This was done after reviewing the consumption data and in general, the customers behaved similarly. Therefore, a single rate structure was developed that applies to each individual customer type within the non-residential class of service. It is recommended that the Department maintain a separate rate schedule for each customer type should the Department decide to alter the rate design at a future date based on changing consumption patterns or cost of service analyses.

To develop the commodity allocation factor for each customer class, the usage for each class was divided by the total usage of the system. This produces the percent of the system that each class is responsible for and, therefore, their contribution to commodity related costs. Shown below in Table 5 – 2 is a summery of the commodity allocation factor.

Table 5 - 2
Summary of the Commodity Allocation Factor

Reference Calculation	A	B	C C = A + B	D
	FY 2015 Consumption (CCF)	Est. System Losses (CCF)	Total Annual Use (CCF)	% of Total
Single Family				
Tier 1	4,877,066	121,927	4,998,992	43.8%
Tier 2	1,719,856	42,996	1,762,853	15.4%
Multi-Family [1]				
Winter	700,700	17,518	718,218	6.3%
Summer	595,044	14,876	609,920	5.3%
Non-Residential [1]				
Winter	995,709	24,893	1,020,602	8.9%
Summer	1,083,448	27,086	1,110,534	9.7%
Irrigation [1]				
Winter	414,088	10,352	424,440	3.7%
Summer	755,294	18,882	774,176	6.8%
Total	**11,141,205**	**278,530**	**11,419,735**	**100.0%**

[1] – Winter: Oct – Apr; Summer: May – Sept

As can be seen, the development of the commodity allocation factor is fairly straightforward. It is important to note that the allocation factors are based on of the amount of water for each class including the assumed losses on the system. As an example, Tier 1 consumption of the single family class of service represents 43.8% of the total consumption on the system. As a result, 43.8% of the commodity related costs are allocated to Tier 1 of the single family customers.

This approach is used for each of the customer classes of service for each rate component, either tier or season. The allocated commodity costs are shown below in Table 5 – 3.

Table 5 - 3
Allocated Commodity Costs ($000s)

Reference Calculation	A	B	C	D D = B / C
	% of Total	Commodity Costs	Water Sales	Unit Cost ($/CCF)
Single Family				
Tier 1	43.8%	$5,192	4,877,066	$1.06
Tier 2	15.4%	1,831	1,719,856	1.06
SF Total	**59.2%**	**$7,023**	**6,596,922**	
Multi-Family [1]				
Winter	6.3%	$746	700,700	$1.06
Summer	5.3%	633	595,044	1.06
MF Total	**11.6%**	**$1,379**	**1,295,744**	
Non-Residential [1]				
Winter	8.9%	$1,060	995,709	$1.06
Summer	9.7%	1,153	1,083,448	1.06
Non-Residential Total	**18.7%**	**$2,213**	**2,079,157**	
Irrigation [1]				
Winter	3.7%	$441	414,088	$1.06
Summer	6.8%	805	755,294	1.06
Irrigation Total	**10.5%**	**$1,245**	**1,169,382**	
Total	**100.0%**	**$11,861**	**11,141,205**	

[1] – Winter: Oct – Apr; Summer: May – Sept

The figures in column A are from column D in Table 5 – 2. The costs shown in column B are based on the total commodity related costs from column A of Table 5 – 1. Column C is from column A in Table 5 – 2, 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 tired and seasonal rates can be determined for the commodity related costs identified in the cost of service analysis (Column D).

5.5.2 Capacity Allocation Factor

The capacity allocation factor utilizes the same customer classes as in the development of the commodity allocation factor. Whereas commodity costs are related to the volume of water used by each class of service by tier or season, capacity is related to how the class uses that water in each tier or season. 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 Department must size the system to meet the demands of customers regardless of when they occur. To determine the allocation by tier or season, peaking factors

need to be developed for each customer class of service tier or season. The peaking factors for a class of service must be reasonably estimated due to a lack of specific metered data related to peak day usage by the classes of service. The method used to estimate a class's peaking factor is to review the average monthly volume of water consumed and compare it to the maximum monthly usage of water. By dividing the maximum month by the average month, a 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 10.0 CCF per month on average and in the peak month 15.0 CCF was used, the peaking factor would be 1.50 (15.0 / 10.0 = 1.50). In this example, the peaking factor is stating that the maximum usage in a month is 1.50 time higher than the average usage per month. Using this same calculation for each customer class tier or season, the allocation factors for capacity can be developed. Shown below in Table 5 – 4 is a summary of the capacity allocation factor for each customer class.

Table 5 - 4
Summary of the Capacity Allocation Factor

Reference Calculation	A	B	C C = A * B	D
	Average Consumption (MGD)	Peaking Factors	Peak Day Use (MGD)	% of Total
Single Family				
Tier 1	10.24	1.69	17.31	42.9%
Tier 2	3.61	2.43	8.79	21.8%
Multi-Family [1]				
Winter	1.47	1.09	1.61	4.0%
Summer	1.25	1.37	1.72	4.3%
Non-Residential [1]				
Winter	2.09	1.16	2.43	6.0%
Summer	2.28	1.68	3.83	9.5%
Irrigation [1]				
Winter	0.87	1.33	1.16	2.9%
Summer	1.59	2.22	3.52	8.7%
Total	**23.40**		**40.36**	**100.0%**

[1] – Winter: Oct – Apr; Summer: May – Sept

Table 5 – 4 above shows the development of the capacity allocation factor. Similar to the allocation of commodity costs to the tiers or seasons, the capacity related costs are allocated in the same manner. For example, 42.9% of the capacity costs are allocated to Tier 1 of the single family customers based on column D in Table 5-4.

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

Table 5 - 5
Allocated Capacity Costs ($000s)

Reference Calculation	A	B	C	D D = B / C
	% of Total	Capacity Costs	Water Sales	Unit Cost ($/CCF)
Single Family				
Tier 1	42.9%	$4,425	4,877,066	$0.91
Tier 2	21.8%	2,246	1,719,856	1.31
SF Total	**64.7%**	**$6,671**	**6,596,922**	
Winter	4.0%	$411	700,700	$0.59
Summer	4.3%	439	595,044	0.74
MF Total	**8.2%**	**$850**	**1,295,744**	
Non-Residential [1]				
Winter	6.0%	$622	995,709	$0.62
Summer	9.5%	978	1,083,448	0.90
Non-Residential Total	**15.5%**	**$1,600**	**2,079,157**	
Irrigation [1]				
Winter	2.9%	$296	414,088	$0.71
Summer	8.7%	900	755,294	1.19
Irrigation Total	**11.6%**	**$1,196**	**1,169,382**	
Total	**100.0%**	**$10,317**	**11,141,205**	

[1] – Winter: Oct – Apr; Summer: May – Sept

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 – 1. Column C is from column A in Table 5 – 2.

Combining the unit costs from the commodity and capacity unit costs result in the basis of the tiered or seasonal pricing. It is important to note that there is an additional $0.02/CCF from the costs classified as revenue, fire protection, and direct assignment related costs as identified in Table 4-2 and 5-1. This was calculated by totaling the amount which equals $238,005 and dividing it by the total consumption amount of 11,141,205 CCF ($238,005 / 11,141,205 CCF = $0.02/CCF).

The summary Table 5 – 6 below shows the summation of the costs for each tier/season rate. This table sums the costs from Table 5 – 3 column D and Table 5 – 5 column D and the additional $0.02/CCF.

Table 5 - 6
Summary of the Tier/Season Cost Basis

Reference	A	B	C	D	E
	Commodity Costs ($/CCF)	Capacity Costs ($/CCF)	Other Costs ($/CCF) [2]	Total Unit Cost ($/CCF)	Differential ($/CCF)
Single Family					
Tier 1	$1.06	$0.91	$0.02	**$2.00**	
Tier 2	1.06	1.31	0.02	**2.39**	*$0.40*
Multi-Family [1]					
Winter	$1.06		$0.04	**$1.70**	
Summer	1.06	$0.59	0.04	**1.85**	*$0.15*
Non-Residential [1]		0.74			
Winter	$1.06		$0.01	**$1.70**	
Summer	1.06		0.01	**1.98**	*$0.28*
Irrigation [1]		$0.62			
Winter	$1.06	0.90	$0.00	**$1.78**	
Summer	1.06		0.00	**2.26**	*$0.48*

[1] – Winter: Oct – Apr; Summer: May – Sept

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

The results shown in Table 5 – 6 above are the basis for the Department's consumption pricing for the proposed tiered and seasonal rate structures. The analysis and costs shown above have been developed to comply the recent legal decisions related to developing cost-based water rates.

It is also important to note that the customer related costs are used to establish the monthly fixed meter 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 1-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.

5.6 Summary of the Present and Proposed Water Rates

Along with meeting the total system revenue needs and cost of service results, a key component of developing the proposed rates for the Department was to transition single family residential to tiered rates and all other customer classes to a seasonal rate structure. The Department has also determined that the proposed rate structure will combine those customers with a 5/8-inch, 3/4-inch, and 1-inch meter sizes into a single monthly meter charge of 1-inch and less meter size. This was done as all new customers will have a 1-inch meter and as the Department replaces aging or damaged meters they will be replaced with a 1-inch meter.

Given this direction, the proposed rates have been developed for each class of service based on the development of the pricing through the cost of service analysis.

5.6.1 Review of the Present and Proposed Single Family Water Rates

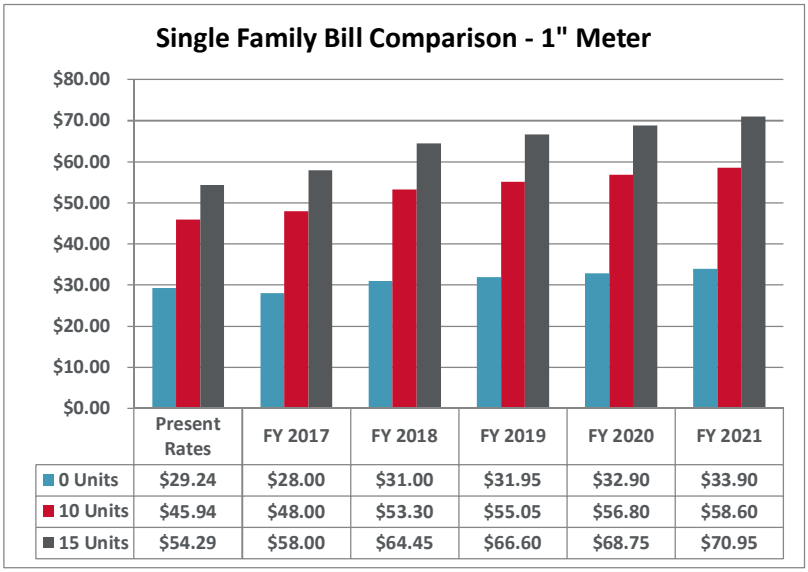
Currently, the Department's single family customers' rate structure includes a monthly fixed charge that varies based on meter size and a uniform consumption charge on a per hundred cubic feet (CCF) basis. The proposed rate structure maintains the monthly fixed charge by meter size, with the exception of combining all meters less than 1-inch, and the consumption charge is an increasing tiered rate structure based on typical customer consumption patterns. Provided below in Table 5 - 7 is a summary of the current and proposed rates for the Department's single family customers.

Table 5 - 7
Summary of the Proposed Single Family Water Rates

	Present Rate	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Fixed Charge	***$/Acct/Mo***					
5/8"	$18.94	N/A	N/A	N/A	N/A	N/A
3/4"	22.25	N/A	N/A	N/A	N/A	N/A
1"	29.24	N/A	N/A	N/A	N/A	N/A
1" & less	N/A	$28.00	$31.00	$31.95	$32.90	$33.90
1 1/2"	42.17	56.00	62.00	63.90	65.80	67.80
2"	54.49	89.60	99.20	102.24	105.28	108.48
3"	96.36	168.00	186.00	191.70	197.40	203.40
4"	138.53	280.00	310.00	319.50	329.00	339.00
6"	228.20	560.00	620.00	639.00	658.00	678.00
8"	330.87	896.00	992.00	1,022.40	1,052.80	1,084.80
10"	412.91	1,288.00	1,426.00	1,469.70	1,513.40	1,559.40
12"	581.32	1,890.00	2,092.50	2,156.63	2,220.75	2,288.25
Consumption Charge	***$/CCF***					
All Usage	$1.67	N/A	N/A	N/A	N/A	N/A
0 - 15 CCF	N/A	$2.00	$2.23	$2.31	$2.39	$2.47
15 + CCF	N/A	2.39	2.66	2.76	2.86	2.95

The proposed rates in Table 5 – 7 show the combination of meter sizes into a single line, 1-inch and less". The subsequent meter sizes are adjusted by the AWWA 1" meter equivalency. The AWWA meter equivalencies reflect the capacity of the larger meter sizes, and the fixed costs associated with providing that level of capacity. Also shown in the table are the proposed tiered rates for FY 2017 which is taken directly from column D in Table 5 – 6, or the calculated unit costs from the cost of service analysis. The chart below shows the impact to single-family residential customers at different usage levels for a 1" service meter.

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



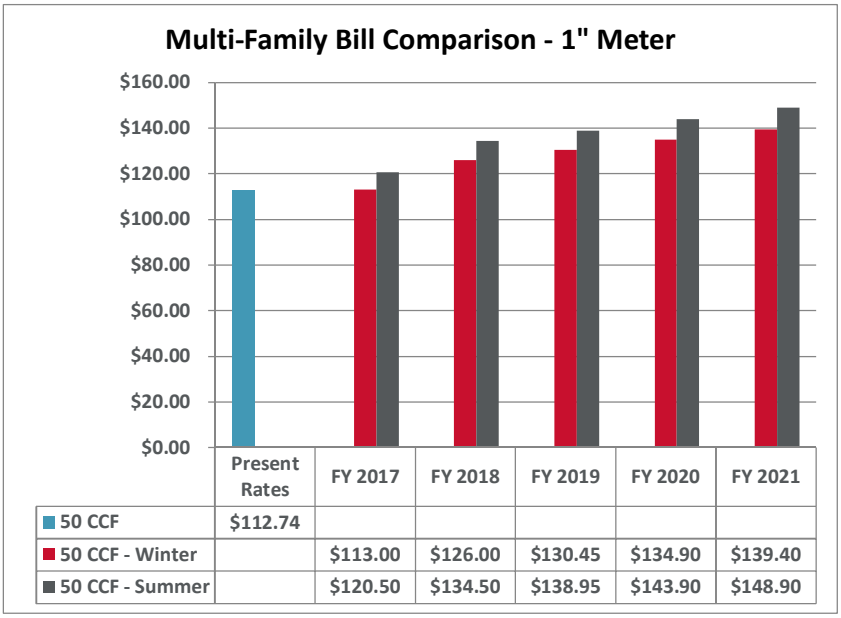
	Present Rates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
0 Units	$29.24	$28.00	$31.00	$31.95	$32.90	$33.90
10 Units	$45.94	$48.00	$53.30	$55.05	$56.80	$58.60
15 Units	$54.29	$58.00	$64.45	$66.60	$68.75	$70.95

For multi-family customers, the approach to transitioning to cost-based seasonal rates was done in a similar way to single family. Multi-family was not combined with commercial, industrial, and institutional as the multi-family customer usage characteristics are different from the other non-residential customers as well as single family customers. For example, the peak use, and resulting peaking factor, is much lower for this customer class of service. For this reason, multi-family was separated as its own rate schedule. Multi-family has transitioned the fixed charges to a 1-inch or less meter size as was done for the single family rates. The proposed consumption charge is a seasonal rate structure for the winter period (October – April) and summer period (May –September). The cost of each season was determined through the cost of service process whereby costs where allocated to each season based on the consumption characteristics for the multi-family customers. Table 5 – 8 shows a summary of the present and proposed multi-family rates.

Table 5 - 8
Summary of the Present & Proposed Multi-Family Water Rates

	Current Rate	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Fixed Charge	***$/Acct.***					
5/8"	$18.94	N/A	N/A	N/A	N/A	N/A
3/4"	22.25	N/A	N/A	N/A	N/A	N/A
1"	29.24	N/A	N/A	N/A	N/A	N/A
1" & less	N/A	$28.00	$31.00	$31.95	$32.90	$33.90
1 1/2"	42.17	56.00	62.00	63.90	65.80	67.80
2"	54.49	89.60	99.20	102.24	105.28	108.48
3"	96.36	168.00	186.00	191.70	197.40	203.40
4"	138.53	280.00	310.00	319.50	329.00	339.00
6"	228.20	560.00	620.00	639.00	658.00	678.00
8"	330.87	896.00	992.00	1,022.40	1,052.80	1,084.80
10"	412.91	1,288.00	1,426.00	1,469.70	1,513.40	1,559.40
12"	581.32	1,890.00	2,092.50	2,156.63	2,220.75	2,288.25
Consumption Charge	***$/CCF***					
All Usage	$1.67	N/A	N/A	N/A	N/A	N/A
Winter (Oct – Apr)	N/A	$1.70	$1.90	$1.97	$2.04	$2.11
Summer (May – Sept)	N/A	1.85	2.07	2.14	2.22	2.30

Similar to the single family rates the multi-family consumption rates are based on the unit costs developed in the cost of service analysis in Table 5-6. Provided in the chart below is a comparison of the current monthly bill to the proposed seasonal monthly bill.



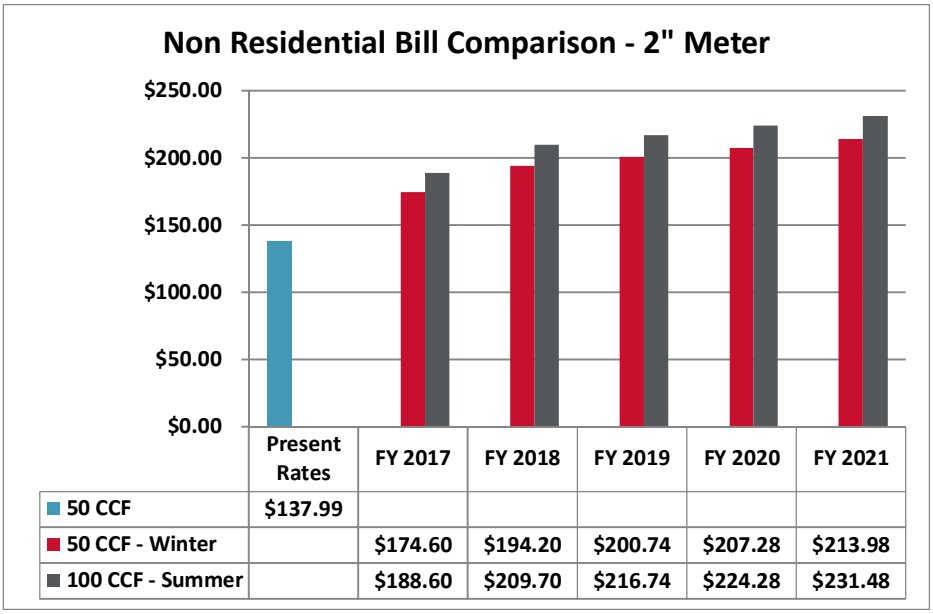
5.6.3 Review of the Present and Proposed Non-Residential Water Rates

Similar to the multi-family rates, the non-residential proposed rates were adjusted to reflect the overall revenue needs as identified in the cost of service results. The 'Non-Residential' customer class is made up of the customers identified as commercial, institutional, and industrial. For purposes of the rate design and cost allocation, these classes were combined as their customer consumption habits were similar. The current rate structure is the same as single family with a fixed meter charge based on the size of meter and a uniform consumption charge on a per hundred cubic feet or CCF (1 CCF = 748 gallons) basis. As with the prior proposed rates, the meter size for all less than 1-inch have been combined into a single charge. This was done as all new meters, and replacement meters, will be a 1-inch meter. The proposed consumption charge was also transitioned to a seasonal rate structure as was done for the multi-family class. However, the rates for the non-residential customers are based on the specific costs allocated in the cost of service analysis for the non-residential customer class of service. Provided in Table 5 - 9 is a summary of the present and proposed non-residential water rates.

Table 5 - 9
Summary of the Present & Proposed Non-Residential Water Rates

	Current Rate	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Fixed Charge	***$/Acct.***					
5/8"	$18.94	N/A	N/A	N/A	N/A	N/A
3/4"	22.25	N/A	N/A	N/A	N/A	N/A
1"	29.24	N/A	N/A	N/A	N/A	N/A
1" & less	N/A	$28.00	$31.00	$31.95	$32.90	$33.90
1 1/2"	42.17	56.00	62.00	63.90	65.80	67.80
2"	54.49	89.60	99.20	102.24	105.28	108.48
3"	96.36	168.00	186.00	191.70	197.40	203.40
4"	138.53	280.00	310.00	319.50	329.00	339.00
6"	228.20	560.00	620.00	639.00	658.00	678.00
8"	330.87	896.00	992.00	1,022.40	1,052.80	1,084.80
10"	412.91	1,288.00	1,426.00	1,469.70	1,513.40	1,559.40
12"	581.32	1,890.00	2,092.50	2,156.63	2,220.75	2,288.25
Consumption Charge	***$/CCF***					
All Usage	$1.67	N/A	N/A	N/A	N/A	N/A
Winter (Oct – Apr)	N/A	$1.70	$1.90	$1.97	$2.04	$2.11
Summer (May – Sept)	N/A	1.98	2.21	2.29	2.38	2.46

As can be seen in Table 5 - 9, the proposed non-residential consumption charge is a seasonal rate. It should also be noted that the proposed fixed charge by meter size is identical to single family and multi-family customers and the consumption charges are based on the unit costs as developed in the cost of service analysis and provided in Table 5-6. Shown below is a chart showing the bill impacts for a non-residential customer at winter and summer use periods assuming a 2-inch meter and 50 CCF of consumption in the winter and 100 CCF in the summer.



	Present Rates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
50 CCF	$137.99					
50 CCF - Winter		$174.60	$194.20	$200.74	$207.28	$213.98
100 CCF - Summer		$188.60	$209.70	$216.74	$224.28	$231.48

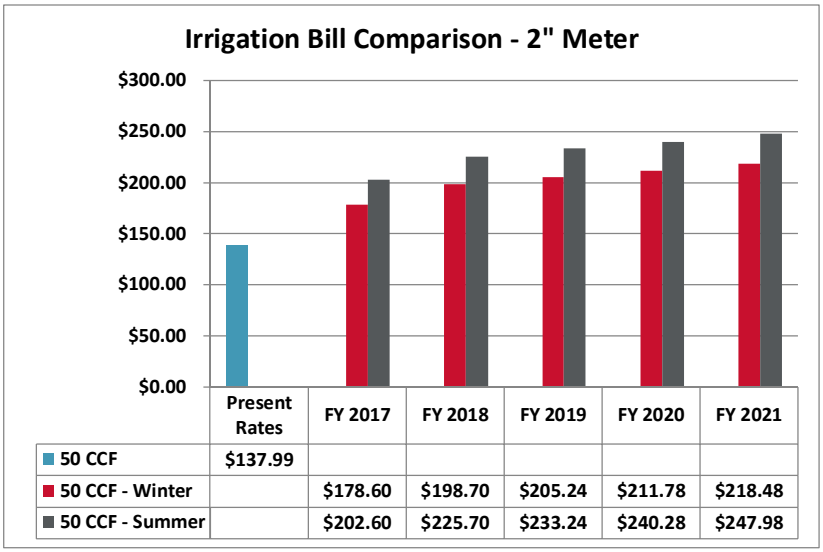
5.6.4 Review of the Present & Proposed Irrigation Water Rates

A similar approach was developed for the proposed irrigation customer rates as for multi-family and non-residential. The meter charge for the 1-inch and smaller were combined and the consumption charge is proposed to be a seasonal rate structure. It is important to note that the cost differences between the irrigation and the all other customers with a seasonal rate is due the peak demands that irrigation has. Because irrigation has a higher peak with more intermittent water requirements, the system must be sized to always provide that level of water availability. This then proportionally adds more costs to the capacity allocation factor for irrigation and results in a higher differential for the winter to summer consumption charge. Again, these rates are the direct output of the calculated cost of service analysis as shown in Table 5 – 6 in column D. Provided in Table 5 - 10 is a summary of the current and proposed rates for the irrigation customers.

Table 5 - 10
Summary of the Present & Proposed Irrigation Water Rates

	Current Rate	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Fixed Charge	***$/Acct.***					
5/8"	$18.94	N/A	N/A	N/A	N/A	N/A
3/4"	22.25	N/A	N/A	N/A	N/A	N/A
1"	29.24	N/A	N/A	N/A	N/A	N/A
1" & less	N/A	$28.00	$31.00	$31.95	$32.90	$33.90
1 1/2"	42.17	56.00	62.00	63.90	65.80	67.80
2"	54.49	89.60	99.20	102.24	105.28	108.48
3"	96.36	168.00	186.00	191.70	197.40	203.40
4"	138.53	280.00	310.00	319.50	329.00	339.00
6"	228.20	560.00	620.00	639.00	658.00	678.00
8"	330.87	896.00	992.00	1,022.40	1,052.80	1,084.80
10"	412.91	1,288.00	1,426.00	1,469.70	1,513.40	1,559.40
12"	581.32	1,890.00	2,092.50	2,156.63	2,220.75	2,288.25
Consumption Charge	***$/CCF***					
All Usage	$1.67	N/A	N/A	N/A	N/A	N/A
Winter (Oct – Apr)	N/A	$1.78	$1.99	$2.06	$2.13	$2.20
Summer (May – Sept)	N/A	2.26	2.53	2.62	2.70	2.79

Again the move to a seasonal rate from the current uniform rate is done in an effort to more closely reflect how the irrigation class incurs costs based on the water usage characteristics. It is important to note that, as for all customers, the meter charge is the same. Shown below is a chart with the anticipated bill impacts that an irrigation customer may see.



5.7 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 - 11 is a summary of the revenue targets based on the revenue requirement and cost of service analyses for the FY 2017 proposed rate adjustments.

Table 5 - 11
Comparison of the FY 2017 Proposed Revenues and Allocated Costs ($000's)

	Present Revenues	Cost of Service Adjustment	Target Revenues	Proposed Revenues	$ Difference
Single Family	$23,649	15.4%	$27,280	$27,376	$96
Multi-Family	3,751	16.8%	4,382	4,268	(114)
All Others	4,411	17.7%	5,191	5,247	55
Irrigation	2,472	27.2%	3,144	3,107	(38)
Total	**$34,283**	**16.7%**	**$39,998**	**$39,997**	**($1)**

As can be seen, the proposed revenues closely reflect the proportional allocation of costs to the various customer classes of service. A more detailed analysis of the projection of the proposed revenues is included within the Technical Appendix of this report.

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

5.8 Development of Drought Surcharges

As part of the water rate study, drought surcharges were developed to maintain sufficient revenues during drought or water shortage periods. Drought surcharges are an important tool that allows the Department to maintain adequate revenues when consumption declines due to voluntary or mandatory conservation resulting from drought conditions, such as the current drought California is experiencing, or other water shortage emergencies (e.g., supply constraints due to infrastructure failure).

When properly designed, drought surcharges address the issues of the financial/revenue impacts of decreased consumption. When a utility enters a drought stage, it is not uncommon for a utility to have a set of drought surcharges to maintain sufficient revenues due to reductions in usage.

The water rates being proposed in this water rate study assume "normal" water conditions. Under drought conditions, the Department will need to have customers reduce their consumption and provide sufficient conservation savings to meet the Department's conservation savings goals (State mandated) under the various stages of drought. For purposes

of establishing rates for drought surcharges, the Department has five different levels reflecting water use restrictions. Each subsequent level results in additional reductions in consumption as established in the Department's Water Management Plan. These five levels are summarized below along with the estimated consumption reductions resulting from additional conservation restrictions.

Level 1 – Minimal Irrigation/Outdoor Use
- Approximately a 10% reduction in consumptive use

Level 2 – Minimal Irrigation/Outdoor Use
- Approximately a 20% reduction in consumptive use

Level 3 – Limited Irrigation/Outdoor Use
- Approximately a 30% reduction in consumptive use

Level 4 – Very Limited Irrigation/Outdoor Use
- Approximately a 40% reduction in consumptive use

Level 5 – No Irrigation/Outdoor Use
- Approximately a 50% reduction in consumptive use

To maintain the target level of revenue during each stage of the drought, the drought surcharges are developed to collect the same revenue level with the lower level of consumption at each stage. The difference, stated in dollars per CCF, is then added to the water rates for each stage.

At the same time, during a drought, a utility may incur additional costs over and above the revenue requirements incurred during normal water conditions as a result of each stage of the drought. These additional expenses can be incurred for items such as additional water supply, pumping, advertising and notification, additional customer outreach, temporary staffing, enforcement, etc. As a part of developing the Department's proposed drought surcharges no additional or incremental costs have been considered or factored into the drought surcharges.

Based on the Department's planning, the development of the proposed drought surcharges takes into consideration where the consumption savings will occur. Typically this first targets discretionary use and then, if needed, non-discretionary use. As an example, discretionary use for a residential customer is often defined as outdoor usage, while non-discretionary water use is typically considered indoor use.

In developing the proposed drought surcharges, the monthly meter charge remains fixed at the same level regardless of the drought stage. Based on the conservation savings estimated for each drought level, the drought surcharges were developed to maintain the current level of revenues for each customer class of service. The surcharges were developed by taking the targeted consumption at each level of conservation savings and dividing the revenue reduction by the remaining consumption. This resulted in surcharges that would need to be added to the proposed rates to maintain the target level of revenues during a drought or water shortage period. Provided below in Table 5 - 12 is a summary of the drought surcharges for each level based on the proposed FY 2017 rates and structures.

Table 5 - 12
Summary of the Drought Surcharges – $/CCF

	Normal Conditions 0%	Level 1 10%	Level 2 20%	Level 3 30%	Level 4 40%	Level 5 50%
Single Family						
0 – 15 CCF	$0.00	$0.23	$0.53	$0.90	$1.40	$2.10
15 + CCF	0.00	0.23	0.53	0.90	1.40	2.10
Multi-Family						
Winter (Oct - Apr)	$0.00	$0.20	$0.44	$0.76	$1.18	$1.77
Summer (May - Sept)	0.00	0.20	0.44	0.76	1.18	1.77
Non-Residential						
Winter (Oct - Apr)	$0.00	$0.21	$0.46	$0.79	$1.23	$1.85
Summer (May - Sept)	0.00	0.21	0.46	0.79	1.23	1.85
Irrigation						
Winter (Oct - Apr)	$0.00	$0.23	$0.52	$0.90	$1.39	$2.09
Summer (May - Sept)	0.00	0.23	0.52	0.90	1.39	2.09

The drought rates in Table 5 - 12 are added to the adopted rates in place at the time the drought stage is declared. The drought surcharges would be applied to each tier of the Department's rates. For example, the proposed rate (FY 2017) for single family's first tier is currently $2.00/CCF and if the Department declares a Stage 2 drought, then the first tier rate will change to $2.53/CCF ($2.00 + $0.53).

Implementation of these drought surcharges will help the Department maintain revenue levels during drought related consumption reductions. It is important to note that the drought surcharges will not automatically go into effect once a drought stage is declared but the City Council will have to take action to implement the surcharges. This allows for the City Council and department staff to evaluate each situation on a case by case basis in order to decide if the water utility's financial health is at risk.

To better understand how the drought surcharges work, Table 5 - 13 shows a comparison of the single family monthly bill assuming a customer does, and does not, adjust their consumption in response to the requested savings in each drought stage.

Table 5 - 13
Single Family Drought Surcharge Bill Impacts [1]

	Normal Condition 0%	Level 1 10%	Level 2 20%	Level 3 30%	Level 4 40%	Level 5 50%
Customer Using 15 CCF						
Assumes No Change in Use (15 CCF)	$58.00	$61.45	$65.95	$71.50	$79.00	$89.50
Assumes Reduced Usage -						
Revised CCF Usage	15.0	14.0	12.0	11.0	9.0	8.0
Total Monthly Bill	$58.00	$59.22	$58.36	$59.90	$58.60	$60.80
Customer Using 30 CCF						
Assumes No Change in Use (30 CCF)	$93.85	$100.75	$109.75	$120.85	$135.85	$156.85
Assumes Reduced Usage -						
Revised CCF Usage	30.0	27.0	24.0	21.0	18.0	15.0
Total Monthly Bill	$93.85	$92.89	$92.23	$91.24	$90.37	$89.50
Customer Using 45 CCF						
Assumes No Change in Use (45 CCF)	$129.70	$140.05	$153.55	$170.20	$192.70	$224.20
Assumes Reduced Usage -						
Revised CCF Usage	45.0	41.0	36.0	32.0	27.0	23.0
Total Monthly Bill	$129.70	$129.57	$127.27	$127.43	$124.48	$125.42

[1] Assumes a 1" meter charge for a typical single family customer.

As can be seen in the above table, if a customer does not modify their consumption, their utility bill will increase substantially. However, if the customer does do provide the requested savings, his or her bill will be relatively the same as the pre-drought bill and provide the Department with sufficient revenue to maintain normal operations. For example, a customer using 15 CCF would pay $58.00 at the proposed rates. With no reduction in use for stage 2 drought, the customer would pay $65.88. With a reduction in use they will pay $58.30 or roughly the same as their current bill.

As noted, the purpose of the drought surcharges is to maintain sufficient revenues during times of declining consumption and subsequent revenues. Therefore, as water rates are adjusted, the drought surcharges will also need to be adjusted to reflect the target revenue needs with the proposed rate adjustments. The adjustment of the drought surcharges is based on the percentage basis to reflect the change in the overall consumption revenues. It should be noted that this is not the same as the overall rate adjustment, only the percentage change in the consumption revenues resulting from the rate increase. Provided in Table 5 - 14 is a summary of the proposed drought surcharges for the five-year rate setting period.

Table 5 - 14
Summary of the Drought Surcharge Schedule – $/CCF

	2017	2018	2019	2020	2021
Single Family					
Stage 1	$0.23	$0.27	$0.28	$0.29	$0.30
Stage 2	0.53	0.60	0.62	0.64	0.66
Stage 3	0.90	1.03	1.07	1.11	1.15
Stage 4	1.40	1.60	1.66	1.72	1.78
Stage 5	2.10	2.40	2.49	2.58	2.66
Multi-Family					
Stage 1	$0.20	$0.22	$0.23	$0.24	$0.25
Stage 2	0.44	0.50	0.52	0.54	0.56
Stage 3	0.76	0.86	0.89	0.92	0.95
Stage 4	1.18	1.33	1.38	1.43	1.48
Stage 5	1.77	2.00	2.07	2.15	2.23
Non-Residential					
Stage 1	$0.21	$0.23	$0.24	$0.25	$0.26
Stage 2	0.46	0.52	0.54	0.56	0.58
Stage 3	0.79	0.90	0.93	0.97	1.00
Stage 4	1.23	1.40	1.45	1.50	1.55
Stage 5	1.85	2.10	2.18	2.26	2.34
Irrigation					
Stage 1	$0.23	$0.26	$0.27	$0.28	$0.29
Stage 2	0.52	0.59	0.61	0.63	0.65
Stage 3	0.90	1.02	1.06	1.10	1.14
Stage 4	1.39	1.58	1.64	1.70	1.76
Stage 5	2.09	2.38	2.47	2.56	2.65

As noted, the above drought surcharges are added to the water rates adopted for the time period specified. Updating the drought surcharges each time the water rates are updated will maintain the sufficient revenue levels necessary to fund the operating and capital needs of the water utility during times of drought and reduced consumption levels. The technical appendix provides the calculation of the drought surcharges for each customer class of service.

5.9 Water Rate Study Recommendations

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

- Rate revenues for the Department's water utility should be adjusted 18.5 % in FY 2017, followed by a 11.0% in FY 2018, and 3.0% in FY 2019 through FY 2021.
- The proposed rates should be implemented to reflect each customer class' proportional allocation of costs.

- The rates are proposed to be implemented and effective on August 1, 2016 and each year thereafter on July 1 (e.g., July 1, 2017).
- When funds are available, increase the level of annual replacement funding to transition towards meeting annual depreciation expense levels.
- Drought rates should be adopted based on the need to maintain sufficient revenues for operating and capital needs.
- Drought surcharges should be implemented at the appropriate level in FY 2017 along with the proposed rates.
- Drought rates should be adjusted whenever water rates are adjusted.
- Prior to the implementation of the fifth, and final, proposed rate adjustment the Department should complete a review of the water rates.

5.10 Summary of the Water Rate Study

This completes the analysis for the City of Stockton Municipal Utility Department's water utility. This study has provided a comprehensive review and development of proposed water rates, and drought surcharges, for the Department. Adoption of the proposed water rates and drought surcharges will allow the Department to meet their current and projected water system financial obligations for the time period reviewed based on the assumed customer growth, capital plan, and projected increases in operating costs. Should these assumptions change, the proposed rate adjustments may also need to be revised to reflect the current conditions.

Technical Appendix A – Water Technical Analysis

City of Stockton MUD
Water Cost of Service Study
Revenue Requirement Summary
Exhibit 1

	Actual FY 2011	Actual FY 2012	Actual FY 2013	Actual FY 2014	Actual FY 2015	Proj. Yr. End FY 2016	Budgeted FY 2017	Projected FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Revenue																
Rate Revenues	$28,861,031	$32,151,476	$36,220,290	$36,703,829	$33,684,844	$32,094,830	$34,282,742	$34,454,156	$34,626,426	$34,799,559	$35,060,555	$35,323,509	$35,676,745	$36,033,512	$36,393,847	$36,757,786
Non-Operating Revenues	2,809,178	1,598,898	1,291,079	1,555,551	1,470,243	1,523,133	1,513,087	1,505,084	1,520,422	1,537,898	1,558,186	1,580,345	1,603,201	1,626,114	1,643,867	1,659,811
Total Revenues	**$31,670,209**	**$33,750,374**	**$37,511,369**	**$38,259,380**	**$35,155,087**	**$33,617,963**	**$35,795,829**	**$35,959,240**	**$36,146,848**	**$36,337,457**	**$36,618,742**	**$36,903,854**	**$37,279,946**	**$37,659,626**	**$38,037,714**	**$38,417,596**
Expenses																
Total Administrative & General	$1,659,587	$1,510,449	$2,412,410	$2,082,407	$1,855,341	$1,269,937	$1,269,551	$1,307,007	$1,345,638	$1,385,481	$1,426,580	$1,468,976	$1,512,715	$1,557,842	$1,604,405	$1,652,455
Total Operations and Maintenance	5,790,360	5,371,381	4,990,523	6,043,473	5,417,295	4,096,281	4,321,399	4,462,767	4,609,294	4,761,188	4,918,666	5,081,956	5,251,294	5,426,928	5,609,117	5,798,132
Total Utility Billing	0	0	0	910,478	940,565	868,410	914,526	940,890	968,029	995,965	1,024,722	1,054,324	1,084,797	1,116,166	1,148,458	1,181,700
Total Other Support Services	528,983	380,745	358,071	352,837	394,787	367,760	436,521	451,926	467,918	484,521	501,760	519,662	538,256	557,569	577,635	598,483
Total Water Conservation	298,933	180,407	204,431	163,914	213,541	129,583	304,322	313,023	321,988	331,226	340,747	350,559	360,673	371,098	381,845	392,926
Total Water Purchase	9,863,289	9,682,662	7,887,945	8,214,161	8,595,356	8,627,646	9,938,201	10,584,184	11,272,156	12,004,846	12,785,161	13,616,197	14,501,249	15,443,831	16,447,680	17,516,779
Total Hydrant Maintenance	341,433	297,228	235,982	225,295	219,689	225,802	268,916	278,110	287,646	297,539	307,802	318,451	329,502	340,972	352,878	365,238
Total Delta Water Production	0	866,404	2,652,121	3,097,711	3,408,187	3,832,729	4,252,879	4,401,962	4,556,622	4,717,081	4,883,566	5,056,318	5,235,584	5,421,625	5,614,710	5,815,121
Total Well Production	0	0	0	0	0	1,325,392	1,553,334	1,608,446	1,665,574	1,724,795	1,786,187	1,849,831	1,915,814	1,984,221	2,055,145	2,128,681
Total DWSP Maintenance & Repair	0	866,404	2,652,121	3,097,711	0	0	495,514	507,686	520,166	532,960	546,078	559,527	573,316	587,454	601,951	616,814
Total Summary Account Expenses	0	456,126	423,872	397,002	1,116,588	1,838,276	2,110,343	2,141,998	2,174,128	2,206,740	2,239,841	2,273,439	2,307,540	2,342,153	2,377,286	2,412,945
Total O&M Expenses	**$18,482,584**	**$19,611,806**	**$21,817,475**	**$24,584,988**	**$22,161,349**	**$22,581,816**	**$25,865,506**	**$26,998,000**	**$28,189,159**	**$29,442,342**	**$30,761,110**	**$32,149,240**	**$33,610,740**	**$35,149,860**	**$36,771,109**	**$38,479,273**
Net Debt Service	**$9,833,187**	**$9,833,187**	**$13,919,075**	**$14,230,639**	**$17,660,146**	**$13,320,485**	**$12,163,653**	**$16,651,280**	**$16,643,287**	**$16,437,221**	**$15,680,832**	**$15,831,699**	**$15,740,756**	**$15,983,257**	**$17,646,918**	**$17,637,428**
Rate Funded Capital	**$0**	**$5,101,000**	**$1,055,098**	**$7,485,009**	**$4,041,500**	**$2,200,000**	**$2,350,000**	**$2,500,000**	**$3,000,000**	**$3,450,000**	**$3,900,000**	**$4,350,000**	**$4,800,000**	**$5,250,000**	**$5,700,000**	**$6,150,000**
Change in Working Capital	**$0**	**$0**	**$0**	**$0**	**$0**	**($4,484,338)**	**$1,131,481**	**$675,078**	**$600,222**	**$769,546**	**$1,609,427**	**$1,543,672**	**$1,853,430**	**$1,837,112**	**$400,698**	**$640,623**
Total Revenue Requirement	**$28,315,771**	**$34,545,993**	**$36,791,648**	**$46,300,636**	**$43,862,995**	**$33,617,963**	**$41,510,640**	**$46,824,358**	**$48,432,668**	**$50,099,110**	**$51,951,370**	**$53,874,611**	**$56,004,926**	**$58,220,228**	**$60,518,724**	**$62,907,325**
Balance/(Deficiency) of Funds	$3,354,438	($795,619)	$719,721	($8,041,256)	($8,707,907)	$0	($5,714,812)	($10,865,118)	($12,285,820)	($13,761,653)	($15,332,628)	($16,970,757)	($18,724,981)	($20,560,603)	($22,481,010)	($24,489,729)
Bal/(Def.) as a % of Rate Rev.	**-11.6%**	**2.5%**	**-2.0%**	**21.9%**	**25.9%**	**0.0%**	**16.7%**	**31.5%**	**35.5%**	**39.5%**	**43.7%**	**48.0%**	**52.5%**	**57.1%**	**61.8%**	**66.6%**
Proposed Rate Adjustment	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**18.5%**	**11.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**
Add'l Revenue from Adj. [2]	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$5,714,812**	**$10,865,118**	**$12,285,820**	**$13,761,653**	**$15,332,628**	**$16,970,757**	**$18,724,981**	**$20,560,603**	**$22,481,010**	**$24,489,729**
Total Bal/(Def.) of Funds	**$3,354,438**	**($795,619)**	**$719,721**	**($8,041,256)**	**($8,707,907)**	**$0**	**$0**	**($0)**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Additional Rate Increase Needed	**-11.6%**	**2.5%**	**-2.0%**	**21.9%**	**25.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Avg Res Monthly Bill (5/8" Meter + 15CCF)						**$43.99**	**$52.13**	**$57.86**	**$59.60**	**$61.39**	**$63.23**	**$65.12**	**$67.08**	**$69.09**	**$71.16**	**$73.30**
Total Reserve Funds	**$0**	**$0**	**$0**	**($1,100,000)**	**$28,047,735**	**$21,325,615**	**$17,862,633**	**$18,394,985**	**$19,537,917**	**$20,747,878**	**$22,926,474**	**$24,723,279**	**$27,590,407**	**$30,150,319**	**$31,094,276**	**$33,072,444**
Total Target Ending Fund Balance	***$9,215,973***	***$9,779,038***	***$10,878,851***	***$12,258,816***	***$11,050,317***	***$11,259,974***	***$12,897,321***	***$13,462,017***	***$14,055,964***	***$14,680,839***	***$15,338,417***	***$16,030,580***	***$16,759,328***	***$17,526,780***	***$18,335,183***	***$19,186,925***

City of Stockton MUD
Water Cost of Service Study
Exhibit 2
Escalation Factors

	Actual	Actual	Actual	Actual	Actual	Proj. Yr. End	Budgeted	Projected								
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Revenues:																
Customer Growth	Actual	Actual	Actual	Actual	Estimated	0.5%	0.5%	0.5%	0.5%	0.5%	0.8%	0.8%	1.0%	1.0%	1.0%	1.0%
Miscellaneous Revenues	Actual	Actual	Actual	Actual	Estimated	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Expenses:																
Labor	Actual	Actual	Actual	Actual	Estimated	Budgeted	Budgeted	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Benefits - Medical	Actual	Actual	Actual	Actual	Estimated	Budgeted	Budgeted	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Benefits - Other	Actual	Actual	Actual	Actual	Estimated	Budgeted	Budgeted	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Materials & Supplies	Actual	Actual	Actual	Actual	Estimated	Budgeted	Budgeted	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Equipment	Actual	Actual	Actual	Actual	Estimated	Budgeted	Budgeted	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Miscellaneous	Actual	Actual	Actual	Actual	Estimated	Budgeted	Budgeted	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Utilities	Actual	Actual	Actual	Actual	Estimated	Budgeted	Budgeted	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Insurance	Actual	Actual	Actual	Actual	Estimated	Budgeted	Budgeted	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Purchased Water	Actual	Actual	Actual	Actual	Estimated	Budgeted	Budgeted	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Interest:					0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
New Debt Service:																
Low Interest Loans																
Term in Years	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Revenue Bond																
Term in Years	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Rate	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%

City of Stockton MUD
Water Cost of Service Study
Exhibit 3
Revenue Requirement

Acct. #		Actual FY 2011	Actual FY 2012	Actual FY 2013	Actual FY 2014	Actual FY 2015	Proj. Yr. End FY 2016	Budgeted FY 2017	Projected FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Notes:
	Revenues																	
	Rate Revenues																	
	Single Family	$20,291,199	$22,540,584	$25,188,591	$25,246,801	$23,235,473	$22,546,976	$23,648,740	$23,766,984	$23,885,819	$24,005,248	$24,185,288	$24,366,677	$24,610,344	$24,856,447	$25,105,012	$25,356,062	As Customer Growth
	Multi-Family	2,612,195	2,805,393	3,178,085	3,329,608	3,250,350	3,230,661	3,751,201	3,769,957	3,788,807	3,807,751	3,836,309	3,865,081	3,903,732	3,942,770	3,982,197	4,022,019	As Customer Growth
	Commercial/Institutional	5,625,641	6,425,434	7,419,270	7,619,711	6,698,219	5,788,177	3,849,167	3,868,413	3,887,755	3,907,194	3,936,498	3,966,021	4,005,682	4,045,738	4,086,196	4,127,058	As Customer Growth
	City	9,238	11,310	13,598	15,234	13,106	13,986	0	0	0	0	0	0	0	0	0	0	As Customer Growth
	Industrial	322,758	368,755	420,746	492,476	487,696	515,030	561,541	564,348	567,170	570,006	574,281	578,588	584,374	590,218	596,120	602,081	As Customer Growth
	Irrigation	0	0	0	0	0	0	2,472,093	2,484,453	2,496,875	2,509,360	2,528,180	2,547,141	2,572,613	2,598,339	2,624,322	2,650,566	As Customer Growth
	Total Rate Revenues	$28,861,031	$32,151,476	$36,220,290	$36,703,829	$33,684,844	$32,094,830	$34,282,742	$34,454,156	$34,626,426	$34,799,559	$35,060,555	$35,323,509	$35,676,745	$36,033,512	$36,393,847	$36,757,786	
	Non-Operating Revenues																	
	Interest	$1,702,167	$466,348	$62,326	$404,649	$259,438	$161,910	$121,170	$99,249	$100,528	$103,805	$109,753	$117,427	$125,654	$133,791	$136,621	$137,492	Calc'd on Oper. Balance
	Private Fire	0	0	0	0	26,649	25,046	169,099	170,790	172,497	174,222	175,965	177,724	179,502	181,297	183,110	184,941	As Miscellaneous Revenues
	Linc Vill Maint	160,907	152,258	176,073	69,363	150,042	283,149	150,792	152,300	153,823	155,361	156,915	158,484	160,069	161,669	163,286	164,919	As Miscellaneous Revenues
	Service Penalties	603,473	665,301	746,035	762,952	727,202	770,196	770,390	778,094	785,875	793,734	801,671	809,688	817,785	825,962	834,222	842,564	As Miscellaneous Revenues
	Reconnection Admin Fees	314,490	314,991	302,251	311,604	298,437	281,142	299,929	302,928	305,957	309,017	312,107	315,228	318,381	321,564	324,780	328,028	As Miscellaneous Revenues
	Repayment of In-Lieu Transfers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	City Provided
	Miscellaneous Other Revenues	28,141	0	4,394	6,983	8,475	1,690	1,707	1,724	1,741	1,759	1,776	1,794	1,812	1,830	1,848	1,867	As Miscellaneous Revenues
	Total Non-Operating Revenues	$2,809,178	$1,598,898	$1,291,079	$1,555,551	$1,470,243	$1,523,133	$1,513,087	$1,505,084	$1,520,422	$1,537,898	$1,558,186	$1,580,345	$1,603,201	$1,626,114	$1,643,867	$1,659,811	
	Total Revenues	**$31,670,209**	**$33,750,374**	**$37,511,369**	**$38,259,380**	**$35,155,087**	**$33,617,963**	**$35,795,829**	**$35,959,240**	**$36,146,848**	**$36,337,457**	**$36,618,742**	**$36,903,854**	**$37,279,946**	**$37,659,626**	**$38,037,714**	**$38,417,596**	
	Administrative & General																	
	Employee Services																	
10-10	Salaries - Regular	$494,024	$438,477	$757,519	$577,973	$599,036	$301,733	$284,677	$293,217	$302,014	$311,074	$320,406	$330,019	$339,919	$350,117	$360,620	$371,439	As Labor
10-13	Regular Overtime	5,239	7,931	11,252	9,903	4,394	470	2,800	2,884	2,971	3,060	3,151	3,246	3,343	3,444	3,547	3,653	As Labor
10-20	Employee Separation Pay	43,610	32,288	33,437	11,980	6,586	3,560	1,274	1,325	1,378	1,433	1,490	1,550	1,612	1,676	1,744	1,813	As Benefits - Other
10-21	Additional Pay	8,428	3,120	2,502	1,587	2,675	1,777	1,512	1,572	1,635	1,701	1,769	1,840	1,913	1,990	2,069	2,152	As Benefits - Other
10-25	Retirement	125,103	88,351	128,043	103,968	120,700	67,841	63,044	65,566	68,188	70,916	73,753	76,703	79,771	82,962	86,280	89,731	As Benefits - Other
10-27	Medicare	7,697	6,593	10,310	7,921	8,162	4,276	3,729	3,953	4,190	4,441	4,708	4,990	5,290	5,607	5,943	6,300	As Benefits - Medical
10-29	Health/Dental/Vision	171,909	158,294	109,572	98,003	93,130	43,867	39,358	41,719	44,223	46,876	49,689	52,670	55,830	59,180	62,731	66,495	As Benefits - Medical
10-31	L/T Disability Insurance	5,186	5,839	6,280	3,314	3,469	1,746	1,524	1,570	1,617	1,665	1,715	1,767	1,820	1,874	1,931	1,988	As Insurance
10-32	Life Insurance	4,241	2,682	1,327	683	676	373	285	294	302	311	321	330	340	351	361	372	As Insurance
10-33	Workers Compensation	8,466	21,077	26,660	48,708	44,870	17,304	14,055	14,617	15,202	15,810	16,442	17,100	17,784	18,495	19,235	20,005	As Benefits - Other
10-34	Unemployment Insurance	3,078	843	3,482	1,657	1,176	466	349	359	370	381	393	405	417	429	442	455	As Insurance
10-45	Cell Phone Allowance	721	1,124	2,668	1,772	2,851	1,326	2,670	2,777	2,888	3,003	3,124	3,248	3,378	3,514	3,654	3,800	As Benefits - Other
10-46	Retirement Pension Bond	0	0	34,648	35,246	36,530	19,661	11,232	11,681	12,149	12,634	13,140	13,665	14,212	14,781	15,372	15,987	As Benefits - Other
	Total Employee Services	$890,538	$777,315	$1,157,551	$905,360	$972,924	$464,401	$426,509	$441,535	$457,126	$473,307	$490,101	$507,533	$525,630	$544,419	$563,929	$584,191	

		Actual	Actual	Actual	Actual	Actual	Proj. Yr. End	Budgeted					Projected					
Acct. #		FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Notes:
	Other Services																	
20-15	Telephone	$2,493	$2,449	$1,399	$1,230	$1,899	$300	$100	$102	$103	$105	$106	$108	$109	$111	$113	$114	As Miscellaneous
20-25	Maint. & Repair Services	5,235	1,238	1,936	2,401	2,885	1,683	2,400	2,460	2,522	2,585	2,649	2,715	2,783	2,853	2,924	2,997	As Materials & Supplies
20-37	Insurance Premiums	15,158	16,558	42,109	43,413	29,597	14,625	12,080	12,442	12,816	13,200	13,596	14,004	14,424	14,857	15,303	15,762	As Insurance
20-43	Computer/Tech/Oper Supprt	31,243	50,940	47,900	39,869	47,162	49,084	22,066	22,618	23,183	23,763	24,357	24,966	25,590	26,230	26,885	27,557	As Materials & Supplies
20-45	Other Rentals	60,855	60,855	59,587	69,898	71,888	72,000	69,451	71,187	72,967	74,791	76,661	78,577	80,542	82,555	84,619	86,735	As Materials & Supplies
20-47	Telephone Rental	10,530	8,596	7,360	7,928	11,289	12,126	16,786	17,206	17,636	18,077	18,529	18,992	19,467	19,953	20,452	20,963	As Materials & Supplies
20-52	Publicity & Advertising	1,025	609	0	1,132	962	1,000	1,000	1,015	1,030	1,046	1,061	1,077	1,093	1,110	1,126	1,143	As Miscellaneous
20-53	Printing & Mapping	0	0	0	13	0	2,500	2,500	2,563	2,627	2,692	2,760	2,829	2,899	2,972	3,046	3,122	As Materials & Supplies
20-54	Postage/Mailing Services	1,141	2,152	3,701	1,320	662	31,500	10,500	10,763	11,032	11,307	11,590	11,880	12,177	12,481	12,793	13,113	As Materials & Supplies
20-57	Processing Fees	38,407	26,594	23,459	6,972	16,091	9,177	10,500	10,763	11,032	11,307	11,590	11,880	12,177	12,481	12,793	13,113	As Materials & Supplies
20-58	Legal Services	145,731	327,679	661,271	721,622	301,568	126,004	312,656	322,036	331,697	341,648	351,897	362,454	373,328	384,527	396,063	407,945	As Labor
20-64	Training Services	240	180	1,231	1,200	2,976	0	500	508	515	523	531	539	547	555	563	572	As Miscellaneous
20-65	Prof & Special Services	152,073	44,367	45,728	71,751	41,583	145,664	32,000	32,960	33,949	34,967	36,016	37,097	38,210	39,356	40,537	41,753	As Labor
20-66	Other Services	265	352	0	956	125	22	2,400	2,436	2,473	2,510	2,547	2,585	2,624	2,664	2,704	2,744	As Miscellaneous
	Total Other Services	$480,566	$559,665	$912,700	$991,466	$546,893	$468,101	$494,939	$509,056	$523,579	$538,520	$553,890	$569,702	$585,970	$602,705	$619,922	$637,634	
	Materials and Supplies																	
30-50	Materials & Supplies	$9,128	$3,515	$3,380	$2,032	$3,554	$5,483	$5,000	$5,125	$5,253	$5,384	$5,519	$5,657	$5,798	$5,943	$6,092	$6,244	As Materials & Supplies
30-51	Computer Software	2,000	2,500	2,013	800	160	0	500	513	525	538	552	566	580	594	609	624	As Materials & Supplies
30-52	Subscriptions - Periodicals	0	198	0	0	0	0	350	355	361	366	371	377	383	388	394	400	As Miscellaneous
30-55	Library Materials	359	0	293	0	78	0	1,000	1,025	1,051	1,077	1,104	1,131	1,160	1,189	1,218	1,249	As Materials & Supplies
	Total Materials and Supplies	$12,291	$6,985	$9,748	$6,522	$7,097	$8,401	$6,850	$7,018	$7,190	$7,366	$7,546	$7,731	$7,921	$8,115	$8,314	$8,518	
	Other Expenses																	
40-10	Training	$8,051	$2,760	$6,069	$1,012	$7,984	$3,694	$10,000	$10,150	$10,302	$10,457	$10,614	$10,773	$10,934	$11,098	$11,265	$11,434	As Miscellaneous
40-12	Meetings & Travel	110	3,151	4,139	3,283	1,032	2,500	5,000	5,125	5,253	5,384	5,519	5,657	5,798	5,943	6,092	6,244	As Materials & Supplies
40-14	Memberships	16,516	20,024	27,500	36,240	23,555	28,136	28,550	28,978	29,413	29,854	30,302	30,756	31,218	31,686	32,161	32,644	As Miscellaneous
40-22	Taxes	2,109	2,023	0	0	1,152	0	3,000	3,075	3,152	3,231	3,311	3,394	3,479	3,566	3,655	3,747	As Materials & Supplies
40-25	Indirect Cost Allocation	249,406	138,525	294,704	138,525	294,704	294,703	294,703	302,071	309,622	317,363	325,297	333,429	341,765	350,309	359,067	368,044	As Materials & Supplies
	Total Other Expenses	$276,193	$166,484	$332,411	$179,059	$328,427	$329,033	$341,253	$349,399	$357,743	$366,289	$375,043	$384,010	$393,195	$402,603	$412,241	$422,112	
	Total Administrative & General	**$1,659,587**	**$1,510,449**	**$2,412,410**	**$2,082,407**	**$1,855,341**	**$1,269,937**	**$1,269,551**	**$1,307,007**	**$1,345,638**	**$1,385,481**	**$1,426,580**	**$1,468,976**	**$1,512,715**	**$1,557,842**	**$1,604,405**	**$1,652,455**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 3
Revenue Requirement

Acct. #		Actual FY 2011	Actual FY 2012	Actual FY 2013	Actual FY 2014	Actual FY 2015	Proj. Yr. End FY 2016	Budgeted FY 2017	Projected FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Notes:
	Operations and Maintenance																	
	Employee Services																	
10-10	Salaries - Regular	$1,632,911	$1,409,623	$1,514,784	$1,528,573	$1,505,658	$1,529,181	$1,595,702	$1,643,573	$1,692,880	$1,743,667	$1,795,977	$1,849,856	$1,905,352	$1,962,512	$2,021,388	$2,082,029	As Labor
10-13	Regular Overtime	64,717	65,009	69,451	57,745	91,969	116,373	77,310	79,629	82,018	84,479	87,013	89,623	92,312	95,082	97,934	100,872	As Labor
10-17	Stand By Time (Call Back)	30,512	30,386	9,943	17,177	18,311	19,486	15,000	15,450	15,914	16,391	16,883	17,389	17,911	18,448	19,002	19,572	As Labor
10-20	Separation Pay	91,727	100,875	65,164	23,500	12,611	11,269	7,249	7,539	7,841	8,154	8,480	8,820	9,172	9,539	9,921	10,318	As Benefits - Other
10-21	Additional Pay	214,136	154,720	118,798	57,984	55,452	56,275	36,239	37,689	39,196	40,764	42,395	44,090	45,854	47,688	49,596	51,579	As Benefits - Other
10-25	Retirement	409,650	299,656	259,447	282,575	310,783	351,006	353,409	367,545	382,247	397,537	413,439	429,976	447,175	465,062	483,665	503,011	As Benefits - Other
10-26	Deferred Compensation	83,749	67,276	67,473	69,872	69,548	71,390	70,702	73,530	76,471	79,530	82,711	86,020	89,461	93,039	96,761	100,631	As Benefits - Other
10-27	Medicare	30,258	24,110	24,695	23,533	23,653	23,853	21,957	23,274	24,671	26,151	27,720	29,383	31,146	33,015	34,996	37,096	As Benefits - Medical
10-29	Health/Dental/Vision	796,145	727,101	448,484	360,691	343,639	313,385	337,586	357,841	379,312	402,070	426,195	451,766	478,872	507,605	538,061	570,344	As Benefits - Medical
10-31	L-T Disability Insurance	17,038	18,600	12,089	8,594	8,460	8,569	8,134	8,378	8,629	8,888	9,155	9,430	9,712	10,004	10,304	10,613	As Insurance
10-32	Life Insurance	9,411	6,392	4,365	2,854	2,763	2,838	2,619	2,698	2,778	2,862	2,948	3,036	3,127	3,221	3,318	3,417	As Insurance
10-33	Workers' Compensation	78,785	105,904	133,402	189,977	170,210	184,676	188,377	195,912	203,749	211,899	220,374	229,189	238,357	247,891	257,807	268,119	As Benefits - Other
10-34	Unemployment Insurance	10,968	2,856	7,810	4,689	3,225	2,586	2,058	2,120	2,183	2,249	2,316	2,386	2,457	2,531	2,607	2,685	As Insurance
10-45	Cell Phone Allowance	84	98	212	1,027	919	847	843	877	912	948	986	1,026	1,067	1,109	1,154	1,200	As Benefits - Other
10-46	Retirement Pension Bond	0	0	68,461	71,332	70,827	63,799	64,751	67,341	70,035	72,836	75,750	78,779	81,931	85,208	88,616	92,161	As Benefits - Other
	Total Employee Services	$3,496,120	$3,022,946	$2,924,241	$2,718,953	$2,837,453	$2,684,714	$2,781,936	$2,883,396	$2,988,836	$3,098,425	$3,212,341	$3,330,770	$3,453,906	$3,581,954	$3,715,127	$3,853,648	
	Other Services & Charges																	
20-11	Electricity	$582,181	$536,061	$484,820	$824,041	$875,005	$14,400	$12,000	$12,480	$12,979	$13,498	$14,038	$14,600	$15,184	$15,791	$16,423	$17,080	As Utilities
20-12	Gas	1,554	665	790	2,186	1,297	1,365	3,000	3,120	3,245	3,375	3,510	3,650	3,796	3,948	4,106	4,270	As Utilities
20-13	Sanitary Sewer	549	0	0	0	0	0	600	624	649	675	702	730	759	790	821	854	As Utilities
20-14	Water	774	866	869	1,891	1,084	880	2,400	2,496	2,596	2,700	2,808	2,920	3,037	3,158	3,285	3,416	As Utilities
20-15	Telephone	27,332	24,057	22,328	18,878	16,730	22,173	26,000	27,040	28,122	29,246	30,416	31,633	32,898	34,214	35,583	37,006	As Utilities
20-17	Storm Water	2,123	2,655	2,655	2,655	2,655	3,035	2,700	2,808	2,920	3,037	3,159	3,285	3,416	3,553	3,695	3,843	As Utilities
20-25	Maint. & Repair Services	261,761	123,968	68,967	385,833	23,780	57,564	103,300	105,883	108,530	111,243	114,024	116,874	119,796	122,791	125,861	129,008	As Materials & Supplies
20-27	Uniform/Laundry Services	11,314	11,061	11,681	9,452	11,286	7,498	10,000	10,250	10,506	10,769	11,038	11,314	11,597	11,887	12,184	12,489	As Materials & Supplies
20-34	Duplication/Copy Costs	512	572	683	1,468	991	937	750	769	788	808	828	849	870	892	914	937	As Materials & Supplies
20-37	Insurance Premiums	54,207	56,379	85,819	89,760	81,155	58,746	71,383	73,524	75,730	78,002	80,342	82,752	85,235	87,792	90,426	93,139	As Insurance
20-41	Automotive Equip Rental	92,757	109,563	101,651	311,287	180,325	149,394	132,822	137,471	142,282	147,262	152,416	157,751	163,272	168,987	174,901	181,023	As Equipment
20-43	Computer/Tech/Oper Supprt	37,705	89,445	58,066	77,618	86,762	133,449	71,943	74,461	77,067	79,764	82,556	85,446	88,436	91,532	94,735	98,051	As Equipment
20-44	Radio Equipment Rental	9,375	2,266	1,951	4,020	4,454	3,624	4,492	4,649	4,812	4,980	5,155	5,335	5,522	5,715	5,915	6,122	As Equipment
20-47	Telephone Rental	8,047	9,748	13,362	12,973	19,007	16,938	10,072	10,425	10,789	11,167	11,558	11,962	12,381	12,814	13,263	13,727	As Equipment
20-52	Publicity & Advertising	1,366	0	446	0	0	0	1,000	1,025	1,051	1,077	1,104	1,131	1,160	1,189	1,218	1,249	As Materials & Supplies
20-54	Postage/Mailing Services	1,464	1,231	9,179	825	1,162	1,809	1,500	1,538	1,576	1,615	1,656	1,697	1,740	1,783	1,828	1,873	As Materials & Supplies
20-57	Processing Fees	17,672	37,011	15,383	7,759	15,337	31,057	75,916	77,814	79,759	81,753	83,797	85,892	88,039	90,240	92,496	94,809	As Materials & Supplies
20-63	Testing & Analysis Servcs	14,755	4,740	10,004	12,913	5,180	5,702	5,000	5,125	5,253	5,384	5,519	5,657	5,798	5,943	6,092	6,244	As Materials & Supplies
20-66	Other Services	1,621	1,966	15,037	70,293	85,141	52,595	162,800	165,242	167,721	170,236	172,790	175,382	178,013	180,683	183,393	186,144	As Miscellaneous
	Total Other Services & Charges	$1,178,874	$1,077,720	$990,583	$1,895,678	$1,475,997	$634,147	$697,678	$716,743	$736,375	$756,593	$777,415	$798,861	$820,949	$843,702	$867,139	$891,282	

City of Stockton MUD
Water Cost of Service Study
Exhibit 3
Revenue Requirement

Acct. #		Actual FY 2011	Actual FY 2012	Actual FY 2013	Actual FY 2014	Actual FY 2015	Proj. Yr. End FY 2016	Budgeted FY 2017	Projected FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Notes:
	Materials and Supplies																	
30-50	Materials & Supplies	$389,129	$442,399	$400,256	$579,389	$501,470	$180,170	$185,000	$189,625	$194,366	$199,225	$204,205	$209,311	$214,543	$219,907	$225,405	$231,040	As Materials & Supplies
30-51	Computer Software	4,650	2,681	9,636	8,614	7,433	0	8,000	8,200	8,405	8,615	8,831	9,051	9,278	9,509	9,747	9,991	As Materials & Supplies
30-52	Subscription-Periodical	0	56	0	0	0	0	500	508	515	523	531	539	547	555	563	572	As Miscellaneous
30-53	Fuel - Gas/Oil/Propane	73,641	86,464	85,066	83,518	55,944	48,734	62,463	64,962	67,560	70,262	73,073	75,996	79,036	82,197	85,485	88,904	As Utilities
30-55	Library Materials	0	0	181	0	0	0	1,000	1,040	1,082	1,125	1,170	1,217	1,265	1,316	1,369	1,423	As Utilities
	Total Materials and Supplies	$475,702	$532,382	$495,139	$671,559	$564,847	$228,904	$256,963	$264,334	$271,927	$279,750	$287,809	$296,113	$304,668	$313,484	$322,569	$331,930	
	Other Expenses																	
40-10	Training	$1,903	$2,457	$2,067	$9,274	$2,339	$1,632	$5,000	$5,150	$5,305	$5,464	$5,628	$5,796	$5,970	$6,149	$6,334	$6,524	As Labor
40-12	Meetings & Travel	380	754	493	64	85	0	5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717	As Miscellaneous
40-14	Memberships	1,488	1,495	2,536	1,539	3,713	2,905	3,000	3,045	3,091	3,137	3,184	3,232	3,280	3,330	3,379	3,430	As Miscellaneous
40-22	Taxes	2,148	2,152	0	0	2,167	3,000	3,000	3,045	3,091	3,137	3,184	3,232	3,280	3,330	3,379	3,430	As Miscellaneous
40-25	Indirect Cost Allocation	414,688	540,000	383,822	540,000	383,822	383,822	383,822	389,579	395,423	401,354	407,375	413,485	419,688	425,983	432,373	438,858	As Miscellaneous
40-68	Retirement Expense	219,056	191,476	191,476	205,691	143,056	157,157	185,000	192,400	200,096	208,100	216,424	225,081	234,084	243,447	253,185	263,313	As Benefits - Other
	Total Other Expenses	$639,663	$738,333	$580,559	$757,282	$538,999	$548,516	$584,822	$598,294	$612,156	$626,420	$641,101	$656,213	$671,770	$687,788	$704,283	$721,272	
	Total Operations and Maintenance	**$5,790,360**	**$5,371,381**	**$4,990,523**	**$6,043,473**	**$5,417,295**	**$4,096,281**	**$4,321,399**	**$4,462,767**	**$4,609,294**	**$4,761,188**	**$4,918,666**	**$5,081,956**	**$5,251,294**	**$5,426,928**	**$5,609,117**	**$5,798,132**	
	Utility Billing																	
10-97	Employee Services Summary	$0	$0	$0	$337,736	$347,272	$403,499	$439,744	$452,936	$466,524	$480,520	$494,936	$509,784	$525,077	$540,830	$557,055	$573,766	As Labor
20-97	Other Services Summary	0	0	0	494,300	520,864	385,690	396,750	408,653	420,912	433,539	446,546	459,942	473,740	487,952	502,591	517,669	As Labor
30-97	Materials & Supplies Summary	0	0	0	6,950	6,685	12,701	9,903	10,151	10,404	10,664	10,931	11,204	11,484	11,772	12,066	12,367	As Materials & Supplies
40-97	Other Expenses Summary	0	0	0	71,492	65,744	66,520	68,129	69,151	70,188	71,241	72,310	73,394	74,495	75,613	76,747	77,898	As Miscellaneous
	Total Utility Billing	$0	$0	$0	$910,478	$940,565	$868,410	$914,526	$940,890	$968,029	$995,965	$1,024,722	$1,054,324	$1,084,797	$1,116,166	$1,148,458	$1,181,700	
	Total Utility Billing	**$0**	**$0**	**$0**	**$910,478**	**$940,565**	**$868,410**	**$914,526**	**$940,890**	**$968,029**	**$995,965**	**$1,024,722**	**$1,054,324**	**$1,084,797**	**$1,116,166**	**$1,148,458**	**$1,181,700**	
	Other Support Services																	
	Employee Services																	
10-10	Salaries - Regular	$293,907	$218,651	$223,908	$222,064	$249,316	$233,445	$282,698	$291,179	$299,914	$308,912	$318,179	$327,724	$337,556	$347,683	$358,113	$368,857	As Labor
10-13	Regular Overtime	657	3,801	2,895	4,341	1,543	2,091	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	As Labor
10-20	Employee Separation Pay	46,015	14,230	10,048	3,470	2,002	4,488	1,267	1,318	1,370	1,425	1,482	1,541	1,603	1,667	1,734	1,803	As Benefits - Other
10-21	Additional Pay	8,218	3,988	628	861	608	502	488	508	528	549	571	594	617	642	668	695	As Benefits - Other
10-25	Retirement	71,132	43,807	38,169	40,266	50,368	52,306	62,439	64,937	67,534	70,235	73,045	75,967	79,005	82,165	85,452	88,870	As Benefits - Other
10-26	Deferred Compensation	2,640	2,640	1,920	1,440	1,920	1,958	1,958	2,036	2,118	2,202	2,291	2,382	2,477	2,577	2,680	2,787	As Benefits - Other
10-27	Medicare	4,189	3,304	3,445	3,267	3,615	3,357	3,658	3,877	4,110	4,357	4,618	4,895	5,189	5,500	5,830	6,180	As Benefits - Medical
10-29	Health/Dental/Vision	79,389	61,853	27,391	25,864	28,830	28,989	38,723	41,046	43,509	46,120	48,887	51,820	54,929	58,225	61,719	65,422	As Benefits - Medical
10-31	L/T Disability Insurance	3,066	2,966	1,887	1,271	1,446	1,354	1,515	1,560	1,607	1,655	1,705	1,756	1,809	1,863	1,919	1,977	As Insurance
10-32	Life Insurance	2,753	1,728	335	209	228	252	286	295	303	313	322	332	341	352	362	373	As Insurance
10-33	Workers Compensation	2,673	2,147	2,759	10,862	8,589	9,019	9,827	10,417	11,042	11,704	12,406	13,151	13,940	14,776	15,663	16,603	As Benefits - Medical
10-34	Unemployment Insurance	1,835	398	1,102	666	490	357	341	351	362	373	384	395	407	419	432	445	As Insurance
10-45	Cell Phone Allowance	456	498	383	429	511	494	672	699	727	756	786	818	850	884	920	956	As Benefits - Other
10-46	Retirement Pension Bond	0	0	9,702	9,608	11,105	9,054	11,123	11,568	12,031	12,512	13,012	13,533	14,074	14,637	15,223	15,831	As Benefits - Other
	Total Employee Services	$519,885	$368,398	$345,574	$331,954	$372,838	$347,666	$417,495	$432,366	$447,807	$463,845	$480,502	$497,806	$515,785	$534,466	$553,881	$574,061	

City of Stockton MUD
Water Cost of Service Study
Exhibit 3
Revenue Requirement

Acct. #		Actual FY 2011	Actual FY 2012	Actual FY 2013	Actual FY 2014	Actual FY 2015	Proj. Yr. End FY 2016	Budgeted FY 2017	Projected FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Notes:
	Other Services																	
20-15	Telephone	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	As Materials & Supplies
20-37	Insurance Premiums	9,098	7,864	12,418	12,451	12,364	11,483	11,826	12,181	12,546	12,923	13,310	13,710	14,121	14,544	14,981	15,430	As Insurance
20-65	Prof & Special Services	0	3,780	0	8,001	6,457	8,611	7,200	7,380	7,565	7,754	7,947	8,146	8,350	8,559	8,773	8,992	As Materials & Supplies
	Total Other Services	$9,098	$11,644	$12,418	$20,452	$21,253	$20,094	$19,026	$19,561	$20,111	$20,676	$21,258	$21,856	$22,471	$23,103	$23,753	$24,422	
	Materials and Supplies																	
30-50	Materials and Supplies	$0	$704	$78	$431	$697	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	As Materials & Supplies
	Total Materials and Supplies	$0	$704	$78	$431	$697	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
	Other Expenses																	
40-10	Training	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	As Labor
	Total Other Expenses	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
	Total Other Support Services	**$528,983**	**$380,745**	**$358,071**	**$352,837**	**$394,787**	**$367,760**	**$436,521**	**$451,926**	**$467,918**	**$484,521**	**$501,760**	**$519,662**	**$538,256**	**$557,569**	**$577,635**	**$598,483**	
	Water Conservation																	
	Employee Services																	
10-10	Salaries - Regular	$97,632	$75,728	$68,476	$35,224	$54,381	$57,201	$65,144	$67,098	$69,111	$71,185	$73,320	$75,520	$77,785	$80,119	$82,522	$84,998	As Labor
10-13	Regular Overtime	1,517	511	159	207	153	89	630	649	668	688	709	730	752	775	798	822	As Labor
10-20	Employee Separation Pay	4,076	4,853	5,713	1,180	629	395	292	304	316	328	342	355	369	384	400	416	As Benefits - Other
10-21	Additional Pay	192	1,014	607	150	168	168	168	175	182	189	197	204	213	221	230	239	As Benefits - Other
10-25	Retirement	24,524	15,946	11,662	6,346	10,959	12,825	14,398	14,974	15,573	16,196	16,844	17,517	18,218	18,947	19,705	20,493	As Benefits - Other
10-27	Medicare	1,457	1,103	974	538	777	812	863	915	970	1,028	1,090	1,155	1,224	1,298	1,375	1,458	As Benefits - Medical
10-29	Health/Dental/Vision	29,581	20,331	9,252	5,516	8,607	7,710	8,887	9,420	9,985	10,585	11,220	11,893	12,606	13,363	14,165	15,014	As Benefits - Medical
10-31	L/T Disability Insurance	1,025	1,035	566	198	315	332	349	359	370	381	393	405	417	429	442	455	As Insurance
10-32	Life Insurance	923	586	115	41	66	66	67	69	71	73	75	78	80	82	85	87	As Insurance
10-33	Workers Compensation	1,129	1,366	5,476	4,431	3,289	2,622	2,677	2,784	2,895	3,011	3,132	3,257	3,387	3,523	3,664	3,810	As Benefits - Other
10-34	Unemployment Insurance	559	132	317	105	104	86	80	82	85	87	90	93	96	98	101	104	As Insurance
10-45	Cell Phone Allowance	464	422	353	68	330	330	330	343	357	371	386	401	418	434	452	470	As Benefits - Other
10-46	Retirement Pension Bond		0	5,924	3,480	3,499	2,177	2,565	2,668	2,774	2,885	3,001	3,121	3,246	3,375	3,510	3,651	As Benefits - Other
10-47	Retiree Health - City Pd		0	5,423	0	7,235	0	0	0	0	0	0	0	0	0	0	0	As Benefits - Medical
10-99	Compensated Absences Adj		0	0	0	0	(86,401)	0	0	0	0	0	0	0	0	0	0	As Benefits - Other
	Total Employee Services	$165,150	$123,292	$115,016	$57,482	$90,513	($1,587)	$96,450	$99,840	$103,358	$107,008	$110,797	$114,729	$118,811	$123,049	$127,449	$132,018	
	Other Services																	
20-15	Telephone	$46	$32	$0	$0	$80	$1,708	$1,000	$1,025	$1,051	$1,077	$1,104	$1,131	$1,160	$1,189	$1,218	$1,249	As Materials & Supplies
20-34	Duplication/Copy Costs	13,029	12,552	11,937	14,498	15,784	5,027	0	0	0	0	0	0	0	0	0	0	As Materials & Supplies
20-37	Insurance Premiums	2,738	2,602	7,564	4,390	2,619	2,751	2,753	2,836	2,921	3,008	3,099	3,191	3,287	3,386	3,487	3,592	As Insurance
20-47	Telephone Rental	2,340	1,074	920	991	1,026	1,056	1,119	1,147	1,176	1,205	1,235	1,266	1,298	1,330	1,363	1,397	As Materials & Supplies
20-51	Community/Program	82,201	24,238	28,594	36,838	66,751	35,919	155,000	158,875	162,847	166,918	171,091	175,368	179,752	184,246	188,852	193,574	As Materials & Supplies
20-52	Publicity & Advertising	690	192	0	24,031	15,869	63,521	5,000	5,125	5,253	5,384	5,519	5,657	5,798	5,943	6,092	6,244	As Materials & Supplies
20-53	Printing & Mapping	3,508	0	0	0	0	0	1,000	1,025	1,051	1,077	1,104	1,131	1,160	1,189	1,218	1,249	As Materials & Supplies
20-54	Postage/Mailing Services	51	418	31	15	69	0	3,000	3,075	3,152	3,231	3,311	3,394	3,479	3,566	3,655	3,747	As Materials & Supplies
20-57	Processing Fees	0	0	0	50	0	0	500	513	525	538	552	566	580	594	609	624	As Materials & Supplies
20-65	Prof & Special Services	18,485	11,067	30,024	19,236	12,600	15,120	30,000	30,900	31,827	32,782	33,765	34,778	35,822	36,896	38,003	39,143	As Labor
	Total Other Services	$127,132	$52,175	$83,069	$100,050	$114,797	$125,103	$199,372	$204,520	$209,802	$215,221	$220,780	$226,484	$232,336	$238,340	$244,500	$250,820	

City of Stockton MUD
Water Cost of Service Study
Exhibit 3
Revenue Requirement

Acct. #		Actual FY 2011	Actual FY 2012	Actual FY 2013	Actual FY 2014	Actual FY 2015	Proj. Yr. End FY 2016	Budgeted FY 2017	Projected FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Notes:
	Materials and Supplies																	
30-50	Materials & Supplies	$1,385	$321	$938	$1,644	$430	$74	$2,000	$2,050	$2,101	$2,154	$2,208	$2,263	$2,319	$2,377	$2,437	$2,498	As Materials & Supplies
30-51	Computer Software	0	0	0	0	1,000	1,285	0	0	0	0	0	0	0	0	0	0	As Materials & Supplies
30-55	Library Materials	498	0	197	0	0	0	500	513	525	538	552	566	580	594	609	624	As Materials & Supplies
	Total Materials and Supplies	$1,883	$321	$1,135	$1,644	$1,430	$1,359	$2,500	$2,563	$2,627	$2,692	$2,760	$2,829	$2,899	$2,972	$3,046	$3,122	
	Other Expenses																	
40-10	Training	$149	$0	$524	$0	$1,943	$708	$1,000	$1,025	$1,051	$1,077	$1,104	$1,131	$1,160	$1,189	$1,218	$1,249	As Materials & Supplies
40-14	Memberships	4,619	4,619	4,619	4,738	4,858	4,000	5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717	As Miscellaneous
	Total Other Expenses	$4,768	$4,619	$5,211	$4,738	$6,801	$4,708	$6,000	$6,100	$6,202	$6,305	$6,411	$6,518	$6,627	$6,738	$6,851	$6,966	
	Total Water Conservation	**$298,933**	**$180,407**	**$204,431**	**$163,914**	**$213,541**	**$129,583**	**$304,322**	**$313,023**	**$321,988**	**$331,226**	**$340,747**	**$350,559**	**$360,673**	**$371,098**	**$381,845**	**$392,926**	
	Water Purchase																	
	Materials and Supplies																	
30-56	Merchandise For Resale	$8,963,692	$8,524,788	$7,171,943	$6,934,072	$7,238,177	$7,154,417	$7,628,341	$8,124,183	$8,652,255	$9,214,652	$9,813,604	$10,451,488	$11,130,835	$11,854,339	$12,624,871	$13,445,488	As Purchased Water
	Total Materials and Supplies	$8,963,692	$8,524,788	$7,171,943	$6,934,072	$7,238,177	$7,154,417	$7,628,341	$8,124,183	$8,652,255	$9,214,652	$9,813,604	$10,451,488	$11,130,835	$11,854,339	$12,624,871	$13,445,488	
	Other Expenses																	
40-22	Groundwater Pumping Tax	$899,597	$1,157,874	$716,002	$1,280,088	$1,357,179	$1,473,229	$2,309,860	$2,460,001	$2,619,901	$2,790,195	$2,971,557	$3,164,708	$3,370,414	$3,589,491	$3,822,808	$4,071,291	As Purchased Water
	Total Other Expenses	$899,597	$1,157,874	$716,002	$1,280,088	$1,357,179	$1,473,229	$2,309,860	$2,460,001	$2,619,901	$2,790,195	$2,971,557	$3,164,708	$3,370,414	$3,589,491	$3,822,808	$4,071,291	
	Total Water Purchase	**$9,863,289**	**$9,682,662**	**$7,887,945**	**$8,214,161**	**$8,595,356**	**$8,627,646**	**$9,938,201**	**$10,584,184**	**$11,272,156**	**$12,004,846**	**$12,785,161**	**$13,616,197**	**$14,501,249**	**$15,443,831**	**$16,447,680**	**$17,516,779**	
	Hydrant Maintenance																	
	Employee Services																	
10-10	Salaries - Regular	$98,035	$93,872	$99,177	$100,580	$98,381	$102,162	$107,348	$110,568	$113,885	$117,302	$120,821	$124,446	$128,179	$132,024	$135,985	$140,065	As Labor
10-13	Regular Overtime	297	2,230	2,996	4,890	2,819	2,685	4,900	5,047	5,198	5,354	5,515	5,680	5,851	6,026	6,207	6,393	As Labor
10-20	Separation Pay	3,630	5,160	3,491	1,301	693	674	475	494	514	534	556	578	601	625	650	676	As Benefits - Other
10-21	Additional Pay	1	1,027	819	825	819	820	819	852	886	921	958	996	1,036	1,078	1,121	1,166	As Benefits - Other
10-25	Retirement	24,683	19,528	12,557	16,368	19,669	18,919	19,775	20,566	21,389	22,244	23,134	24,059	25,022	26,023	27,063	28,146	As Benefits - Other
10-26	Deferred Compensation	5,387	5,139	4,938	5,387	5,387	5,398	5,387	5,602	5,827	6,060	6,302	6,554	6,816	7,089	7,372	7,667	As Benefits - Other
10-27	Medicare	1,806	1,579	1,454	1,415	1,359	1,378	1,347	1,428	1,513	1,604	1,701	1,803	1,911	2,025	2,147	2,276	As Benefits - Medical
10-29	Health/Dental/Vision	52,326	49,728	23,376	24,744	24,288	21,192	25,392	26,916	28,530	30,242	32,057	33,980	36,019	38,180	40,471	42,899	As Benefits - Medical
10-31	L-T Disability Insurance	1,028	1,279	790	575	569	571	568	585	603	621	639	658	678	699	720	741	As Insurance
10-32	Life Insurance	562	435	294	198	198	198	198	204	210	216	223	230	236	244	251	258	As Insurance
10-33	Workers' Compensation	5,282	8,620	11,181	11,958	10,621	11,689	12,715	13,224	13,753	14,303	14,875	15,470	16,089	16,732	17,401	18,097	As Benefits - Other
10-34	Unemployment Insurance	653	190	467	294	194	159	134	138	142	146	151	155	160	165	170	175	As Insurance
10-46	Retirement Pension Bond	0	0	3,664	3,860	3,880	3,795	3,523	3,664	3,810	3,963	4,121	4,286	4,458	4,636	4,821	5,014	As Benefits - Other
10-47	Retiree Health - City Pd	0	0	5,423	0	7,235	0	0	0	0	0	0	0	0	0	0	0	As Benefits - Medical
	Total Employee Services	$214,051	$203,334	$175,263	$172,395	$176,112	$169,640	$182,581	$189,288	$196,260	$203,511	$211,052	$218,896	$227,056	$235,546	$244,380	$253,574	
	Other Services																	
20-11	Electricity	$3,773	$2,913	$2,769	$3,642	$3,427	$2,607	$3,000	$3,120	$3,245	$3,375	$3,510	$3,650	$3,796	$3,948	$4,106	$4,270	As Utilities
20-12	Gas	0	0	0	0	0	115	0	0	0	0	0	0	0	0	0	0	As Utilities
20-13	Sanitary Sewer	427	377	411	448	488	497	500	520	541	562	585	608	633	658	684	712	As Utilities
20-14	Water	342	360	398	612	642	695	700	728	757	787	819	852	886	921	958	996	As Utilities
20-15	Telephone	0	0	0	0	19	158	0	0	0	0	0	0	0	0	0	0	As Utilities
20-17	Storm Water	255	153	153	153	153	153	200	208	216	225	234	243	253	263	274	285	As Utilities
20-25	Maint. & Repair Services	48,435	21,183	4,350	3,606	2,748	3,177	20,000	20,500	21,013	21,538	22,076	22,628	23,194	23,774	24,368	24,977	As Materials & Supplies
20-34	Duplication/Copy Costs	80	0	0	0	0	0	100	103	105	108	110	113	116	119	122	125	As Materials & Supplies
20-37	Insurance Premiums	3,095	3,747	6,542	5,346	4,877	5,045	4,673	4,813	4,958	5,106	5,260	5,417	5,580	5,747	5,920	6,097	As Insurance
20-41	Automotive Equip Rental	28,327	31,160	3,912	19,617	15,021	12,065	15,986	16,546	17,125	17,724	18,344	18,986	19,651	20,339	21,051	21,787	As Equipment
20-43	Computer/Tech/Oper Supprt	4,856	14,598	5,211	5,454	6,197	6,348	6,078	6,291	6,511	6,739	6,975	7,219	7,471	7,733	8,004	8,284	As Equipment
20-44	Radio Equipment Rental	0	0	175	335	371	500	449	465	481	498	515	533	552	571	591	612	As Equipment
20-57	Processing Fees	2,760	693	1,270	1,023	760	20	2,000	2,050	2,101	2,154	2,208	2,263	2,319	2,377	2,437	2,498	As Materials & Supplies
20-66	Other Services	1,482	500	6,425	2,078	403	4,963	7,000	7,105	7,212	7,320	7,430	7,541	7,654	7,769	7,885	8,004	As Miscellaneous
	Total Other Services	$95,357	$77,132	$33,115	$43,956	$36,526	$36,344	$60,686	$62,448	$64,264	$66,135	$68,065	$70,054	$72,105	$74,219	$76,399	$78,646	

City of Stockton MUD
Water Cost of Service Study
Exhibit 3
Revenue Requirement

Acct. #		Actual FY 2011	Actual FY 2012	Actual FY 2013	Actual FY 2014	Actual FY 2015	Proj. Yr. End FY 2016	Budgeted FY 2017	Projected FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Notes:
	Materials and Supplies																	
30-50	Materials & Supplies	$53,698	$16,374	$33,552	$12,882	$8,956	$15,885	$20,000	$20,500	$21,013	$21,538	$22,076	$22,628	$23,194	$23,774	$24,368	$24,977	As Materials & Supplies
30-53	Fuels - Gas/Oil/Propane	5,923	7,322	6,751	6,292	5,697	3,933	5,649	5,875	6,110	6,354	6,609	6,873	7,148	7,434	7,731	8,040	As Utilities
	Total Materials and Supplies	$59,622	$23,696	$40,303	$19,174	$14,653	$19,818	$25,649	$26,375	$27,122	$27,892	$28,685	$29,501	$30,342	$31,207	$32,099	$33,018	
	Other Expenses																	
40-12	Meetings/Travel	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	As Miscellaneous
40-14	Memberships	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	As Miscellaneous
40-60	Miscellaneous Refunds	(27,596)	(6,934)	(12,699)	(10,231)	(7,603)	0	0	0	0	0	0	0	0	0	0	0	As Miscellaneous
	Total Other Expenses	($27,596)	($6,934)	($12,699)	($10,231)	($7,603)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
	Total Hydrant Maintenance	**$341,433**	**$297,228**	**$235,982**	**$225,295**	**$219,689**	**$225,802**	**$268,916**	**$278,110**	**$287,646**	**$297,539**	**$307,802**	**$318,451**	**$329,502**	**$340,972**	**$352,878**	**$365,238**	
	Delta Water Production																	
	Employee Services																	
10-10	Salaries - Regular	$0	$218,303	$614,975	$702,236	$703,413	$639,511	$984,392	$1,013,924	$1,044,341	$1,075,672	$1,107,942	$1,141,180	$1,175,416	$1,210,678	$1,246,998	$1,284,408	As Labor
10-13	Regular Overtime	0	38,258	160,697	202,748	194,594	152,652	200,556	206,573	212,770	219,153	225,728	232,499	239,474	246,659	254,058	261,680	As Labor
10-17	Stand By Time (Call Back)	0	464	16,668	20,889	14,648	18,907	0	0	0	0	0	0	0	0	0	0	As Labor
10-18	Holiday Pay	0		5,809	0	57	57	0	0	0	0	0	0	0	0	0	0	As Benefits - Other
10-20	Separation Pay	0	52,139	23,401	9,286	4,976	6,874	4,316	4,489	4,668	4,855	5,049	5,251	5,461	5,680	5,907	6,143	As Benefits - Other
10-21	Additional Pay	0	1,771	2,738	8,726	7,761	3,672	1,503	1,563	1,626	1,691	1,758	1,829	1,902	1,978	2,057	2,139	As Benefits - Other
10-25	Retirement	0	44,171	103,595	127,566	143,240	143,451	212,812	221,324	230,177	239,385	248,960	258,918	269,275	280,046	291,248	302,898	As Benefits - Other
10-26	Deferred Compensation	0	9,767	26,191	31,615	32,059	33,948	38,521	40,062	41,664	43,331	45,064	46,867	48,741	50,691	52,719	54,827	As Benefits - Other
10-27	Medicare	0	3,683	10,968	13,647	13,267	11,355	15,182	16,093	17,058	18,082	19,167	20,317	21,536	22,828	24,198	25,650	As Benefits - Medical
10-29	Health/Dental/Vision	0	55,600	120,819	144,237	139,036	121,169	167,587	177,642	188,301	199,599	211,575	224,269	237,725	251,989	267,108	283,135	As Benefits - Medical
10-31	L-T Disability Insurance	0	2,952	5,243	4,061	4,086	3,758	5,160	5,315	5,474	5,638	5,808	5,982	6,161	6,346	6,537	6,733	As Insurance
10-32	Life Insurance	0	1,243	1,531	1,164	1,127	1,065	1,264	1,302	1,341	1,381	1,423	1,465	1,509	1,555	1,601	1,649	As Insurance
10-33	Workers' Compensation	0	14,943	59,126	100,390	97,273	88,435	127,766	132,877	138,192	143,719	149,468	155,447	161,665	168,131	174,857	181,851	As Benefits - Other
10-34	Unemployment Insurance	0	440	3,623	2,704	1,802	1,253	1,419	1,462	1,505	1,551	1,597	1,645	1,694	1,745	1,798	1,851	As Insurance
10-45	Cell Phone Allowance	0	75	901	900	908	135	0	0	0	0	0	0	0	0	0	0	As Benefits - Other
10-46	Retirement Pension Bond	0	0	24,243	27,351	27,680	34,783	37,913	39,430	41,007	42,647	44,353	46,127	47,972	49,891	51,887	53,962	As Benefits - Other
10-99	Vacancy Savings	0	0	0	0	0	(89,751)	0	0	0	0	0	0	0	0	0	0	As Benefits - Other
	Total Employee Services	$0	$444,190	$1,208,583	$1,418,247	$1,450,294	$1,171,274	$1,798,391	$1,862,054	$1,928,125	$1,996,703	$2,067,891	$2,141,796	$2,218,532	$2,298,216	$2,380,971	$2,466,926	
	Other Services																	
20-11	Electricity	$0	$117,939	$534,093	$745,656	$667,392	$1,140,699	$1,266,000	$1,316,640	$1,369,306	$1,424,078	$1,481,041	$1,540,283	$1,601,894	$1,665,970	$1,732,608	$1,801,913	As Utilities
20-12	Gas	0	0	0	0	95,300	210	0	0	0	0	0	0	0	0	0	0	As Utilities
20-15	Telephone	0	4,392	9,136	7,454	10,447	13,889	16,000	16,640	17,306	17,998	18,718	19,466	20,245	21,055	21,897	22,773	As Utilities
20-24	Prof/Spec Svcs-Consultant	0	0	0	0	18,270	12,849	33,000	34,320	35,693	37,121	38,605	40,150	41,756	43,426	45,163	46,969	As Utilities
20-25	Maint. & Repair Services	0	4,387	7,972	18,742	91,501	143,370	0	0	0	0	0	0	0	0	0	0	As Utilities
20-27	Uniform/Laundry Services	0	1,078	8,592	9,838	9,400	8,562	0	0	0	0	0	0	0	0	0	0	As Materials & Supplies
20-34	Duplication/Copy Costs	0	40	0	0	0	270	250	256	263	269	276	283	290	297	305	312	As Materials & Supplies
20-37	Insurance Premiums	0	8,687	36,230	46,724	45,328	39,266	49,235	50,466	51,728	53,021	54,346	55,705	57,098	58,525	59,988	61,488	As Materials & Supplies
20-41	Automotive Equip Rental	0	4,297	17,129	10,775	9,551	66,140	20,784	21,511	22,264	23,044	23,850	24,685	25,549	26,443	27,369	28,326	As Equipment
20-43	Computer/Tech/Oper Supprt	0	0	15,357	19,576	21,838	20,856	55,496	57,438	59,449	61,529	63,683	65,912	68,219	70,606	73,078	75,635	As Equipment
20-44	Radio Equipment Rental	0	7,277	0	0	0	0	2,695	2,789	2,887	2,988	3,093	3,201	3,313	3,429	3,549	3,673	As Equipment
20-47	Telephone Rental	0	0	5,000	5,750	12,316	12,670	13,429	13,899	14,385	14,889	15,410	15,949	16,508	17,085	17,683	18,302	As Equipment
20-52	Publicity & Advertising	0	799	955	433	0	2,417	500	513	525	538	552	566	580	594	609	624	As Materials & Supplies
20-53	Printing & Mapping	0	0	0	0	64	223	500	513	525	538	552	566	580	594	609	624	As Materials & Supplies
20-54	Postage/Mailing Services	0	0	130	57	132	192	500	513	525	538	552	566	580	594	609	624	As Materials & Supplies
20-57	Processing Fees	0	190,138	84,247	1,362	18,955	48,141	60,000	61,800	63,654	65,564	67,531	69,556	71,643	73,792	76,006	78,286	As Labor
20-63	Testing & Analysis Servcs	0	520	24,811	4,508	757	81	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	As Labor
20-64	Training Services	0	0	415	2,503	9,210	82,627	34,300	35,329	36,389	37,481	38,605	39,763	40,956	42,185	43,450	44,754	As Labor
20-65	Prof & Special Services	0	2,975	14,139	14,521	80,026	77,428	75,000	77,250	79,568	81,955	84,413	86,946	89,554	92,241	95,008	97,858	As Labor
20-66	Other Services	0	8,068	61,539	84,677	83,290	93,817	244,800	248,472	252,199	255,982	259,822	263,719	267,675	271,690	275,765	279,902	As Miscellaneous
	Total Other Services	$0	$350,596	$828,689	$972,575	$1,175,750	$1,763,707	$1,873,489	$1,939,379	$2,007,726	$2,078,625	$2,152,174	$2,228,474	$2,307,632	$2,389,757	$2,474,963	$2,563,370	

City of Stockton MUD
Water Cost of Service Study
Exhibit 3
Revenue Requirement

Acct. #		Actual FY 2011	Actual FY 2012	Actual FY 2013	Actual FY 2014	Actual FY 2015	Proj. Yr. End FY 2016	Budgeted FY 2017	Projected FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Notes:
	Materials and Supplies																	
30-50	Materials And Supplies	$0	$67,097	$120,493	$214,246	$270,065	$184,322	$72,000	$73,800	$75,645	$77,536	$79,475	$81,461	$83,498	$85,585	$87,725	$89,918	As Materials & Supplies
30-51	Computer Software	0	0	2,283	8,792	14,859	7,009	0	0	0	0	0	0	0	0	0	0	As Equipment
30-52	Subscription-Periodical	0	0	0	109	97	0	500	513	525	538	552	566	580	594	609	624	As Materials & Supplies
30-53	Fuels-Gas/Oil/Propane	0	4,197	29,791	27,350	18,794	23,438	8,475	8,814	9,167	9,533	9,915	10,311	10,724	11,153	11,599	12,063	As Utilities
30-54	Chemicals	0	0	288,018	279,416	383,180	594,816	388,524	404,065	420,228	437,037	454,518	472,699	491,607	511,271	531,722	552,991	As Utilities
30-55	Library Materials	0	0	0	0	0	0	1,500	1,538	1,576	1,615	1,656	1,697	1,740	1,783	1,828	1,873	As Materials & Supplies
	Total Materials and Supplies	$0	$71,295	$440,586	$529,913	$686,994	$809,585	$470,999	$488,729	$507,140	$526,260	$546,115	$566,734	$588,148	$610,386	$633,482	$657,469	
	Other Expenses																	
40-10	Training	$0	$0	$1,588	$3,628	$5,797	$2,441	$10,000	$10,250	$10,506	$10,769	$11,038	$11,314	$11,597	$11,887	$12,184	$12,489	As Materials & Supplies
40-12	Meetings & Travel	0	324	1,249	2,787	480	722	2,500	2,563	2,627	2,692	2,760	2,829	2,899	2,972	3,046	3,122	As Materials & Supplies
40-14	Memberships	0	0	306	448	1,712	0	2,500	2,563	2,627	2,692	2,760	2,829	2,899	2,972	3,046	3,122	As Materials & Supplies
40-22	Taxes	0	0	170,000	170,000	87,160	85,000	95,000	96,425	97,871	99,339	100,830	102,342	103,877	105,435	107,017	108,622	As Miscellaneous
	Total Other Expenses	$0	$324	$174,263	$176,977	$95,149	$88,163	$110,000	$111,800	$113,631	$115,493	$117,387	$119,313	$121,273	$123,266	$125,293	$127,355	
	Total Delta Water Production	**$0**	**$866,404**	**$2,652,121**	**$3,097,711**	**$3,408,187**	**$3,832,729**	**$4,252,879**	**$4,401,962**	**$4,556,622**	**$4,717,081**	**$4,883,566**	**$5,056,318**	**$5,235,584**	**$5,421,625**	**$5,614,710**	**$5,815,121**	
	Well Production																	
	Employee Services																	
10-10	Salaries - Regular	$0	$0	$0	$0	$0	$196,720	$311,819	$321,174	$330,809	$340,733	$350,955	$361,484	$372,328	$383,498	$395,003	$406,853	As Labor
10-13	Regular Overtime	0	0	0	0	0	10,186	10,900	11,227	11,564	11,911	12,268	12,636	13,015	13,406	13,808	14,222	As Labor
10-17	Stand By Time (Call Back)	0	0	0	0	0	13,452	12,000	12,360	12,731	13,113	13,506	13,911	14,329	14,758	15,201	15,657	As Labor
10-20	Separation Pay	0	0	0	0	0	0	1,375	1,409	1,445	1,481	1,518	1,556	1,595	1,634	1,675	1,717	As Materials & Supplies
10-21	Additional Pay	0	0	0	0	0	8,468	8,366	8,575	8,790	9,009	9,234	9,465	9,702	9,945	10,193	10,448	As Materials & Supplies
10-25	Retirement	0	0	0	0	0	45,574	69,233	70,964	72,738	74,556	76,420	78,331	80,289	82,296	84,354	86,463	As Materials & Supplies
10-26	Deferred Compensation	0	0	0	0	0	10,682	15,591	15,981	16,380	16,790	17,210	17,640	18,081	18,533	18,996	19,471	As Materials & Supplies
10-27	Medicare	0	0	0	0	0	3,236	4,444	4,711	4,993	5,293	5,610	5,947	6,304	6,682	7,083	7,508	As Benefits - Medical
10-29	Health/Dental/Vision	0	0	0	0	0	35,246	63,480	65,067	66,694	68,361	70,070	71,822	73,617	75,458	77,344	79,278	As Materials & Supplies
10-31	L-T Disability Insurance	0	0	0	0	0	1,152	1,644	1,685	1,727	1,770	1,815	1,860	1,907	1,954	2,003	2,053	As Materials & Supplies
10-32	Life Insurance	0	0	0	0	0	350	496	508	521	534	547	561	575	590	604	619	As Materials & Supplies
10-33	Workers' Compensation	0	0	0	0	0	27,800	38,608	40,152	41,758	43,429	45,166	46,973	48,851	50,805	52,838	54,951	As Benefits - Other
10-34	Unemployment Insurance	0	0	0	0	0	289	410	422	435	448	461	475	490	504	519	535	As Insurance
10-46	Retirement Pension Bond	0	0	0	0	0	0	12,334	12,642	12,958	13,282	13,614	13,955	14,304	14,661	15,028	15,403	As Materials & Supplies
	Total Employee Services	$0	$0	$0	$0	$0	$353,155	$550,700	$566,878	$583,543	$600,710	$618,396	$636,615	$655,386	$674,725	$694,650	$715,179	
	Other Services																	
20-11	Electricity	$0	$0	$0	$0	$0	$883,920	$900,000	$936,000	$973,440	$1,012,378	$1,052,873	$1,094,988	$1,138,787	$1,184,339	$1,231,712	$1,280,981	As Utilities
20-15	Telephone	0	0	0	0	0	592	0	0	0	0	0	0	0	0	0	0	As Materials & Supplies
20-25	Maint. & Repair Services	0	0	0	0	0	31,978	0	0	0	0	0	0	0	0	0	0	As Materials & Supplies
20-37	Insurance Premiums	0	0	0	0	0	10,944	14,201	14,627	15,066	15,518	15,983	16,463	16,957	17,465	17,989	18,529	As Insurance
20-43	Computer/Tech/Oper Supprt	0	0	0	0	0	0	18,234	18,690	19,157	19,636	20,127	20,630	21,146	21,674	22,216	22,772	As Materials & Supplies
20-44	Radio Equipment Rental	0	0	0	0	0	0	1,348	1,382	1,416	1,452	1,488	1,525	1,563	1,602	1,642	1,683	As Materials & Supplies
20-47	Telephone Rental	0	0	0	0	0	0	4,476	4,588	4,703	4,820	4,941	5,064	5,191	5,321	5,454	5,590	As Materials & Supplies
20-52	Publicity & Advertising	0	0	0	0	0	375	0	0	0	0	0	0	0	0	0	0	As Materials & Supplies
20-57	Processing Fees	0	0	0	0	0	1,000	1,875	1,931	1,989	2,049	2,110	2,174	2,239	2,306	2,375	2,446	As Labor
20-66	Other Services	0	0	0	0	0	6,350	10,000	10,150	10,302	10,457	10,614	10,773	10,934	11,098	11,265	11,434	As Miscellaneous
	Total Other Services	$0	$0	$0	$0	$0	$935,159	$950,134	$987,368	$1,026,073	$1,066,309	$1,108,136	$1,151,616	$1,196,817	$1,243,806	$1,292,654	$1,343,435	
	Materials and Supplies																	
30-50	Materials And Supplies	$0	$0	$0	$0	$0	$17,078	$25,000	$25,625	$26,266	$26,922	$27,595	$28,285	$28,992	$29,717	$30,460	$31,222	As Materials & Supplies
30-54	Chemicals	0	0	0	0	0	20,000	25,000	26,000	27,040	28,122	29,246	30,416	31,633	32,898	34,214	35,583	As Utilities
	Total Materials and Supplies	$0	$0	$0	$0	$0	$37,078	$50,000	$51,625	$53,306	$55,044	$56,842	$58,702	$60,625	$62,615	$64,674	$66,804	
	Other Expenses																	
40-10	Training	$0	$0	$0	$0	$0	$0	$2,500	$2,575	$2,652	$2,732	$2,814	$2,898	$2,985	$3,075	$3,167	$3,262	As Labor
	Total Other Expenses	$0	$0	$0	$0	$0	$0	$2,500	$2,575	$2,652	$2,732	$2,814	$2,898	$2,985	$3,075	$3,167	$3,262	
	Total Well Production	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,325,392**	**$1,553,334**	**$1,608,446**	**$1,665,574**	**$1,724,795**	**$1,786,187**	**$1,849,831**	**$1,915,814**	**$1,984,221**	**$2,055,145**	**$2,128,681**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 3
Revenue Requirement

Acct. #		Actual FY 2011	Actual FY 2012	Actual FY 2013	Actual FY 2014	Actual FY 2015	Proj. Yr. End FY 2016	Budgeted FY 2017	Projected FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Notes:
	DWSP Maintenance & Repair																	
	Employee Services																	
10-10	Salaries - Regular	$0	$218,303	$614,975	$702,236	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	As Labor
10-13	Regular Overtime	0	38,258	160,697	202,748	0	0	13,120	13,514	13,919	14,337	14,767	15,210	15,666	16,136	16,620	17,119	As Labor
10-17	Stand By Time (Call Back)	0	464	16,668	20,889	0	0	21,000	21,630	22,279	22,947	23,636	24,345	25,075	25,827	26,602	27,400	As Labor
10-27	Medicare	0	3,683	10,968	13,647	0	0	495	525	556	590	625	662	702	744	789	836	As Benefits - Medical
10-33	Workers' Compensation	0	14,943	59,126	100,390	0	0	4,179	4,346	4,520	4,701	4,889	5,084	5,288	5,499	5,719	5,948	As Benefits - Other
10-34	Unemployment Insurance	0	440	3,623	2,704	0	0	44	45	47	48	50	51	53	54	56	57	As Insurance
	Total Employee Services	$0	$444,190	$1,208,583	$1,418,247	$0	$0	$38,838	$40,060	$41,321	$42,622	$43,966	$45,352	$46,784	$48,261	$49,786	$51,361	
	Other Services																	
20-11	Electricity	$0	$117,939	$534,093	$745,656	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	As Utilities
20-25	Maint. & Repair Services	0	4,387	7,972	18,742	0	0	232,490	238,302	244,260	250,366	256,625	263,041	269,617	276,358	283,266	290,348	As Materials & Supplies
20-34	Duplication/Copy Costs	0	40	0	0	0	0	250	256	263	269	276	283	290	297	305	312	As Materials & Supplies
20-37	Insurance Premiums	0	8,687	36,230	46,724	0	0	1,536	1,582	1,630	1,678	1,729	1,781	1,834	1,889	1,946	2,004	As Insurance
20-52	Publicity & Advertising	0	799	955	433	0	0	500	513	525	538	552	566	580	594	609	624	As Materials & Supplies
20-53	Printing & Mapping	0	0	0	0	0	0	500	513	525	538	552	566	580	594	609	624	As Materials & Supplies
20-54	Postage/Mailing Services	0	0	130	57	0	0	500	513	525	538	552	566	580	594	609	624	As Materials & Supplies
20-65	Prof & Special Services	0	2,975	14,139	14,521	0	0	50,000	51,250	52,531	53,845	55,191	56,570	57,985	59,434	60,920	62,443	As Materials & Supplies
20-66	Other Services	0	8,068	61,539	84,677	0	0	53,900	54,709	55,529	56,362	57,207	58,066	58,937	59,821	60,718	61,629	As Miscellaneous
	Total Other Services	$0	$350,596	$828,689	$972,575	$0	$0	$339,676	$347,637	$355,788	$364,136	$372,684	$381,438	$390,402	$399,582	$408,983	$418,610	
	Materials and Supplies																	
30-50	Materials And Supplies	$0	$67,097	$120,493	$214,246	$0	$0	$101,500	$104,038	$106,638	$109,304	$112,037	$114,838	$117,709	$120,652	$123,668	$126,760	As Materials & Supplies
30-51	Computer Software	0	0	2,283	8,792	0	0	500	513	525	538	552	566	580	594	609	624	As Materials & Supplies
30-52	Subscription-Periodical	0	0	0	109	0	0	500	513	525	538	552	566	580	594	609	624	As Materials & Supplies
	Total Materials and Supplies	$0	$71,295	$440,586	$529,913	$0	$0	$102,500	$105,063	$107,689	$110,381	$113,141	$115,969	$118,869	$121,840	$124,886	$128,008	
	Other Expenses																	
40-10	Training	$0	$0	$1,588	$3,628	$0	$0	$13,000	$13,390	$13,792	$14,205	$14,632	$15,071	$15,523	$15,988	$16,468	$16,962	As Labor
40-12	Meetings & Travel	0	324	1,249	2,787	0	0	1,500	1,538	1,576	1,615	1,656	1,697	1,740	1,783	1,828	1,873	As Materials & Supplies
	Total Other Expenses	$0	$324	$174,263	$176,977	$0	$0	$14,500	$14,928	$15,368	$15,821	$16,287	$16,768	$17,262	$17,771	$18,296	$18,835	
	Total DWSP Maintenance & Repair	**$0**	**$866,404**	**$2,652,121**	**$3,097,711**	**$0**	**$0**	**$495,514**	**$507,686**	**$520,166**	**$532,960**	**$546,078**	**$559,527**	**$573,316**	**$587,454**	**$601,951**	**$616,814**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 3
Revenue Requirement

Acct. #	Actual FY 2011	Actual FY 2012	Actual FY 2013	Actual FY 2014	Actual FY 2015	Proj. Yr. End FY 2016	Budgeted FY 2017	Projected FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Notes:
Summary Account Expenses																	
421-4311-572.10-97	$0	$0	$0	$0	$0	$430,940	$493,546	$500,949	$508,463	$516,090	$523,832	$531,689	$539,665	$547,760	$555,976	$564,316	As Miscellaneous
421-4311-572.20-97	0	0	0	0	0	198,975	225,802	229,189	232,627	236,116	239,658	243,253	246,902	250,605	254,364	258,180	As Miscellaneous
421-4311-572.30-97	0	0	0	0	0	27,453	28,800	29,232	29,670	30,116	30,567	31,026	31,491	31,964	32,443	32,930	As Miscellaneous
421-4311-572.40-97	0	0	0	0	0	98,413	87,911	89,230	90,568	91,927	93,306	94,705	96,126	97,568	99,031	100,517	As Miscellaneous
421-4312-572.10-97	0	0	0	0	343,430	136,180	206,707	209,808	212,955	216,149	219,391	222,682	226,022	229,413	232,854	236,347	As Miscellaneous
421-4312-572.20-97	0	0	0	0	80,084	27,252	33,007	33,502	34,005	34,515	35,032	35,558	36,091	36,633	37,182	37,740	As Miscellaneous
421-4312-572.30-97	0	0	0	0	12,236	3,250	5,035	5,111	5,187	5,265	5,344	5,424	5,505	5,588	5,672	5,757	As Miscellaneous
421-4312-572.40-97	0	0	0	0	21,279	5,126	6,435	6,532	6,629	6,729	6,830	6,932	7,036	7,142	7,249	7,358	As Miscellaneous
421-4334-571.10-97	0	210,117	252,692	213,530	188,007	243,491	155,029	157,354	159,715	162,110	164,542	167,010	169,515	172,058	174,639	177,259	As Miscellaneous
421-4334-571.20-97	0	122,219	111,508	137,933	99,369	77,751	89,236	90,575	91,933	93,312	94,712	96,133	97,575	99,038	100,524	102,032	As Miscellaneous
421-4334-571.30-97	0	55,936	59,588	45,127	2,836	107,555	52,042	52,823	53,615	54,419	55,235	56,064	56,905	57,759	58,625	59,504	As Miscellaneous
421-4334-571.40-97	0	67,855	84	412	262	983	4,292	4,356	4,422	4,488	4,555	4,624	4,693	4,763	4,835	4,907	As Miscellaneous
421-4342-572.10-97	0	0	0	0	21,565	19,016	20,799	21,111	21,428	21,749	22,075	22,406	22,743	23,084	23,430	23,781	As Miscellaneous
421-4342-572.20-97	0	0	0	0	1,180	1,070	89,189	90,527	91,885	93,263	94,662	96,082	97,523	98,986	100,471	101,978	As Miscellaneous
421-4342-572.30-97	0	0	0	0	819	0	1,575	1,599	1,623	1,647	1,672	1,697	1,722	1,748	1,774	1,801	As Miscellaneous
421-4342-572.40-97	0	0	0	0	566	0	1,920	1,949	1,978	2,008	2,038	2,068	2,099	2,131	2,163	2,195	As Miscellaneous
421-4343-572.10-97	0	0	0	0	21,664	38,448	21,654	21,979	22,308	22,643	22,983	23,328	23,677	24,033	24,393	24,759	As Miscellaneous
421-4343-572.20-97	0	0	0	0	139,756	156,720	187,116	189,923	192,772	195,663	198,598	201,577	204,601	207,670	210,785	213,947	As Miscellaneous
421-4343-572.30-97	0	0	0	0	63,299	23,760	42,034	42,665	43,304	43,954	44,613	45,283	45,962	46,651	47,351	48,061	As Miscellaneous
421-4343-572.40-97	0	0	0	0	961	612	1,636	1,661	1,685	1,711	1,736	1,762	1,789	1,816	1,843	1,871	As Miscellaneous
421-4344-572.10-97	0	0	0	0	56,161	100,916	109,935	111,584	113,258	114,957	116,681	118,431	120,208	122,011	123,841	125,699	As Miscellaneous
421-4344-572.20-97	0	0	0	0	23,079	35,484	129,829	131,776	133,753	135,759	137,796	139,863	141,961	144,090	146,251	148,445	As Miscellaneous
421-4344-572.30-97	0	0	0	0	39,127	70,078	21,920	22,249	22,583	22,921	23,265	23,614	23,968	24,328	24,693	25,063	As Miscellaneous
421-4344-572.40-97	0	0	0	0	25	79	2,240	2,274	2,308	2,342	2,377	2,413	2,449	2,486	2,523	2,561	As Miscellaneous
421-4345-572.10-97	0	0	0	0	0	0	30,497	30,954	31,419	31,890	32,368	32,854	33,347	33,847	34,355	34,870	As Miscellaneous
421-4345-572.20-97	0	0	0	0	0	9,059	46,587	47,286	47,995	48,715	49,446	50,187	50,940	51,704	52,480	53,267	As Miscellaneous
421-4345-572.30-97	0	0	0	0	0	342	14,044	14,255	14,468	14,686	14,906	15,129	15,356	15,587	15,820	16,058	As Miscellaneous
421-4345-572.40-97	0	0	0	0	0	586	1,526	1,549	1,572	1,596	1,620	1,644	1,669	1,694	1,719	1,745	As Miscellaneous
Total Summary Account Expenses	$0	$456,126	$423,872	$397,002	$1,116,588	$1,838,276	$2,110,343	$2,141,998	$2,174,128	$2,206,740	$2,239,841	$2,273,439	$2,307,540	$2,342,153	$2,377,286	$2,412,945	
Total Operations & Maintenance	**$18,482,584**	**$19,611,806**	**$21,817,475**	**$24,584,988**	**$22,161,349**	**$22,581,816**	**$25,865,506**	**$26,998,000**	**$28,189,159**	**$29,442,342**	**$30,761,110**	**$32,149,240**	**$33,610,740**	**$35,149,860**	**$36,771,109**	**$38,479,273**	
Debt Service																	
2002 A Revenue Bond	$0	$0	$1,111,588	$1,112,038	$1,115,188	$328,460	$309,341	$1,110,063	$1,113,220	$1,112,706	$1,113,763	$1,112,256	$1,117,931	$0	$0	$0	
2005 A Revenue Bond	1,150,313	1,150,313	1,150,313	1,150,313	1,150,313	1,150,313	1,150,313	1,297,313	1,296,213	1,294,713	1,292,703	1,295,266	1,287,609	2,409,688	2,405,297	2,407,375	
2009 A Revenue Bond	833,950	833,950	3,808,250	3,809,350	3,805,450	282,750	0	0	0	0	0	0	0	0	0	0	
2009 B Revenue Bond	11,928,589	11,928,589	11,928,589	11,928,589	11,928,589	11,928,589	11,928,589	15,646,813	15,557,557	15,467,839	15,361,863	15,251,547	15,130,375	15,002,800	14,877,730	14,730,843	
Less BAB Interest Rebate	(4,175,006)	(4,175,006)	(4,175,006)	(3,864,991)	(3,924,373)	(3,776,328)	(3,874,406)	(3,844,745)	(3,765,240)	(3,679,074)	(3,582,734)	(3,476,843)	(3,365,792)	(3,249,401)	(3,127,316)	(2,993,247)	
2010 A Revenue Bond	0	0	0	0	3,489,638	3,319,838	3,317,138	3,441,838	3,441,538	3,441,038	3,445,238	3,439,238	3,443,038	3,441,538	3,438,988	3,440,238	
Drought Relief Loan	95,342	95,342	95,342	95,342	95,342	86,865	82,679	0	0	0	0	0	0	0	0	0	
New SRF Loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Calc @ 2.5% for 20 Yrs
New Revenue Bonds	0	0	0	0	0	0	0	0	0	0	0	460,236	627,595	878,633	2,552,220	2,552,220	Calc @ 5.5% for 20 Yrs
Total Debt Service	**$9,833,187**	**$9,833,187**	**$13,919,075**	**$14,230,639**	**$17,660,146**	**$13,320,485**	**$12,913,653**	**$17,651,280**	**$17,643,287**	**$17,637,221**	**$17,630,832**	**$18,081,699**	**$18,240,756**	**$18,483,257**	**$20,146,918**	**$20,137,428**	
Less Connection Fees						$0	$0	$0	$0	$0	$450,000	$750,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	
Less DWSP Fees						0	750,000	1,000,000	1,000,000	1,200,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	
Net Debt Service	**$9,833,187**	**$9,833,187**	**$13,919,075**	**$14,230,639**	**$17,660,146**	**$13,320,485**	**$12,163,653**	**$16,651,280**	**$16,643,287**	**$16,437,221**	**$15,680,832**	**$15,831,699**	**$15,740,756**	**$15,983,257**	**$17,646,918**	**$17,637,428**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 3
Revenue Requirement

Acct. #		Actual FY 2011	Actual FY 2012	Actual FY 2013	Actual FY 2014	Actual FY 2015	Proj. Yr. End FY 2016	Budgeted FY 2017	Projected FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Notes:
	Rate Funded Capital	$0	$5,101,000	$1,055,098	$7,485,009	$4,041,500	$2,200,000	$2,350,000	$2,500,000	$3,000,000	$3,450,000	$3,900,000	$4,350,000	$4,800,000	$5,250,000	$5,700,000	$6,150,000	$7,425,092 2014 Dep. Exp.
	Change in Working Capital																	
	To/(From) Operating Cash	$0	$0	$0	$0	$0	($4,484,338)	$1,131,481	$675,078	$600,222	$769,546	$1,609,427	$1,543,672	$1,853,430	$1,837,112	$400,698	$640,623	
	To/(From) Capital Reserve	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	To/(From) Rate Stabilization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Total Change in Working Capital	**$0**	**$0**	**$0**	**$0**	**$0**	**($4,484,338)**	**$1,131,481**	**$675,078**	**$600,222**	**$769,546**	**$1,609,427**	**$1,543,672**	**$1,853,430**	**$1,837,112**	**$400,698**	**$640,623**	
	Total Revenue Requirement	**$28,315,771**	**$34,545,993**	**$36,791,648**	**$46,300,636**	**$43,862,995**	**$33,617,963**	**$41,510,640**	**$46,824,358**	**$48,432,668**	**$50,099,110**	**$51,951,370**	**$53,874,611**	**$56,004,926**	**$58,220,228**	**$60,518,724**	**$62,907,325**	
	Bal/(Def.) of Funds	$3,354,438	($795,619)	$719,721	($8,041,256)	($8,707,907)	$0	($5,714,812)	($10,865,118)	($12,285,820)	($13,761,653)	($15,332,628)	($16,970,757)	($18,724,981)	($20,560,603)	($22,481,010)	($24,489,729)	
	Rate Adj. as a % of Rate Rev.	**-11.6%**	**2.5%**	**-2.0%**	**21.9%**	**25.9%**	**0.0%**	**16.7%**	**31.5%**	**35.5%**	**39.5%**	**43.7%**	**48.0%**	**52.5%**	**57.1%**	**61.8%**	**66.6%**	
	Proposed Rate Adjustment	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**18.5%**	**11.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	
	Add'l Revenue from Adj. *[2]*	$0	$0	$0	$0	$0	$0	$5,714,812	$10,865,118	$12,285,820	$13,761,653	$15,332,628	$16,970,757	$18,724,981	$20,560,603	$22,481,010	$24,489,729	
	Total Bal/(Def.) of Funds	$3,354,438	($795,619)	$719,721	($8,041,256)	($8,707,907)	$0	$0	($0)	$0	$0	$0	$0	$0	$0	$0	$0	
	Additional Rate Increase Needed	**-11.6%**	**2.5%**	**-2.0%**	**21.9%**	**25.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	
	Avg Res Monthly Bill (5/8" Meter + 15CCF)					$43.24	$43.99											
	After Proposed Rate Adjustment					$43.24	$43.99	$52.13	$57.86	$59.60	$61.39	$63.23	$65.12	$67.08	$69.09	$71.16	$73.30	
	Annual $ Change					0.00	0.00	8.14	5.73	1.74	1.79	1.84	1.90	1.95	2.01	2.07	2.13	
	Cumulative Change					0.00	0.00	8.14	13.87	15.61	17.40	19.24	21.13	23.09	25.10	27.17	29.31	
421	**Operating Cash**																	
	Beginning Balance	**$0**	**$0**	**$0**	**$0**	**$0**	**$26,465,725**	**$17,504,492**	**$13,668,553**	**$13,638,930**	**$14,180,252**	**$14,949,798**	**$16,559,225**	**$18,019,428**	**$19,850,053**	**$21,274,299**	**$20,982,112**	
	Plus: To Operating Reserves	0	0	0	0	0	0	1,131,481	675,078	600,222	769,546	1,609,427	1,543,672	1,853,430	1,837,112	400,698	640,623	
	From: Rate Stabilization Fund	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Less: Defeasance	0	0	0	0	0	(4,476,895)	(4,903,020)	0	0	0	0	0	0	0	0	0	
	Less: Uses of Funds	0	0	0	0	0	(4,484,338)	(64,400)	(704,700)	(58,900)	0	0	(83,469)	(22,805)	(412,866)	(692,884)	0	
	Ending Balance	**$0**	**$0**	**$0**	**$0**	**$26,465,725**	**$17,504,492**	**$13,668,553**	**$13,638,930**	**$14,180,252**	**$14,949,798**	**$16,559,225**	**$18,019,428**	**$19,850,053**	**$21,274,299**	**$20,982,112**	**$21,622,735**	
	Target: 180 days of O&M	*$9,215,973*	*$9,779,038*	*$10,878,851*	*$12,258,816*	*$11,050,317*	*$11,259,974*	*$12,897,321*	*$13,462,017*	*$14,055,964*	*$14,680,839*	*$15,338,417*	*$16,030,580*	*$16,759,328*	*$17,526,780*	*$18,335,183*	*$19,186,925*	
287	**Reserve Account**																	
	Beginning Balance	**$0**	**$0**	**$0**	**$0**	**$0**	**$5,000,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	
	Plus: To Reserves	0	0	0	0	0	1,196,000	0	0	0	0	0	0	0	0	0	0	
	Less: Uses of Funds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Ending Balance	**$0**	**$0**	**$0**	**$0**	**$5,000,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	**$6,196,000**	
424	**Connection Fee Reserve**																	
	Beginning Balance	**$0**	**$0**	**$0**	**$0**	**$0**	**($2,899,584)**	**($2,509,343)**	**($2,119,339)**	**($1,573,739)**	**($1,010,605)**	**($429,376)**	**$21,713**	**$207,113**	**$498,392**	**$839,123**	**$1,231,340**	
	Plus: Connection Fees	0	0	0	0	466,238	390,241	390,004	545,600	563,133	581,230	899,861	931,088	1,284,533	1,332,407	1,382,066	1,433,576	As Customer Growth
	Plus: Interest	0	0	0	0	1,166	0	0	0	0	0	1,228	4,311	6,747	8,323	10,151	12,241	
	Less: Uses of Funds	0	0	0	0	0	0	0	0	0	0	(450,000)	(750,000)	(1,000,000)	(1,000,000)	(1,000,000)	(1,000,000)	
	Ending Balance	**$0**	**$0**	**$0**	**$0**	**($2,899,584)**	**($2,509,343)**	**($2,119,339)**	**($1,573,739)**	**($1,010,605)**	**($429,376)**	**$21,713**	**$207,113**	**$498,392**	**$839,123**	**$1,231,340**	**$1,677,156**	
																		As Customer Growth
425	**DWSP SWSF Fund**																	
	Beginning Balance	**$0**	**$0**	**$0**	**$0**	**($1,100,000)**	**($518,406)**	**$134,466**	**$117,419**	**$133,793**	**$172,270**	**$31,455**	**$149,535**	**$300,738**	**$1,045,961**	**$1,840,898**	**$2,684,824**	
	Plus: Connection Fees	0	0	0	0	614,426	652,872	732,325	1,015,748	1,037,714	1,058,677	1,617,628	1,650,080	2,241,865	2,287,737	2,332,640	2,376,114	As Customer Growth
	Plus: Interest	0	0	0	0	0	0	628	626	763	508	451	1,123	3,358	7,199	11,286	15,614	
	Less: Uses of Funds	0	0	0	0	0	0	(750,000)	(1,000,000)	(1,000,000)	(1,200,000)	(1,500,000)	(1,500,000)	(1,500,000)	(1,500,000)	(1,500,000)	(1,500,000)	
	Ending Balance	**$0**	**$0**	**$0**	**($1,100,000)**	**($518,406)**	**$134,466**	**$117,419**	**$133,793**	**$172,270**	**$31,455**	**$149,535**	**$300,738**	**$1,045,961**	**$1,840,898**	**$2,684,824**	**$3,576,552**	
																		As Customer Growth
	Total Reserve Funds	**$0**	**$0**	**$0**	**($1,100,000)**	**$28,047,735**	**$21,325,615**	**$17,862,633**	**$18,394,985**	**$19,537,917**	**$20,747,878**	**$22,926,474**	**$24,723,279**	**$27,590,407**	**$30,150,319**	**$31,094,276**	**$33,072,444**	
	Total Target Ending Fund Balance	***$9,215,973***	***$9,779,038***	***$10,878,851***	***$12,258,816***	***$11,050,317***	***$11,259,974***	***$12,897,321***	***$13,462,017***	***$14,055,964***	***$14,680,839***	***$15,338,417***	***$16,030,580***	***$16,759,328***	***$17,526,780***	***$18,335,183***	***$19,186,925***	

[2] - FY 2017 additional rate revenue from adjustment assumes 11 months of implementation; Aug. 1, 2016 implementation

City of Stockton MUD
Water Cost of Service Study
Exhibit 4
Capital Improvement Plan

Inflation 2.7%

Capital Projects	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	*Total*
Fund												
427 I-5 Frontage Rd & North of Roth Road Water Main							$849,496	$0	$0	$0	$0	$849,496
424 Northeast Reservoir No. 2							0	0	4,603,694	0	0	4,603,694
424 Terminal Reservoir and Pump Station							0	0	0	23,858,577	0	23,858,577
427 Underground Emergency Repairs and Replacements							368,428	378,375	388,591	399,083	409,859	1,944,336
424 Water Supply - Well #34							0	2,024,428	0	0	0	2,024,428
424 Water Supply - Well #35							0	0	2,079,088	0	0	2,079,088
424 Water Supply - Well #36							0	0	0	2,135,223	0	2,135,223
424 Water Supply - Well #37							0	0	0	0	2,192,874	2,192,874
424 McKinley Ave Waterline Extension Reimbursement							0	0	1,591,492	0	0	1,591,492
424 French Camp - 18-inch Transmission Main Reimbursement							0	583,228	0	0	0	583,228
424 Gateway Oversizing Reimbursements							0	3,445,143	0	0	0	3,445,143
424 Tidewater Oversizing Reimbursements							0	391,630	0	0	0	391,630
424 West, East & South Bear Creeks Reimbursements							8,715,545	0	0	0	0	8,715,545
Total Capital Projects	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$9,933,469**	**$6,822,805**	**$8,662,866**	**$26,392,884**	**$2,602,733**	**$54,414,756**

Summary by Fund

423 Total Capital Projects	$1,004,000	$2,114,400	$2,547,700	$2,558,900	$2,578,500	$2,322,500	$0	$0	$0	$0	$0	$13,126,000
424 Total Capital Projects	3,356,000	300,000	300,000	500,000	500,000	0	8,715,545	6,444,430	8,274,274	25,993,800	2,192,874	56,576,924
427 Total Capital Projects	0	0	357,000	0	106,000	540,000	1,217,924	378,375	388,591	399,083	409,859	3,796,832
Total Capital Projects	**$4,360,000**	**$2,414,400**	**$3,204,700**	**$3,058,900**	**$3,184,500**	**$2,862,500**	**$9,933,469**	**$6,822,805**	**$8,662,866**	**$26,392,884**	**$2,602,733**	**$73,499,756**
Future Unidentified Projects	**$0**	**$0**	**$0**	**$0**	**$265,500**	**$1,037,500**	**$0**	**$0**	**$0**	**$0**	**$3,547,267**	**$4,850,267**
To Capital Reserves	**$1,196,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,196,000**
Total Capital Improvement Projects	**$5,556,000**	**$2,414,400**	**$3,204,700**	**$3,058,900**	**$3,450,000**	**$3,900,000**	**$9,933,469**	**$6,822,805**	**$8,662,866**	**$26,392,884**	**$6,150,000**	**$79,546,023**
Less: Outside Funding Sources												
Operating Cash	$0	$64,400	$704,700	$58,900	$0	$0	$83,469	$22,805	$412,866	$692,884	$0	$2,040,024
Previously Set Aside Funding	3,356,000	0	0	0	0	0	0	0	0	0	0	3,356,000
Capital Reserves	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
New SRF Loans	0	0	0	0	0	0	0	0	0	0	0	0
New Revenue Bonds	0	0	0	0	0	0	5,500,000	2,000,000	3,000,000	20,000,000	0	30,500,000
Total Outside Funding Sources	**$3,356,000**	**$64,400**	**$704,700**	**$58,900**	**$0**	**$0**	**$5,583,469**	**$2,022,805**	**$3,412,866**	**$20,692,884**	**$0**	**$35,896,024**
Rate Funded Capital	**$2,200,000**	**$2,350,000**	**$2,500,000**	**$3,000,000**	**$3,450,000**	**$3,900,000**	**$4,350,000**	**$4,800,000**	**$5,250,000**	**$5,700,000**	**$6,150,000**	**$43,650,000**

City of Stockton MUD
Water Cost of Service Study
SDC Revenue Calculation
Exhibit 5

Inflation	**2.7%**

	Actual	Actual	Actual	Actual	Actual	Proj. Yr. End	Budgeted									
	FY 2011	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**
Connection Fee																
Additional DUE's - Equivalent 5/8"X3/4"	134	223	398	9	226	186	181	247	248	249	375	378	508	513	518	523
Connection Fee Charge																
5/8 x 3/4	$1,836	$1,906	$1,954	$2,003	$2,063	$2,098	$2,155	$2,213	$2,273	$2,334	$2,397	$2,462	$2,528	$2,596	$2,667	$2,739
Total Connection Fee	**$245,637**	**$424,239**	**$777,129**	**$18,027**	**$466,238**	**$390,241**	**$390,004**	**$545,600**	**$563,133**	**$581,230**	**$899,861**	**$931,088**	**$1,284,533**	**$1,332,407**	**$1,382,066**	**$1,433,576**
Surface Water Supply Fee																
Additional DUE's - Equivalent 5/8"X3/4"	130	194	353	39	127	132	145	198	199	200	301	303	407	411	416	420
Surface Water Supply Fee																
5/8 x 3/4	$4,442	$4,482	$4,595	$4,721	$4,838	$4,946	$5,046	$5,138	$5,223	$5,302	$5,374	$5,441	$5,503	$5,560	$5,613	$5,661
Total Surface Water Supply Fee	**$575,639**	**$868,403**	**$1,620,410**	**$184,119**	**$614,426**	**$652,872**	**$732,325**	**$1,015,748**	**$1,037,714**	**$1,058,677**	**$1,617,628**	**$1,650,080**	**$2,241,865**	**$2,287,737**	**$2,332,640**	**$2,376,114**
Total Revenues	**$821,276**	**$1,292,642**	**$2,397,539**	**$202,146**	**$1,080,664**	**$1,043,113**	**$1,122,329**	**$1,561,348**	**$1,600,847**	**$1,639,907**	**$2,517,490**	**$2,581,168**	**$3,526,398**	**$3,620,145**	**$3,714,706**	**$3,809,690**

City of Stockton MUD
Water Cost of Service Study
Exhibit 6
Projected Pro Forma

	Actual	Actual	Actual	Actual	Actual	Proj. Yr. End		Projected								
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Charges for Services [1]	$29,336,428	$32,618,725	$36,698,614	$37,084,796	$34,159,972	$32,684,167	$34,902,561	$35,080,173	$35,258,704	$35,438,159	$35,705,542	$35,974,946	$36,334,695	$36,698,042	$37,065,023	$37,435,673
Revenues from Rate Adjustment [2]	0	0	0	0	0	0	5,714,812	10,865,118	12,285,820	13,761,653	15,332,628	16,970,757	18,724,981	20,560,603	22,481,010	24,489,729
Other Revenues	631,614	665,301	750,429	769,935	735,677	770,283	772,097	779,818	787,616	795,492	803,447	811,482	819,597	827,792	836,070	844,431
Interest Revenues	1,702,167	466,348	62,326	404,649	259,438	161,910	121,170	99,249	100,528	103,805	109,753	117,427	125,654	133,791	136,621	137,492
Debt Service Reserve Interest Earnings	0	535,413	460,629	516,001	361,230	445,689	400,000	0	0	0	0	0	0	0	0	0
Connection Charges	245,637	424,239	777,129	18,027	466,238	390,241	390,004	545,600	563,133	581,230	899,861	931,088	1,284,533	1,332,407	1,382,066	1,433,576
Surface Water Supply Fees	575,639	868,403	1,620,410	184,119	614,426	652,872	732,325	1,015,748	1,037,714	1,058,677	1,617,628	1,650,080	2,241,865	2,287,737	2,332,640	2,376,114
Rate Stabilization Deposit	0	0	0	0	5,600,000	2,250,000	0	0	0	0	0	0	0	0	0	0
Total Revenues	**$32,491,485**	**$35,578,429**	**$40,369,538**	**$38,977,528**	**$42,196,981**	**$37,355,162**	**$43,032,969**	**$48,385,706**	**$50,033,516**	**$51,739,016**	**$54,468,859**	**$56,455,779**	**$59,531,324**	**$61,840,373**	**$64,233,431**	**$66,717,014**
Expenses																
Administrative and General	$1,659,587	$1,510,449	$2,412,410	$2,082,407	$1,855,341	$1,269,937	$1,269,551	$1,307,007	$1,345,638	$1,385,481	$1,426,580	$1,468,976	$1,512,715	$1,557,842	$1,604,405	$1,652,455
Operations and Maintenance	5,790,360	5,371,381	4,990,523	6,043,473	5,417,295	4,096,281	4,321,399	4,462,767	4,609,294	4,761,188	4,918,666	5,081,956	5,251,294	5,426,928	5,609,117	5,798,132
Utility Billing	0	0	0	910,478	940,565	868,410	914,526	940,890	968,029	995,965	1,024,722	1,054,324	1,084,797	1,116,166	1,148,458	1,181,700
Other Support Services	528,983	380,745	358,071	352,837	394,787	367,760	436,521	451,926	467,918	484,521	501,760	519,662	538,256	557,569	577,635	598,483
Water Conservation	298,933	180,407	204,431	163,914	213,541	129,583	304,322	313,023	321,988	331,226	340,747	350,559	360,673	371,098	381,845	392,926
Water Purchases	9,863,289	9,682,662	7,887,945	8,214,161	8,595,356	8,627,646	9,938,201	10,584,184	11,272,156	12,004,846	12,785,161	13,616,197	14,501,249	15,443,831	16,447,680	17,516,779
Hydrant Maintenance	341,433	297,228	235,982	225,295	219,689	225,802	268,916	278,110	287,646	297,539	307,802	318,451	329,502	340,972	352,878	365,238
Delta Water Production	0	866,404	2,652,121	3,097,711	3,408,187	3,832,729	4,252,879	4,401,962	4,556,622	4,717,081	4,883,566	5,056,318	5,235,584	5,421,625	5,614,710	5,815,121
Well Production	0	0	0	0	0	1,325,392	1,553,334	1,608,446	1,665,574	1,724,795	1,786,187	1,849,831	1,915,814	1,984,221	2,055,145	2,128,681
DWSP Maintenance & Repair	0	866,404	2,652,121	3,097,711	0	0	495,514	507,686	520,166	532,960	546,078	559,527	573,316	587,454	601,951	616,814
Summary Account Expenses	0	456,126	423,872	397,002	1,116,588	1,838,276	2,110,343	2,141,998	2,174,128	2,206,740	2,239,841	2,273,439	2,307,540	2,342,153	2,377,286	2,412,945
Total O&M	**$18,482,584**	**$19,611,806**	**$21,817,475**	**$24,584,988**	**$22,161,349**	**$22,581,816**	**$25,865,506**	**$26,998,000**	**$28,189,159**	**$29,442,342**	**$30,761,110**	**$32,149,240**	**$33,610,740**	**$35,149,860**	**$36,771,109**	**$38,479,273**
Net Revenues Available for DS	**$14,008,901**	**$15,966,623**	**$18,552,062**	**$14,392,539**	**$20,035,632**	**$14,773,347**	**$17,167,463**	**$21,387,706**	**$21,844,356**	**$22,296,674**	**$23,707,749**	**$24,306,539**	**$25,920,584**	**$26,690,513**	**$27,462,321**	**$28,237,741**
Senior Debt Service																
2002 A	$0	$0	$1,111,588	$1,112,038	$1,115,188	$328,460	$309,341	$1,110,063	$1,113,220	$1,112,706	$1,113,763	$1,112,256	$1,117,931	$0	$0	$0
2005 A	1,150,313	1,150,313	1,150,313	1,150,313	1,150,313	1,150,313	1,150,313	1,297,313	1,296,213	1,294,713	1,292,703	1,295,266	1,287,609	2,409,688	2,405,297	2,407,375
2010 A	0	0	0	0	3,489,638	3,319,838	3,317,138	3,441,838	3,441,538	3,441,038	3,445,238	3,439,238	3,443,038	3,441,538	3,438,988	3,440,238
Drought Relief Loan	95,342	95,342	95,342	95,342	95,342	86,865	82,679	0	0	0	0	0	0	0	0	0
New Debt	0	0	0	0	0	0	0	0	0	0	0	460,236	627,595	878,633	2,552,220	2,552,220
Total Senior Debt Service	**$1,245,655**	**$1,245,655**	**$2,357,242**	**$2,357,692**	**$5,850,480**	**$4,885,475**	**$4,859,470**	**$5,849,213**	**$5,850,970**	**$5,848,456**	**$5,851,703**	**$6,306,996**	**$6,476,173**	**$6,729,858**	**$8,396,504**	**$8,399,832**
Less: Interest Revenues-Senior Lien DSRF(s)	$0	$0	$112,827	$77,288	$101,333	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Senior Debt Service	$1,245,655	$1,245,655	$2,244,415	$2,280,404	$5,749,147	$4,885,475	$4,859,470	$5,849,213	$5,850,970	$5,848,456	$5,851,703	$6,306,996	$6,476,173	$6,729,858	$8,396,504	$8,399,832
Net Revenue Available for Subordinate DS	**$12,763,246**	**$14,720,968**	**$16,307,648**	**$12,112,136**	**$14,286,485**	**$9,887,872**	**$12,307,993**	**$15,538,493**	**$15,993,386**	**$16,448,218**	**$17,856,046**	**$17,999,543**	**$19,444,411**	**$19,960,655**	**$19,065,817**	**$19,837,909**
Senior Debt Service Coverage	**11.25**	**12.82**	**8.27**	**6.31**	**3.48**	**3.02**	**3.53**	**3.66**	**3.73**	**3.81**	**4.05**	**3.85**	**4.00**	**3.97**	**3.27**	**3.36**
Senior Debt Service Coverage [3]	**10.59**	**11.78**	**7.20**	**6.22**	**3.30**	**2.81**	**3.30**	**3.39**	**3.46**	**3.53**	**3.62**	**3.44**	**3.46**	**3.43**	**2.83**	**2.91**
Subordinate Debt Service																
2009 A Revenue Bond	$833,950	$833,950	$3,808,250	$3,809,350	$3,805,450	$282,750	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2009 B Revenue Bond	11,928,589	11,928,589	11,928,589	11,928,589	11,928,589	11,928,589	11,928,589	15,646,813	15,557,557	15,467,839	15,361,863	15,251,547	15,130,375	15,002,800	14,877,730	14,730,843
Less BAB Interest Rebate	(4,175,006)	(4,175,006)	(4,175,006)	(3,864,991)	(3,924,373)	(3,776,328)	(3,874,406)	(3,844,745)	(3,765,240)	(3,679,074)	(3,582,734)	(3,476,843)	(3,365,792)	(3,249,401)	(3,127,316)	(2,993,247)
Total Subordinate DS	**$8,587,533**	**$8,587,533**	**$11,561,833**	**$11,872,947**	**$11,809,666**	**$8,435,011**	**$8,054,183**	**$11,802,068**	**$11,792,317**	**$11,788,765**	**$11,779,129**	**$11,774,703**	**$11,764,583**	**$11,753,399**	**$11,750,414**	**$11,737,596**

City of Stockton MUD
Water Cost of Service Study
Exhibit 6
Projected Pro Forma

	Actual	Actual	Actual	Actual	Actual	Proj. Yr. End		Projected								
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Interest Revenues-Subodinate DSRF(s)	$0	$0	$392,386	$392,386	$392,386	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net: Subordinate Debt Service	$8,587,533	$8,587,533	$11,169,447	$11,480,562	$11,417,280	$8,435,011	$8,054,183	$11,802,068	$11,792,317	$11,788,765	$11,779,129	$11,774,703	$11,764,583	$11,753,399	$11,750,414	$11,737,596
Net Revenues Available for Capital and Other	$4,175,714	$6,133,436	$5,138,201	$631,574	$2,869,204	$1,452,861	$4,253,810	$3,736,425	$4,201,069	$4,659,453	$6,076,917	$6,224,840	$7,679,828	$8,207,256	$7,315,404	$8,100,313
Subordinate Debt Service Coverage	**1.49**	**1.71**	**1.46**	**1.06**	**1.25**	**1.17**	**1.53**	**1.32**	**1.36**	**1.40**	**1.52**	**1.53**	**1.65**	**1.70**	**1.62**	**1.69**
Subordinate Debt Service Coverage [3]	**1.39**	**1.56**	**1.25**	**1.04**	**1.16**	**1.05**	**1.39**	**1.18**	**1.22**	**1.26**	**1.30**	**1.31**	**1.35**	**1.39**	**1.31**	**1.37**
Overall Debt Service Coverage	**1.42**	**1.62**	**1.38**	**1.05**	**1.17**	**1.11**	**1.33**	**1.21**	**1.24**	**1.26**	**1.34**	**1.34**	**1.42**	**1.44**	**1.36**	**1.40**
Overall Debt Service Coverage [3]	**1.34**	**1.49**	**1.20**	**1.03**	**1.10**	**1.03**	**1.24**	**1.12**	**1.15**	**1.17**	**1.20**	**1.20**	**1.23**	**1.25**	**1.18**	**1.21**
Rate Stabilization Fund (426 Fund)																
Beginning Balance	**$8,000,000**	**$8,000,000**	**$8,000,000**	**$8,000,000**	**$8,387,023**	**$2,787,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**
Plus: To Reserves (Rev Req)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plus: From Operating Cash	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plus: From DWSP SWSF Fund	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less: Uses of Funds (Rev Req)	0	0	0	0	5,600,000	2,250,000	0	0	0	0	0	0	0	0	0	0
Less: To Operating Cash	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less: To DWSP SWSF Fund	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ending Balance [4]	**$8,000,000**	**$8,000,000**	**$8,000,000**	**$8,000,000**	**$2,787,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**	**$537,023**
Operating Fund Ending Balance	$16,718,405	$24,829,000	$28,911,801	$26,911,863	$25,416,568	$18,229,306	$11,448,384	$6,626,943	$5,093,590	$3,220,462	$2,536,461	$3,035,523	$3,035,523	$3,035,523	$3,035,523	$3,035,523
Operating Reserve Ending Balance	0	5,000,000	5,000,000	5,000,000	5,550,000	6,150,000	6,750,000	7,350,000	7,950,000	8,550,000	9,150,000	9,750,000	9,750,000	9,750,000	9,750,000	9,750,000
Total Ending Cash Balance	$16,718,405	$29,829,000	$33,911,801	$31,911,863	$30,966,568	$24,379,306	$18,198,384	$13,976,943	$13,043,590	$11,770,462	$11,686,461	$12,785,523	$12,785,523	$12,785,523	$12,785,523	$12,785,523

[1] Assumes adopted rate adjustments
[2] Assumes inflationary adjustments (3.0%) after approved rate increases in FY 12/13
[3] Less connection fees and SWS fees
[4] Does not include interest earnings; interest included in misc revenue

City of Stockton MUD
Water Cost of Service Study
Exhibit 7
Revenues at Present Rates

Average		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Single Family														
Fixed Charge	**$/Acct.**													
5/8"	$18.94	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390
3/4"	22.25	21,890	21,890	21,890	21,890	21,890	21,890	21,890	21,890	21,890	21,890	21,890	21,890	21,890
1"	29.24	17,912	17,912	17,912	17,912	17,912	17,912	17,912	17,912	17,912	17,912	17,912	17,912	17,912
1 1/2"	42.17	69	69	69	69	69	69	69	69	69	69	69	69	69
2"	54.49	37	37	37	37	37	37	37	37	37	37	37	37	37
3"	96.36	0	0	0	0	0	0	0	0	0	0	0	0	0
4"	138.53	1	1	1	1	1	1	1	1	1	1	1	1	1
6"	228.20	0	0	0	0	0	0	0	0	0	0	0	0	0
8"	330.87	2	2	2	2	2	2	2	2	2	2	2	2	2
10"	412.91	0	0	0	0	0	0	0	0	0	0	0	0	0
12"	581.32	0	0	0	0	0	0	0	0	0	0	0	0	0
		41,301	41,301	41,301	41,301	41,301	41,301	41,301	41,301	41,301	41,301	41,301	41,301	41,301
	54.29													
Total Fixed Charge Revenue		$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	**$12,514,225**
Consumption Charge	**$/CCF**													
All Usage	$1.67	350,862	342,240	350,008	519,204	503,782	541,699	742,008	811,408	728,856	685,069	580,254	441,533	6,596,922
		350,862	342,240	350,008	519,204	503,782	541,699	742,008	811,408	728,856	685,069	580,254	441,533	**6,596,922**
Total Consumption Revenue		$585,940	$571,541	$584,513	$867,071	$841,316	$904,637	$1,239,153	$1,355,051	$1,217,189	$1,144,065	$969,024	$737,360	**$11,016,860**
Total Single Family		**$1,628,792**	**$1,614,393**	**$1,627,365**	**$1,909,923**	**$1,884,168**	**$1,947,489**	**$2,282,005**	**$2,397,903**	**$2,260,041**	**$2,186,917**	**$2,011,876**	**$1,780,212**	**$23,531,085**

City of Stockton MUD
Water Cost of Service Study
Exhibit 7
Revenues at Present Rates

Average		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Multi-Family														
Fixed Charge	**$/Acct.**													
5/8"	$18.94	437	437	437	437	437	437	437	437	437	437	437	437	437
3/4"	22.25	3,628	3,628	3,628	3,628	3,628	3,628	3,628	3,628	3,628	3,628	3,628	3,628	3,628
1"	29.24	595	595	595	595	595	595	595	595	595	595	595	595	595
1 1/2"	42.17	190	190	190	190	190	190	190	190	190	190	190	190	190
2"	54.49	231	231	231	231	231	231	231	231	231	231	231	231	231
3"	96.36	12	12	12	12	12	12	12	12	12	12	12	12	12
4"	138.53	7	7	7	7	7	7	7	7	7	7	7	7	7
6"	228.20	7	7	7	7	7	7	7	7	7	7	7	7	7
8"	330.87	0	0	0	0	0	0	0	0	0	0	0	0	0
10"	412.91	0	0	0	0	0	0	0	0	0	0	0	0	0
12"	581.32	0	0	0	0	0	0	0	0	0	0	0	0	0
		5,107	5,107	5,107	5,107	5,107	5,107	5,107	5,107	5,107	5,107	5,107	5,107	5,107
Total Fixed Charge Revenue		$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	**$1,568,646**
Consumption Charge	**$/CCF**													0
All Usage	$1.67	94,578	85,486	89,278	108,009	101,421	100,396	121,388	134,057	127,877	120,565	112,929	99,761	1,295,744
		94,578	85,486	89,278	108,009	101,421	100,396	121,388	134,057	127,877	120,565	112,929	99,761	**1,295,744**
Total Consumption Revenue		$157,945	$142,762	$149,094	$180,375	$169,373	$167,661	$202,717	$223,874	$213,555	$201,344	$188,591	$166,601	**$2,163,892**
Total Multi-Family		**$288,666**	**$273,482**	**$279,815**	**$311,096**	**$300,094**	**$298,382**	**$333,438**	**$354,595**	**$344,275**	**$332,064**	**$319,312**	**$297,321**	**$3,732,538**

City of Stockton MUD
Water Cost of Service Study
Exhibit 7
Revenues at Present Rates

Average		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Commercial/Institutional														
Fixed Charge	**$/Acct.**													
5/8"	$18.94	14	14	14	14	14	14	14	14	14	14	14	14	14
3/4"	22.25	210	210	210	210	210	210	210	210	210	210	210	210	210
1"	29.24	243	243	243	243	243	243	243	243	243	243	243	243	243
1 1/2"	42.17	230	230	230	230	230	230	230	230	230	230	230	230	230
2"	54.49	603	603	603	603	603	603	603	603	603	603	603	603	603
3"	96.36	69	69	69	69	69	69	69	69	69	69	69	69	69
4"	138.53	46	46	46	46	46	46	46	46	46	46	46	46	46
6"	228.20	18	18	18	18	18	18	18	18	18	18	18	18	18
8"	330.87	5	5	5	5	5	5	5	5	5	5	5	5	5
10"	412.91	2	2	2	2	2	2	2	2	2	2	2	2	2
12"	581.32	2	2	2	2	2	2	2	2	2	2	2	2	2
		1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442	**1,442**
Total Fixed Charge Revenue		$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	**$904,454**
Consumption Charge	**$/CCF**													
All Usage	$1.67	76,101	83,851	91,529	130,799	157,413	152,899	191,631	214,871	220,812	186,632	139,443	105,854	1,751,834
		76,101	83,851	91,529	130,799	157,413	152,899	191,631	214,871	220,812	186,632	139,443	105,854	**1,751,834**
Total Consumption Revenue		$127,089	$140,031	$152,853	$218,434	$262,880	$255,341	$320,023	$358,834	$368,756	$311,675	$232,870	$176,776	**$2,925,563**
Total Commercial		**$202,460**	**$215,402**	**$228,225**	**$293,806**	**$338,251**	**$330,713**	**$395,394**	**$434,205**	**$444,127**	**$387,047**	**$308,241**	**$252,147**	**$3,830,017**

City of Stockton MUD
Water Cost of Service Study
Exhibit 7
Revenues at Present Rates

Average		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Industrial														
Fixed Charge	**$/Acct.**													
5/8"	$18.94	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4"	22.25	14	14	14	14	14	14	14	14	14	14	14	14	14
1"	29.24	0	0	0	0	0	0	0	0	0	0	0	0	0
1 1/2"	42.17	0	0	0	0	0	0	0	0	0	0	0	0	0
2"	54.49	1	1	1	1	1	1	1	1	1	1	1	1	1
3"	96.36	0	0	0	0	0	0	0	0	0	0	0	0	0
4"	138.53	3	3	3	3	3	3	3	3	3	3	3	3	3
6"	228.20	1	1	1	1	1	1	1	1	1	1	1	1	1
8"	330.87	0	0	0	0	0	0	0	0	0	0	0	0	0
10"	412.91	0	0	0	0	0	0	0	0	0	0	0	0	0
12"	581.32	0	0	0	0	0	0	0	0	0	0	0	0	0
		19	19	19	19	19	19	19	19	19	19	19	19	**19**
Total Fixed Charge Revenue		$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	**12,117**
Consumption Charge	**$/CCF**													
All Usage	$1.67	24,602	22,639	26,321	29,987	22,590	26,580	26,132	29,116	41,405	27,332	23,764	26,855	327,323
		24,602	22,639	26,321	29,987	22,590	26,580	26,132	29,116	41,405	27,332	23,764	26,855	**327,323**
Total Consumption Revenue		$41,085	$37,807	$43,956	$50,078	$37,725	$44,389	$43,640	$48,624	$69,146	$45,644	$39,686	$44,848	**$546,629**
Total Institutional		**$42,095**	**$38,817**	**$44,966**	**$51,088**	**$38,735**	**$45,398**	**$44,650**	**$49,634**	**$70,156**	**$46,654**	**$40,696**	**$45,858**	**$558,747**

City of Stockton MUD
Water Cost of Service Study
Exhibit 7
Revenues at Present Rates

Average		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Irrigation														
Fixed Charge	**$/Acct.**													
5/8"	$18.94	15	15	15	15	15	15	15	15	15	15	15	15	15
3/4"	22.25	74	74	74	74	74	74	74	74	74	74	74	74	74
1"	29.24	146	146	146	146	146	146	146	146	146	146	146	146	146
1 1/2"	42.17	159	159	159	159	159	159	159	159	159	159	159	159	159
2"	54.49	435	435	435	435	435	435	435	435	435	435	435	435	435
3"	96.36	25	25	25	25	25	25	25	25	25	25	25	25	25
4"	138.53	20	20	20	20	20	20	20	20	20	20	20	20	20
6"	228.20	2	2	2	2	2	2	2	2	2	2	2	2	2
8"	330.87	0	0	0	0	0	0	0	0	0	0	0	0	0
10"	412.91	0	0	0	0	0	0	0	0	0	0	0	0	0
12"	581.32	0	0	0	0	0	0	0	0	0	0	0	0	0
		876	876	876	876	876	876	876	876	876	876	876	876	**876**
Total Fixed Charge Revenue		$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	1,752
Consumption Charge	**$/CCF**													
All Usage	$1.67	9,785	19,873	26,077	82,625	115,618	100,623	167,590	186,449	185,015	149,227	91,226	35,275	1,169,382
		9,785	19,873	26,077	82,625	115,618	100,623	167,590	186,449	185,015	149,227	91,226	35,275	**1,169,382**
Total Consumption Revenue		$16,341	$33,188	$43,549	$137,984	$193,082	$168,040	$279,874	$311,370	$308,974	$249,209	$152,347	$58,909	**$1,952,868**
Total Irrigation		**$58,585**	**$75,432**	**$85,792**	**$180,228**	**$235,326**	**$210,284**	**$322,118**	**$353,614**	**$351,218**	**$291,453**	**$194,591**	**$101,153**	**$2,459,794**

City of Stockton MUD
Water Cost of Service Study
Exhibit 7
Revenues at Present Rates

Average	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Summary													
Customer													
Single Family	41,301	41,301	41,301	41,301	41,301	41,301	41,301	41,301	41,301	41,301	41,301	41,301	41,301
Multi-Family	5,107	5,107	5,107	5,107	5,107	5,107	5,107	5,107	5,107	5,107	5,107	5,107	5,107
Commercial/Institutional	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442
Industrial	19	19	19	19	19	19	19	19	19	19	19	19	19
Irrigation	876	876	876	876	876	876	876	876	876	876	876	876	876
	49,130	**49,130**	**49,130**	**49,130**	**49,130**	**49,130**	**49,130**	**49,130**	**49,130**	**49,130**	**49,130**	**49,130**	**49,130**
Consumption													
Single Family	350,862	342,240	350,008	519,204	503,782	541,699	742,008	811,408	728,856	685,069	580,254	441,533	6,596,922
Multi-Family	94,578	85,486	89,278	108,009	101,421	100,396	121,388	134,057	127,877	120,565	112,929	99,761	1,295,744
Commercial/Institutional	76,101	83,851	91,529	130,799	157,413	152,899	191,631	214,871	220,812	186,632	139,443	105,854	1,751,834
Industrial	24,602	22,639	26,321	29,987	22,590	26,580	26,132	29,116	41,405	27,332	23,764	26,855	327,323
Irrigation	9,785	19,873	26,077	82,625	115,618	100,623	167,590	186,449	185,015	149,227	91,226	35,275	1,169,382
	555,928	**554,089**	**583,213**	**870,624**	**900,824**	**922,197**	**1,248,748**	**1,375,900**	**1,303,964**	**1,168,825**	**947,616**	**709,278**	**11,141,205**
Total Revenue													
Single Family	1,628,792	1,614,393	1,627,365	1,909,923	1,884,168	1,947,489	2,282,005	2,397,903	2,260,041	2,186,917	2,011,876	1,780,212	$23,531,085
Multi-Family	288,666	273,482	279,815	311,096	300,094	298,382	333,438	354,595	344,275	332,064	319,312	297,321	3,732,538
Commercial/Institutional	202,460	215,402	228,225	293,806	338,251	330,713	395,394	434,205	444,127	387,047	308,241	252,147	3,830,017
Industrial	42,095	38,817	44,966	51,088	38,735	45,398	44,650	49,634	70,156	46,654	40,696	45,858	558,747
Irrigation	58,585	75,432	85,792	180,228	235,326	210,284	322,118	353,614	351,218	291,453	194,591	101,153	2,459,794
Private Fire	13,952	13,952	13,952	13,952	13,952	13,952	13,952	13,952	13,952	13,952	13,952	13,952	167,424
	2,234,549	**2,231,478**	**2,280,115**	**2,760,092**	**2,810,526**	**2,846,218**	**3,391,558**	**3,603,902**	**3,483,769**	**3,258,087**	**2,888,668**	**2,490,644**	**$34,279,605**
	6.5%	6.5%	6.7%	8.1%	8.2%	8.3%	9.9%	10.5%	10.2%	9.5%	8.4%	7.3%	
												FY 2014 Actual	**$36,703,829**
												Difference	*($2,424,224)*
												Percent	*-6.6%*
												FY 2015 Actual	**$35,169,426**
												Difference	*($889,821)*
												Percent	*-2.5%*
												FY 2016 Budget	**$33,039,544**
												Difference	*$1,240,061*
												Percent	*3.8%*

City of Stockton MUD
Water Cost of Service Study
Exhibit 7
Revenues at Present Rates

Average	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Revenue Detail														
Single Family														
Fixed	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	$1,042,852	**$12,514,225**	***53.2%***
Consumption	585,940	571,541	584,513	867,071	841,316	904,637	1,239,153	1,355,051	1,217,189	1,144,065	969,024	737,360	**11,016,860**	***46.8%***
Multi-Family														
Fixed	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	$130,721	**$1,568,646**	***42.0%***
Consumption	157,945	142,762	149,094	180,375	169,373	167,661	202,717	223,874	213,555	201,344	188,591	166,601	**2,163,892**	***58.0%***
Commercial/Institutional														
Fixed	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	$75,371	**$904,454**	***23.6%***
Consumption	127,089	140,031	152,853	218,434	262,880	255,341	320,023	358,834	368,756	311,675	232,870	176,776	**2,925,563**	***76.4%***
Industrial														
Fixed	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	$1,010	**$12,117**	***2.2%***
Consumption	41,085	37,807	43,956	50,078	37,725	44,389	43,640	48,624	69,146	45,644	39,686	44,848	**546,629**	***97.8%***
Irrigation														
Fixed	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	$42,244	**$506,926**	***20.6%***
Consumption	16,341	33,188	43,549	137,984	193,082	168,040	279,874	311,370	308,974	249,209	152,347	58,909	**1,952,868**	***79.4%***
	$2,220,597	**$2,217,526**	**$2,266,163**	**$2,746,139**	**$2,796,573**	**$2,832,266**	**$3,377,606**	**$3,589,950**	**$3,469,817**	**$3,244,135**	**$2,874,716**	**$2,476,692**	**$34,112,181**	
													Total Fixed Revenue	**$15,506,369** ***45.5%***
													Total Consumption Revenue	**$18,605,812** ***54.5%***

City of Stockton MUD
Water Cost of Service Study
Exhibit 8
Commodity Allocation Factor

	FY 2015 Consumption (CCF)	2.5% Losses [1]	Net Water Delivered (Flow + Losses)	Base Consumption (MGD)	Component % of Total	Class Total % of Total
Single Family						**59.2%**
Tier 1	4,877,066	121,927	4,998,992	10.24	43.8%	
Tier 2	1,719,856	42,996	1,762,853	3.61	15.4%	
Multi-Family [2]						**11.6%**
Winter	700,700	17,518	718,218	1.47	6.3%	
Summer	595,044	14,876	609,920	1.25	5.3%	
Non-Residential [2]						**18.7%**
Winter	995,709	24,893	1,020,602	2.09	8.9%	
Summer	1,083,448	27,086	1,110,534	2.28	9.7%	
Irrigation						**10.5%**
Winter	414,088	10,352	424,440	0.87	3.7%	
Summer	755,294	18,882	774,176	1.59	6.8%	
	11,141,205	**278,530**	**11,419,735**	**23.40**	**100.0%**	**100.0%**
	Revised City Water Production Report [3]		**12,060,882**	**24.72**		

Notes:

[1] - Estimated

[2] - Winter: Oct - Apr ; Summer: May - Sept

[3] - Water Supply provided by City (Based on 2015 fiscal year)

(COM-W) / (COM-S)

City of Stockton MUD
Water Cost of Service Study
Exhibit 9
Capacity Allocation Factor

	Average Consumption (MGD)	Peaking Factors [1]	Peak Day Use (MGD)	Component % of Total	Class % of Total
Single Family					**64.7%**
Tier 1	10.24	1.69	17.31	42.9%	
Tier 2	3.61	2.43	8.79	21.8%	
Multi-Family					**8.2%**
Winter	1.47	1.09	1.61	4.0%	
Summer	1.25	1.37	1.72	4.3%	
Non-Residential					**15.5%**
Winter	2.09	1.16	2.43	6.0%	
Summer	2.28	1.68	3.83	9.5%	
Irrigation					**11.6%**
Winter	0.87	1.33	1.16	2.9%	
Summer	1.59	2.22	3.52	8.7%	
	23.40		**40.36**	**100.0%**	**100.0%**
		Historical Peak Day [2]	**45.70**		

Notes:

[1] - Tier/Season relationship based on FY 2014 peak to average month usage in each tier/season

[2] - Water System Peak Day Data Provided by City (July 2015 Peak Day)

(CAP - W) / (CAP-S)

City of Stockton MUD
Water Cost of Service Study
Exhibit 10
Customer Allocation Factors

	Actual Customer		Customer Service & Acctng.		Meters & Services		
	Number of Meters	% of Total	Number of Living Units	% of Total	Weighting Factor [1]	Weighted Customer	% of Total
Single Family	41,301	84.7%	41,301	71.8%	1.01	41,522	76.4%
Multi-Family	5,107	10.5%	14,753	25.7%	1.19	6,061	11.2%
Commercial/Institutional	1,442	3.0%	1,442	2.5%	3.01	4,343	8.0%
Industrial	19	0.0%	19	0.0%	3.54	67	0.1%
Irrigation	876	1.8%	0	0.0%	2.67	2,335	4.3%
Total	48,745	100.0%	57,515	100.0%		54,328	100.0%
		(AC)		**(WCA)**			**(WCMS)**

Notes:

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

Development of Equivalent Meter Allocation Factor

	Number of Meters												
	5/8"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"	**Total**	**% of Total**
Single Family	1,390	21,890	17,912	69	37	0	1	0	2	0	0	**41,301**	84.7%
Multi-Family	437	3,628	595	190	231	12	7	7	0	0	0	**5,107**	10.5%
Commercial/Institutional	14	210	243	230	603	69	46	18	5	2	2	**1,442**	3.0%
Industrial	0	14	0	0	1	0	3	1	0	0	0	**19**	0.0%
Irrigation	15	74	146	159	435	25	20	2	0	0	0	**876**	1.8%
Total Meters	**1,856**	**25,816**	**18,896**	**648**	**1,307**	**106**	**77**	**28**	**7**	**2**	**2**	**48,745**	
Equivalency Factor	*1.00*	*1.00*	*1.00*	*2.00*	*3.20*	*6.00*	*10.00*	*20.00*	*32.00*	*46.00*	*67.50*		
	Equivalent Meters												
Single Family	1,390	21,890	17,912	138	118	0	10	0	64	0	0	**41,522**	1.01
Multi-Family	437	3,628	595	380	739	72	70	140	0	0	0	**6,061**	1.19
Commercial/Institutional	14	210	243	460	1,930	414	460	360	160	92	135	**4,343**	3.01
Industrial	0	14	0	0	3	0	30	20	0	0	0	**67**	3.54
Irrigation	15	74	146	318	1,392	150	200	40	0	0	0	**2,335**	2.67
Total Equivalent Meters	**1,856**	**25,816**	**18,896**	**1,296**	**4,182**	**636**	**770**	**560**	**224**	**92**	**135**	**54,328**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 11
Public Fire Allocation Factor

	Number of Meters	Fire Prot. Requirements (gals/min)	Duration (minutes)	Total FP Requirements (1,000 g/min)	% of Total
Single Family	41,301	1,000	90	3,717,090	64.5%
Multi-Family	5,107	1,500	180	1,378,890	23.9%
Commercial/Institutional	1,442	2,500	180	648,900	11.3%
Industrial	19	3,500	240	15,960	0.3%
Irrigation	876	0	0	0	0.0%
	---			---	---
Total	48,745			5,760,840	100.0%

(FP)

City of Stockton MUD
Water Cost of Service Study
Exhibit 12
Revenue Related Allocation Factor

	Projected FY 2017	% of Total
Single Family	$23,648,740	69.0%
Multi-Family	3,751,201	10.9%
Commercial/Institutional	3,849,167	11.2%
Industrial	561,541	1.6%
Irrigation	2,472,093	7.2%
Total Rate Revenues	$34,282,742	100.0%

(RR)

City of Stockton MUD
Water Cost of Service Study
Exhibit 13.1
Net Plant In Service

	Net Plant 06/30/14	Commodity (COMM)	Capacity (CAP)	Customer Related: Actual Customer (AC)	Customer Related: Cust. Acctg. (WCA)	Customer Related: Meters & Services (WCMS)	Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Classification
Source of Supply - Wells										
North	$2,395,960	$1,389,178	$1,006,782	$0	$0	$0	$0	$0	$0	58.0% COMM 42.0% CAP
South	2,297,637	1,332,170	965,467	0	0	0	0	0	0	58.0% COMM 42.0% CAP
Walnut	0	0	0	0	0	0	0	0	0	58.0% COMM 42.0% CAP
Total Source of Supply - Wells	$4,693,597	$2,721,348	$1,972,249	$0	$0	$0	$0	$0	$0	
Treatment										
North	$228,388,600	$132,419,711	$95,968,890	$0	$0	$0	$0	$0	$0	58.0% COMM 42.0% CAP
South	8,518	4,939	3,579	0	0	0	0	0	0	58.0% COMM 42.0% CAP
Walnut	0	0	0	0	0	0	0	0	0	58.0% COMM 42.0% CAP
Total Treatment	$228,397,119	$132,424,650	$95,972,469	$0	$0	$0	$0	$0	$0	
Pumping										
North	$521,851	$0	$521,851	$0	$0	$0	$0	$0	$0	100.0% CAP
South	428,507	0	428,507	0	0	0	0	0	0	100.0% CAP
Walnut	0	0	0	0	0	0	0	0	0	100.0% CAP
Total Pumping	$950,358	$0	$950,358	$0	$0	$0	$0	$0	$0	
Transmission & Distribution										
Structures and Improvements										
North	$297,093	$45,115	$0	$71,566	$0	$160,307	$20,106	$0	$0	As T&D Assets Below
South	361,095	54,834	0	86,983	0	194,841	24,437	0	0	As T&D Assets Below
Walnut	0	0	0	0	0	0	0	0	0	As T&D Assets Below
Reservoirs and Standpipes										
North	$4,110,014	$0	$0	$0	$0	$3,891,507	$218,507	$0	$0	94.7% WCMS 5.3% FP
South	821,885	0	0	0	0	778,190	43,695	0	0	94.7% WCMS 5.3% FP
Walnut	0	0	0	0	0	0	0	0	0	94.7% WCMS 5.3% FP
Distribution Mains										
North	$56,637,775	$0	$0	$20,389,599	$0	$30,762,209	$5,485,968	$0	$0	36.0% AC 54.3% WCMS 9.7% FP
South	4,612,995	0	0	1,660,678	0	2,505,500	446,817	0	0	36.0% AC 54.3% WCMS 9.7% FP
Walnut	41,654	0	0	14,996	0	22,624	4,035	0	0	36.0% AC 54.3% WCMS 9.7% FP
Transmission Mains										
North	$11,463,082	$6,646,295	$0	$0	$0	$4,816,787	$0	$0	$0	58.0% COMM 42.0% WCMS
South	12,519,074	7,258,559	0	0	0	5,260,515	0	0	0	58.0% COMM 42.0% WCMS
Walnut	8,794	5,099	0	0	0	3,695	0	0	0	58.0% COMM 42.0% WCMS
Meter										
North	$1,385,122	$0	$0	$0	$0	$1,385,122	$0	$0	$0	100.0% WCMS
South	0	0	0	0	0	0	0	0	0	100.0% WCMS
Walnut	0	0	0	0	0	0	0	0	0	100.0% WCMS
Other	0	0	0	0	0	0	0	0	0	As T&D Assets Above
Total Transmission & Distribution	$92,258,583	$14,009,901	$0	$22,223,822	$0	$49,781,296	$6,243,565	$0	$0	
Plant Before General Plant	$326,299,657	$149,155,898	$98,895,077	$22,223,822	$0	$49,781,296	$6,243,565	$0	$0	
Percent Plant Before General Plant	*100.0%*	*45.7%*	*30.3%*	*6.8%*	*0.0%*	*15.3%*	*1.9%*	*0.0%*	*0.0%*	*Factor PBG*
General Plant										
Water Admin Equipment	$9,634	$4,404	$2,920	$656	$0	$1,470	$184	$0	$0	As Factor PBG
Equipment in Storage	2,701	1,235	819	184	0	412	52	0	0	As Factor PBG
Equipment in Storage	34,178	15,623	10,359	2,328	0	5,214	654	0	0	As Factor PBG
Water Shop Equipment	746,708	341,330	226,313	50,857	0	113,920	14,288	0	0	As Factor PBG
Total General Plant	$793,221	$362,592	$240,410	$54,025	$0	$121,016	$15,178	$0	$0	
Total Net Plant in Service	**$327,092,878**	**$149,518,490**	**$99,135,487**	**$22,277,847**	**$0**	**$49,902,312**	**$6,258,743**	**$0**	**$0**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 13.2
Direct Assignment of Plant in Service

	Total	#REF!	#REF!	#REF!	#REF!	#REF!	Private Fire	*Notes:*
Source of Supply - Wells								
North	$0	$0	$0	$0	$0	$0	$0	
South	0	0	0	0	0	0	0	
Walnut	0	0	0	0	0	0	0	
Total Source of Supply - Wells	$0	$0	$0	$0	$0	$0	$0	
Treatment								
North	$0	$0	$0	$0	$0	$0	$0	
South	0	0	0	0	0	0	0	
Walnut	0	0	0	0	0	0	0	
Total Treatment	$0	$0	$0	$0	$0	$0	$0	
Pumping								
North	$0	$0	$0	$0	$0	$0	$0	
South	0	0	0	0	0	0	0	
Walnut	0	0	0	0	0	0	0	
Total Pumping	$0	$0	$0	$0	$0	$0	$0	
Transmission & Distribution								
Structures and Improvements								
North	$0	$0	$0	$0	$0	$0	$0	
South	0	0	0	0	0	0	0	
Walnut	0	0	0	0	0	0	0	
Reservoirs and Standpipes								
North	$0	$0	$0	$0	$0	$0	$0	
South	0	0	0	0	0	0	0	
Walnut	0	0	0	0	0	0	0	
Transmission Mains								
North	$0	$0	$0	$0	$0	$0	$0	
South	0	0	0	0	0	0	0	
Walnut	0	0	0	0	0	0	0	
Transmission Mains								
North	$0	$0	$0	$0	$0	$0	$0	
South	0	0	0	0	0	0	0	
Walnut	0	0	0	0	0	0	0	
Meter								
North	$0	$0	$0	$0	$0	$0	$0	
South	0	0	0	0	0	0	0	
Walnut	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
Total Transmission & Distribution	$0	$0	$0	$0	$0	$0	$0	
Plant Before General Plant	$0	$0	$0	$0	$0	$0	$0	
Percent Plant Before General Plant	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	
General Plant								
Equipment in Storage	$0	$0	$0	$0	$0	$0	$0	
Equipment in Storage	0	0	0	0	0	0	0	
Water Shop Equipment	0	0	0	0	0	0	0	
Total General Plant	$0	$0	$0	$0	$0	$0	0	
Total Net Plant in Service	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 14
Distribution Storage

Fire Protection

	hrs	gal/min	Total
Fire Flow Requirements	4	3,500	840,000
Storage Capacity -		15,800,000	15,800,000
% Public Fire Protection			5.3%
% Capacity			94.7%

Source of Supply

Capacity/Commodity			
Average Day	23.40	COMM	58.0%
Peak Day	40.36	(1-COMM)=CAP	42.0%

Distribution Main Analysis

Main Size	Length (ft)	Replcmt $	Total
1"	312	$35.00	$10,905
2"	9,892	35.00	$346,219
3"	3,134	35.00	109,701
4"	117,287	70.85	8,309,751
5"	22	70.85	1,535
6"	433,942	70.85	30,744,815
8"	1,529,504	92.90	142,090,893
10"	107,138	88.56	9,488,122
11"	14	100.00	1,351
12"	724,511	124.60	90,274,064
14"	2,706	123.98	335,549
16"	172,110	148.64	25,582,442
18"	45,209	173.64	7,850,083
20"	370	198.64	73,478
21"	14,760	223.64	3,300,851
22"	114	248.64	28,457
24"	88,368	273.64	24,181,148
30"	79,748	298.64	23,816,067
36"	4,184	323.64	1,354,032
42"	46,941	348.64	16,365,530
48"	34,279	373.64	12,808,058
60"	287	398.64	114,592
Total 1" - 14"	**2,928,461**		**$281,712,906**

Customer%		Adjusted
(1) Total @ 2" Equiv	$102,496,129	
/Total Cost	36.0%	36.0%
Capacity		
(2) Cost for 1-10"	$191,101,942	
(3) Equiv 10" - 16"	$64,403,571	
1+2-3/4	54.3%	54.3%
Fire Protection		
1-comm-cap	9.7%	9.7%

City of Stockton MUD
Water Cost of Service Study
Exhibit 15.1
Classification of the Revenue Requirement

Acct. #		FY 2017	Commodity (COM)	Capacity (CAP)	Customer Related: Actual Customer (AC)	Customer Related Weighted for: Cust. Acctg. (WCA)	Customer Related Weighted for: Meters & Services (WCMS)	Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Classification
	Administrative & General										
	Employee Services										
10-10	Salaries - Regular	$284,677	$135,179	$123,674	$2,497	$13,163	$5,592	$4,572	$0	$0	*As O&M Below*
10-13	Regular Overtime	2,800	1,330	1,216	25	129	55	45	0	0	*As O&M Below*
10-20	Employee Separation Pay	1,274	605	553	11	59	25	20	0	0	*As O&M Below*
10-21	Additional Pay	1,512	718	657	13	70	30	24	0	0	*As O&M Below*
10-25	Retirement	63,044	29,936	27,389	553	2,915	1,238	1,012	0	0	*As O&M Below*
10-27	Medicare	3,729	1,771	1,620	33	172	73	60	0	0	*As O&M Below*
10-29	Health/Dental/Vision	39,358	18,689	17,099	345	1,820	773	632	0	0	*As O&M Below*
10-31	L/T Disability Insurance	1,524	724	662	13	70	30	24	0	0	*As O&M Below*
10-32	Life Insurance	285	135	124	2	13	6	5	0	0	*As O&M Below*
10-33	Workers Compensation	14,055	6,674	6,106	123	650	276	226	0	0	*As O&M Below*
10-34	Unemployment Insurance	349	166	152	3	16	7	6	0	0	*As O&M Below*
10-45	Cell Phone Allowance	2,670	1,268	1,160	23	123	52	43	0	0	*As O&M Below*
10-46	Retirement Pension Bond	11,232	5,334	4,880	99	519	221	180	0	0	*As O&M Below*
	Total Employee Services	$426,509	$202,528	$185,292	$3,741	$19,721	$8,379	$6,850	$0	$0	
	Other Services										
20-15	Telephone	$100	$47	$43	$1	$5	$2	$2	$0	$0	*As O&M Below*
20-25	Maint. & Repair Services	2,400	1,140	1,043	21	111	47	39	0	0	*As O&M Below*
20-37	Insurance Premiums	12,080	5,736	5,248	106	559	237	194	0	0	*As O&M Below*
20-43	Computer/Tech/Oper Supprt	22,066	10,478	9,586	194	1,020	433	354	0	0	*As O&M Below*
20-45	Other Rentals	69,451	32,979	30,172	609	3,211	1,364	1,115	0	0	*As O&M Below*
20-47	Telephone Rental	16,786	7,971	7,292	147	776	330	270	0	0	*As O&M Below*
20-52	Publicity & Advertising	1,000	475	434	9	46	20	16	0	0	*As O&M Below*
20-53	Printing & Mapping	2,500	1,187	1,086	22	116	49	40	0	0	*As O&M Below*
20-54	Postage/Mailing Services	10,500	4,986	4,562	92	485	206	169	0	0	*As O&M Below*
20-57	Processing Fees	10,500	4,986	4,562	92	485	206	169	0	0	*As O&M Below*
20-58	Legal Services	312,656	148,465	135,830	2,742	14,456	6,142	5,021	0	0	*As O&M Below*
20-64	Training Services	500	237	217	4	23	10	8	0	0	*As O&M Below*
20-65	Prof & Special Services	32,000	15,195	13,902	281	1,480	629	514	0	0	*As O&M Below*
20-66	Other Services	2,400	1,140	1,043	21	111	47	39	0	0	*As O&M Below*
	Total Other Services	$494,939	$235,022	$215,020	$4,341	$22,885	$9,723	$7,949	$0	$0	

City of Stockton MUD
Water Cost of Service Study
Exhibit 15.1
Classification of the Revenue Requirement

Acct. #		FY 2017	Commodity (COM)	Capacity (CAP)	Customer Related: Actual Customer (AC)	Customer Related Weighted for: Cust. Acctg. (WCA)	Customer Related Weighted for: Meters & Services (WCMS)	Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Classification
	Materials and Supplies										
30-50	Materials & Supplies	$5,000	$2,374	$2,172	$44	$231	$98	$80	$0	$0	*As O&M Below*
30-51	Computer Software	500	237	217	4	23	10	8	0	0	*As O&M Below*
30-52	Subscriptions - Periodicals	350	166	152	3	16	7	6	0	0	*As O&M Below*
30-55	Library Materials	1,000	475	434	9	46	20	16	0	0	*As O&M Below*
	Total Materials and Supplies	$6,850	$3,253	$2,976	$60	$317	$135	$110	$0	$0	
	Other Expenses										
40-10	Training	$10,000	$4,749	$4,344	$88	$462	$196	$161	$0	$0	*As O&M Below*
40-12	Meetings & Travel	5,000	2,374	2,172	44	231	98	80	0	0	*As O&M Below*
40-14	Memberships	28,550	13,557	12,403	250	1,320	561	459	0	0	*As O&M Below*
40-22	Taxes	3,000	1,425	1,303	26	139	59	48	0	0	*As O&M Below*
40-25	Indirect Cost Allocation	294,703	139,940	128,030	2,585	13,626	5,789	4,733	0	0	*As O&M Below*
	Total Other Expenses	$341,253	$162,044	$148,253	$2,993	$15,779	$6,704	$5,480	$0	$0	
	Total Administrative & General	**$1,269,551**	**$602,847**	**$551,541**	**$11,134**	**$58,700**	**$24,940**	**$20,389**	**$0**	**$0**	
	Operations and Maintenance										
	Employee Services										
10-10	Salaries - Regular	$1,595,702	$729,417	$483,626	$108,681	$0	$243,445	$30,533	$0	$0	*As Plant in Service*
10-13	Regular Overtime	77,310	35,339	23,431	5,265	0	11,795	1,479	0	0	*As Plant in Service*
10-17	Stand By Time (Call Back)	15,000	6,857	4,546	1,022	0	2,288	287	0	0	*As Plant in Service*
10-20	Separation Pay	7,249	3,314	2,197	494	0	1,106	139	0	0	*As Plant in Service*
10-21	Additional Pay	36,239	16,565	10,983	2,468	0	5,529	693	0	0	*As Plant in Service*
10-25	Retirement	353,409	161,548	107,111	24,070	0	53,917	6,762	0	0	*As Plant in Service*
10-26	Deferred Compensation	70,702	32,319	21,428	4,815	0	10,787	1,353	0	0	*As Plant in Service*
10-27	Medicare	21,957	10,037	6,655	1,495	0	3,350	420	0	0	*As Plant in Service*
10-29	Health/Dental/Vision	337,586	154,315	102,316	22,993	0	51,503	6,460	0	0	*As Plant in Service*
10-31	L-T Disability Insurance	8,134	3,718	2,465	554	0	1,241	156	0	0	*As Plant in Service*
10-32	Life Insurance	2,619	1,197	794	178	0	400	50	0	0	*As Plant in Service*
10-33	Workers' Compensation	188,377	86,110	57,093	12,830	0	28,739	3,604	0	0	*As Plant in Service*
10-34	Unemployment Insurance	2,058	941	624	140	0	314	39	0	0	*As Plant in Service*
10-45	Cell Phone Allowance	843	385	255	57	0	129	16	0	0	*As Plant in Service*
10-46	Retirement Pension Bond	64,751	29,599	19,625	4,410	0	9,879	1,239	0	0	*As Plant in Service*
	Total Employee Services	$2,781,936	$1,271,660	$843,151	$189,474	$0	$424,421	$53,231	$0	$0	

City of Stockton MUD
Water Cost of Service Study
Exhibit 15.1
Classification of the Revenue Requirement

Acct. #		FY 2017	Commodity (COM)	Capacity (CAP)	Customer Related: Actual Customer (AC)	Customer Related Weighted for: Cust. Acctg. (WCA)	Customer Related Weighted for: Meters & Services (WCMS)	Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Classification
	Other Services & Charges										
20-11	Electricity	$12,000	$5,485	$3,637	$817	$0	$1,831	$230	$0	$0	*As Plant in Service*
20-12	Gas	3,000	1,371	909	204	0	458	57	0	0	*As Plant in Service*
20-13	Sanitary Sewer	600	274	182	41	0	92	11	0	0	*As Plant in Service*
20-14	Water	2,400	1,097	727	163	0	366	46	0	0	*As Plant in Service*
20-15	Telephone	26,000	11,885	7,880	1,771	0	3,967	497	0	0	*As Plant in Service*
20-17	Storm Water	2,700	1,234	818	184	0	412	52	0	0	*As Plant in Service*
20-25	Maint. & Repair Services	103,300	47,220	31,308	7,036	0	15,760	1,977	0	0	*As Plant in Service*
20-27	Uniform/Laundry Services	10,000	4,571	3,031	681	0	1,526	191	0	0	*As Plant in Service*
20-34	Duplication/Copy Costs	750	343	227	51	0	114	14	0	0	*As Plant in Service*
20-37	Insurance Premiums	71,383	32,630	21,635	4,862	0	10,890	1,366	0	0	*As Plant in Service*
20-41	Automotive Equip Rental	132,822	60,715	40,256	9,046	0	20,264	2,541	0	0	*As Plant in Service*
20-43	Computer/Tech/Oper Supprt	71,943	32,886	21,805	4,900	0	10,976	1,377	0	0	*As Plant in Service*
20-44	Radio Equipment Rental	4,492	2,053	1,361	306	0	685	86	0	0	*As Plant in Service*
20-47	Telephone Rental	10,072	4,604	3,053	686	0	1,537	193	0	0	*As Plant in Service*
20-52	Publicity & Advertising	1,000	457	303	68	0	153	19	0	0	*As Plant in Service*
20-54	Postage/Mailing Services	1,500	686	455	102	0	229	29	0	0	*As Plant in Service*
20-57	Processing Fees	75,916	34,702	23,009	5,171	0	11,582	1,453	0	0	*As Plant in Service*
20-63	Testing & Analysis Servcs	5,000	2,286	1,515	341	0	763	96	0	0	*As Plant in Service*
20-66	Other Services	162,800	74,418	49,342	11,088	0	24,837	3,115	0	0	*As Plant in Service*
	Total Other Services & Charges	$697,678	$318,918	$211,453	$47,518	$0	$106,440	$13,350	$0	$0	
	Materials and Supplies										
30-50	Materials & Supplies	$185,000	$84,566	$56,070	$12,600	$0	$28,224	$3,540	$0	$0	*As Plant in Service*
30-51	Computer Software	8,000	3,657	2,425	545	0	1,221	153	0	0	*As Plant in Service*
30-52	Subscription-Periodical	500	229	152	34	0	76	10	0	0	*As Plant in Service*
30-53	Fuel - Gas/Oil/Propane	62,463	28,553	18,931	4,254	0	9,530	1,195	0	0	*As Plant in Service*
30-55	Library Materials	1,000	457	303	68	0	153	19	0	0	*As Plant in Service*
	Total Materials and Supplies	$256,963	$117,461	$77,880	$17,501	$0	$39,203	$4,917	$0	$0	
	Other Expenses										
40-10	Training	$5,000	$2,286	$1,515	$341	$0	$763	$96	$0	$0	*As Plant in Service*
40-12	Meetings & Travel	5,000	2,286	1,515	341	0	763	96	0	0	*As Plant in Service*
40-14	Memberships	3,000	1,371	909	204	0	458	57	0	0	*As Plant in Service*
40-22	Taxes	3,000	1,371	909	204	0	458	57	0	0	*As Plant in Service*
40-25	Indirect Cost Allocation	383,822	175,450	116,329	26,142	0	58,557	7,344	0	0	*As Plant in Service*
40-68	Retirement Expense	185,000	84,566	56,070	12,600	0	28,224	3,540	0	0	*As Plant in Service*
	Total Other Expenses	$584,822	$267,330	$177,248	$39,831	$0	$89,222	$11,190	$0	$0	
	Total Operations and Maintenance	**$4,321,399**	**$1,975,369**	**$1,309,732**	**$294,325**	**$0**	**$659,286**	**$82,688**	**$0**	**$0**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 15.1
Classification of the Revenue Requirement

Acct. #		FY 2017	Commodity (COM)	Capacity (CAP)	Customer Related: Actual Customer (AC)	Customer Related Weighted for: Cust. Acctg. (WCA)	Customer Related Weighted for: Meters & Services (WCMS)	Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Classification
	Utility Billing										
10-97	Employee Services Summary	$439,744	$0	$0	$0	$439,744	$0	$0	$0	$0	100% WCA
20-97	Other Services Summary	396,750	0	0	0	396,750	0	0	0	0	100% WCA
30-97	Materials & Supplies Summary	9,903	0	0	0	9,903	0	0	0	0	100% WCA
40-97	Other Expenses Summary	68,129	0	0	0	68,129	0	0	0	0	100% WCA
	Total Utility Billing	$914,526	$0	$0	$0	$914,526	$0	$0	$0	$0	
	Total Utility Billing	**$914,526**	**$0**	**$0**	**$0**	**$914,526**	**$0**	**$0**	**$0**	**$0**	
	Other Support Services										
	Employee Services										
10-10	Salaries - Regular	$282,698	$129,225	$85,680	$19,254	$0	$43,129	$5,409	$0	$0	*As Plant in Service*
10-13	Regular Overtime	2,500	1,143	758	170	0	381	48	0	0	*As Plant in Service*
10-20	Employee Separation Pay	1,267	579	384	86	0	193	24	0	0	*As Plant in Service*
10-21	Additional Pay	488	223	148	33	0	74	9	0	0	*As Plant in Service*
10-25	Retirement	62,439	28,542	18,924	4,253	0	9,526	1,195	0	0	*As Plant in Service*
10-26	Deferred Compensation	1,958	895	593	133	0	299	37	0	0	*As Plant in Service*
10-27	Medicare	3,658	1,672	1,109	249	0	558	70	0	0	*As Plant in Service*
10-29	Health/Dental/Vision	38,723	17,701	11,736	2,637	0	5,908	741	0	0	*As Plant in Service*
10-31	L/T Disability Insurance	1,515	693	459	103	0	231	29	0	0	*As Plant in Service*
10-32	Life Insurance	286	131	87	19	0	44	5	0	0	*As Plant in Service*
10-33	Workers Compensation	9,827	4,492	2,978	669	0	1,499	188	0	0	*As Plant in Service*
10-34	Unemployment Insurance	341	156	103	23	0	52	7	0	0	*As Plant in Service*
10-45	Cell Phone Allowance	672	307	204	46	0	103	13	0	0	*As Plant in Service*
10-46	Retirement Pension Bond	11,123	5,084	3,371	758	0	1,697	213	0	0	*As Plant in Service*
	Total Employee Services	$417,495	$190,842	$126,535	$28,435	$0	$63,694	$7,989	$0	$0	
	Other Services										
20-15	Telephone	$0	$0	$0	$0	$0	$0	$0	$0	$0	*As Plant in Service*
20-37	Insurance Premiums	11,826	5,406	3,584	805	0	1,804	226	0	0	*As Plant in Service*
20-65	Prof & Special Services	7,200	3,291	2,182	490	0	1,098	138	0	0	*As Plant in Service*
	Total Other Services	$19,026	$8,697	$5,766	$1,296	$0	$2,903	$364	$0	$0	
	Materials and Supplies										
30-50	Materials and Supplies	$0	$0	$0	$0	$0	$0	$0	$0	$0	*As Plant in Service*
	Total Materials and Supplies	$0	$0	$0	$0	$0	$0	$0	$0	$0	

City of Stockton MUD
Water Cost of Service Study
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Classification of the Revenue Requirement

Acct. #		FY 2017	Commodity (COM)	Capacity (CAP)	Customer Related: Actual Customer (AC)	Customer Related Weighted for: Cust. Acctg. (WCA)	Customer Related Weighted for: Meters & Services (WCMS)	Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Classification
	Water Conservation										
	Employee Services										
10-10	Salaries - Regular	$65,144	$0	$65,144	$0	$0	$0	$0	$0	$0	100% CAP
10-13	Regular Overtime	630	0	630	0	0	0	0	0	0	100% CAP
10-20	Employee Separation Pay	292	0	292	0	0	0	0	0	0	100% CAP
10-21	Additional Pay	168	0	168	0	0	0	0	0	0	100% CAP
10-25	Retirement	14,398	0	14,398	0	0	0	0	0	0	100% CAP
10-27	Medicare	863	0	863	0	0	0	0	0	0	100% CAP
10-29	Health/Dental/Vision	8,887	0	8,887	0	0	0	0	0	0	100% CAP
10-31	L/T Disability Insurance	349	0	349	0	0	0	0	0	0	100% CAP
10-32	Life Insurance	67	0	67	0	0	0	0	0	0	100% CAP
10-33	Workers Compensation	2,677	0	2,677	0	0	0	0	0	0	100% CAP
10-34	Unemployment Insurance	80	0	80	0	0	0	0	0	0	100% CAP
10-45	Cell Phone Allowance	330	0	330	0	0	0	0	0	0	100% CAP
10-46	Retirement Pension Bond	2,565	0	2,565	0	0	0	0	0	0	100% CAP
	Total Employee Services	$96,450	$0	$96,450	$0	$0	$0	$0	$0	$0	
	Other Services										
20-15	Telephone	$1,000	$0	$1,000	$0	$0	$0	$0	$0	$0	100% CAP
20-37	Insurance Premiums	2,753	0	2,753	0	0	0	0	0	0	100% CAP
20-47	Telephone Rental	1,119	0	1,119	0	0	0	0	0	0	100% CAP
20-51	Community/Program	155,000	0	155,000	0	0	0	0	0	0	100% CAP
20-52	Publicity & Advertising	5,000	0	5,000	0	0	0	0	0	0	100% CAP
20-53	Printing & Mapping	1,000	0	1,000	0	0	0	0	0	0	100% CAP
20-54	Postage/Mailing Services	3,000	0	3,000	0	0	0	0	0	0	100% CAP
20-57	Processing Fees	500	0	500	0	0	0	0	0	0	100% CAP
20-65	Prof & Special Services	30,000	0	30,000	0	0	0	0	0	0	100% CAP
	Total Other Services	$199,372	$0	$199,372	$0	$0	$0	$0	$0	$0	
	Materials and Supplies										
30-50	Materials & Supplies	$2,000	$0	$2,000	$0	$0	$0	$0	$0	$0	100% CAP
30-55	Library Materials	500	0	500	0	0	0	0	0	0	100% CAP
	Total Materials and Supplies	$2,500	$0	$2,500	$0	$0	$0	$0	$0	$0	

City of Stockton MUD
Water Cost of Service Study
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	Other Expenses										
40-10	Training	$1,000	$0	$1,000	$0	$0	$0	$0	$0	$0	100% CAP
40-14	Memberships	5,000	0	5,000	0	0	0	0	0	0	100% CAP
	Total Other Expenses	$6,000	$0	$6,000	$0	$0	$0	$0	$0	$0	
	Total Water Conservation	**$304,322**	**$0**	**$304,322**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
	Water Purchase										
	Materials and Supplies										
30-56	Merchandise For Resale	$7,628,341	$4,422,827	$3,205,514	$0	$0	$0	$0	$0	$0	58.0% COM 42.0% CAP
	Total Materials and Supplies	$7,628,341	$4,422,827	$3,205,514	$0	$0	$0	$0	$0	$0	
	Other Expenses										
40-22	Groundwater Pumping Tax	$2,309,860	$1,339,231	$970,629	$0	$0	$0	$0	$0	$0	58.0% COM 42.0% CAP
	Total Other Expenses	$2,309,860	$1,339,231	$970,629	$0	$0	$0	$0	$0	$0	
	Total Water Purchase	**$9,938,201**	**$5,762,059**	**$4,176,142**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
	Hydrant Maintenance										
	Employee Services										
10-10	Salaries - Regular	$107,348	$0	$0	$0	$0	$0	$107,348	$0	$0	100% FP
10-13	Regular Overtime	4,900	0	0	0	0	0	4,900	0	0	100% FP
10-20	Separation Pay	475	0	0	0	0	0	475	0	0	100% FP
10-21	Additional Pay	819	0	0	0	0	0	819	0	0	100% FP
10-25	Retirement	19,775	0	0	0	0	0	19,775	0	0	100% FP
10-26	Deferred Compensation	5,387	0	0	0	0	0	5,387	0	0	100% FP
10-27	Medicare	1,347	0	0	0	0	0	1,347	0	0	100% FP
10-29	Health/Dental/Vision	25,392	0	0	0	0	0	25,392	0	0	100% FP
10-31	L-T Disability Insurance	568	0	0	0	0	0	568	0	0	100% FP
10-32	Life Insurance	198	0	0	0	0	0	198	0	0	100% FP
10-33	Workers' Compensation	12,715	0	0	0	0	0	12,715	0	0	100% FP
10-34	Unemployment Insurance	134	0	0	0	0	0	134	0	0	100% FP
10-46	Retirement Pension Bond	3,523	0	0	0	0	0	3,523	0	0	100% FP
	Total Employee Services	$182,581	$0	$0	$0	$0	$0	$182,581	$0	$0	

City of Stockton MUD
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	Other Services										
20-11	Electricity	$3,000	$0	$0	$0	$0	$0	$3,000	$0	$0	100% FP
20-13	Sanitary Sewer	500	0	0	0	0	0	500	0	0	100% FP
20-14	Water	700	0	0	0	0	0	700	0	0	100% FP
20-17	Storm Water	200	0	0	0	0	0	200	0	0	100% FP
20-25	Maint. & Repair Services	20,000	0	0	0	0	0	20,000	0	0	100% FP
20-34	Duplication/Copy Costs	100	0	0	0	0	0	100	0	0	100% FP
20-37	Insurance Premiums	4,673	0	0	0	0	0	4,673	0	0	100% FP
20-41	Automotive Equip Rental	15,986	0	0	0	0	0	15,986	0	0	100% FP
20-43	Computer/Tech/Oper Supprt	6,078	0	0	0	0	0	6,078	0	0	100% FP
20-44	Radio Equipment Rental	449	0	0	0	0	0	449	0	0	100% FP
20-57	Processing Fees	2,000	0	0	0	0	0	2,000	0	0	100% FP
20-66	Other Services	7,000	0	0	0	0	0	7,000	0	0	100% FP
	Total Other Services	$60,686	$0	$0	$0	$0	$0	$60,686	$0	$0	
	Materials and Supplies										
30-50	Materials & Supplies	$20,000	$0	$0	$0	$0	$0	$20,000	$0	$0	100% FP
30-53	Fuels - Gas/Oil/Propane	5,649	0	0	0	0	0	5,649	0	0	100% FP
	Total Materials and Supplies	$25,649	$0	$0	$0	$0	$0	$25,649	$0	$0	
	Other Expenses										
40-12	Meetings/Travel	$0	$0	$0	$0	$0	$0	$0	$0	$0	100% FP
	Total Other Expenses	$0	$0	$0	$0	$0	$0	$0	$0	$0	
	Total Hydrant Maintenance	**$268,916**	**$0**	**$0**	**$0**	**$0**	**$0**	**$268,916**	**$0**	**$0**	
	Delta Water Production										
	Employee Services										
10-10	Salaries - Regular	$984,392	$570,750	$413,642	$0	$0	$0	$0	$0	$0	As Treatment North
10-13	Regular Overtime	200,556	116,282	84,274	0	0	0	0	0	0	As Treatment North
10-20	Separation Pay	4,316	2,502	1,814	0	0	0	0	0	0	As Treatment North
10-21	Additional Pay	1,503	871	632	0	0	0	0	0	0	As Treatment North
10-25	Retirement	212,812	123,388	89,424	0	0	0	0	0	0	As Treatment North
10-26	Deferred Compensation	38,521	22,334	16,187	0	0	0	0	0	0	As Treatment North
10-27	Medicare	15,182	8,803	6,379	0	0	0	0	0	0	As Treatment North
10-29	Health/Dental/Vision	167,587	97,167	70,420	0	0	0	0	0	0	As Treatment North
10-31	L-T Disability Insurance	5,160	2,992	2,168	0	0	0	0	0	0	As Treatment North
10-32	Life Insurance	1,264	733	531	0	0	0	0	0	0	As Treatment North
10-33	Workers' Compensation	127,766	74,079	53,687	0	0	0	0	0	0	As Treatment North
10-34	Unemployment Insurance	1,419	823	596	0	0	0	0	0	0	As Treatment North
10-46	Retirement Pension Bond	37,913	21,982	15,931	0	0	0	0	0	0	As Treatment North
	Total Employee Services	$1,798,391	$1,042,707	$755,684	$0	$0	$0	$0	$0	$0	

City of Stockton MUD
Water Cost of Service Study
Exhibit 15.1
Classification of the Revenue Requirement

Acct. #		FY 2017	Commodity (COM)	Capacity (CAP)	Customer Related: Actual Customer (AC)	Customer Related: Weighted for: Cust. Acctg. (WCA)	Customer Related: Weighted for: Meters & Services (WCMS)	Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Classification
	Other Services										
20-11	Electricity	$1,266,000	$734,027	$531,973	$0	$0	$0	$0	$0	$0	As Treatment North
20-15	Telephone	16,000	9,277	6,723	0	0	0	0	0	0	As Treatment North
20-24	Prof/Spec Svcs-Consultant	33,000	19,133	13,867	0	0	0	0	0	0	As Treatment North
20-34	Duplication/Copy Costs	250	145	105	0	0	0	0	0	0	As Treatment North
20-37	Insurance Premiums	49,235	28,546	20,689	0	0	0	0	0	0	As Treatment North
20-41	Automotive Equip Rental	20,784	12,051	8,733	0	0	0	0	0	0	As Treatment North
20-43	Computer/Tech/Oper Supprt	55,496	32,177	23,319	0	0	0	0	0	0	As Treatment North
20-44	Radio Equipment Rental	2,695	1,563	1,132	0	0	0	0	0	0	As Treatment North
20-47	Telephone Rental	13,429	7,786	5,643	0	0	0	0	0	0	As Treatment North
20-52	Publicity & Advertising	500	290	210	0	0	0	0	0	0	As Treatment North
20-53	Printing & Mapping	500	290	210	0	0	0	0	0	0	As Treatment North
20-54	Postage/Mailing Services	500	290	210	0	0	0	0	0	0	As Treatment North
20-57	Processing Fees	60,000	34,788	25,212	0	0	0	0	0	0	As Treatment North
20-63	Testing & Analysis Servcs	1,000	580	420	0	0	0	0	0	0	As Treatment North
20-64	Training Services	34,300	19,887	14,413	0	0	0	0	0	0	As Treatment North
20-65	Prof & Special Services	75,000	43,485	31,515	0	0	0	0	0	0	As Treatment North
20-66	Other Services	244,800	141,935	102,865	0	0	0	0	0	0	As Treatment North
	Total Other Services	$1,873,489	$1,086,249	$787,240	$0	$0	$0	$0	$0	$0	
	Materials and Supplies										
30-50	Materials And Supplies	$72,000	$41,746	$30,254	$0	$0	$0	$0	$0	$0	As Treatment North
30-52	Subscription-Periodical	500	290	210	0	0	0	0	0	0	As Treatment North
30-53	Fuels-Gas/Oil/Propane	8,475	4,914	3,561	0	0	0	0	0	0	As Treatment North
30-54	Chemicals	388,524	225,266	163,258	0	0	0	0	0	0	As Treatment North
30-55	Library Materials	1,500	870	630	0	0	0	0	0	0	As Treatment North
	Total Materials and Supplies	$470,999	$273,085	$197,914	$0	$0	$0	$0	$0	$0	
	Other Expenses										
40-10	Training	$10,000	$5,798	$4,202	$0	$0	$0	$0	$0	$0	As Treatment North
40-12	Meetings & Travel	2,500	1,450	1,051	0	0	0	0	0	0	As Treatment North
40-14	Memberships	2,500	1,450	1,051	0	0	0	0	0	0	As Treatment North
40-22	Taxes	95,000	55,081	39,919	0	0	0	0	0	0	As Treatment North
	Total Other Expenses	$110,000	$63,778	$46,222	$0	$0	$0	$0	$0	$0	
	Total Delta Water Production	**$4,252,879**	**$2,465,819**	**$1,787,060**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 15.1
Classification of the Revenue Requirement

Acct. #		FY 2017	Commodity (COM)	Capacity (CAP)	Customer Related: Actual Customer (AC)	Customer Related Weighted for: Cust. Acctg. (WCA)	Customer Related Weighted for: Meters & Services (WCMS)	Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Classification
	Well Production										
	Employee Services										
10-10	Salaries - Regular	$311,819	$0	$311,819	$0	$0	$0	$0	$0	$0	100% CAP
10-13	Regular Overtime	10,900	0	10,900	0	0	0	0	0	0	100% CAP
10-17	Stand By Time (Call Back)	12,000	0	12,000	0	0	0	0	0	0	100% CAP
10-20	Separation Pay	1,375	0	1,375	0	0	0	0	0	0	100% CAP
10-21	Additional Pay	8,366	0	8,366	0	0	0	0	0	0	100% CAP
10-25	Retirement	69,233	0	69,233	0	0	0	0	0	0	100% CAP
10-26	Deferred Compensation	15,591	0	15,591	0	0	0	0	0	0	100% CAP
10-27	Medicare	4,444	0	4,444	0	0	0	0	0	0	100% CAP
10-29	Health/Dental/Vision	63,480	0	63,480	0	0	0	0	0	0	100% CAP
10-31	L-T Disability Insurance	1,644	0	1,644	0	0	0	0	0	0	100% CAP
10-32	Life Insurance	496	0	496	0	0	0	0	0	0	100% CAP
10-33	Workers' Compensation	38,608	0	38,608	0	0	0	0	0	0	100% CAP
10-34	Unemployment Insurance	410	0	410	0	0	0	0	0	0	100% CAP
10-46	Retirement Pension Bond	12,334	0	12,334	0	0	0	0	0	0	100% CAP
	Total Employee Services	$550,700	$0	$550,700	$0	$0	$0	$0	$0	$0	
	Other Services										
20-11	Electricity	$900,000	$0	$900,000	$0	$0	$0	$0	$0	$0	100% CAP
20-37	Insurance Premiums	14,201	0	14,201	0	0	0	0	0	0	100% CAP
20-43	Computer/Tech/Oper Supprt	18,234	0	18,234	0	0	0	0	0	0	100% CAP
20-44	Radio Equipment Rental	1,348	0	1,348	0	0	0	0	0	0	100% CAP
20-47	Telephone Rental	4,476	0	4,476	0	0	0	0	0	0	100% CAP
20-57	Processing Fees	1,875	0	1,875	0	0	0	0	0	0	100% CAP
20-66	Other Services	10,000	0	10,000	0	0	0	0	0	0	100% CAP
	Total Other Services	$950,134	$0	$950,134	$0	$0	$0	$0	$0	$0	
	Materials and Supplies										
30-50	Materials And Supplies	$25,000	$0	$25,000	$0	$0	$0	$0	$0	$0	100% CAP
30-54	Chemicals	25,000	0	25,000	0	0	0	0	0	0	100% CAP
	Total Materials and Supplies	$50,000	$0	$50,000	$0	$0	$0	$0	$0	$0	
	Other Expenses										
40-10	Training	$2,500	$0	$2,500	$0	$0	$0	$0	$0	$0	100% CAP
	Total Other Expenses	$2,500	$0	$2,500	$0	$0	$0	$0	$0	$0	
	Total Well Production	**$1,553,334**	**$0**	**$1,553,334**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 15.1
Classification of the Revenue Requirement

Acct. #		FY 2017	Commodity (COM)	Capacity (CAP)	Customer Related: Actual Customer (AC)	Customer Related Weighted for: Cust. Acctg. (WCA)	Customer Related Weighted for: Meters & Services (WCMS)	Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Classification
	DWSP Maintenance & Repair										
	Employee Services										
10-10	Salaries - Regular	$0	$0	$0	$0	$0	$0	$0	$0	$0	As Delta Water Production
10-13	Regular Overtime	13,120	7,607	5,513	0	0	0	0	0	0	As Delta Water Production
10-17	Stand By Time (Call Back)	21,000	12,176	8,824	0	0	0	0	0	0	As Delta Water Production
10-27	Medicare	495	287	208	0	0	0	0	0	0	As Delta Water Production
10-33	Workers' Compensation	4,179	2,423	1,756	0	0	0	0	0	0	As Delta Water Production
10-34	Unemployment Insurance	44	26	18	0	0	0	0	0	0	As Delta Water Production
	Total Employee Services	$38,838	$22,518	$16,320	$0	$0	$0	$0	$0	$0	
	Other Services										
20-11	Electricity	$0	$0	$0	$0	$0	$0	$0	$0	$0	As Delta Water Production
20-25	Maint. & Repair Services	232,490	134,798	97,692	0	0	0	0	0	0	As Delta Water Production
20-34	Duplication/Copy Costs	250	145	105	0	0	0	0	0	0	As Delta Water Production
20-37	Insurance Premiums	1,536	891	645	0	0	0	0	0	0	As Delta Water Production
20-52	Publicity & Advertising	500	290	210	0	0	0	0	0	0	As Delta Water Production
20-53	Printing & Mapping	500	290	210	0	0	0	0	0	0	As Delta Water Production
20-54	Postage/Mailing Services	500	290	210	0	0	0	0	0	0	As Delta Water Production
20-65	Prof & Special Services	50,000	28,990	21,010	0	0	0	0	0	0	As Delta Water Production
20-66	Other Services	53,900	31,251	22,649	0	0	0	0	0	0	As Delta Water Production
	Total Other Services	$339,676	$196,944	$142,732	$0	$0	$0	$0	$0	$0	
	Materials and Supplies										
30-50	Materials And Supplies	$101,500	$58,850	$42,650	$0	$0	$0	$0	$0	$0	As Delta Water Production
30-51	Computer Software	500	290	210	0	0	0	0	0	0	As Delta Water Production
30-52	Subscription-Periodical	500	290	210	0	0	0	0	0	0	As Delta Water Production
	Total Materials and Supplies	$102,500	$59,430	$43,071	$0	$0	$0	$0	$0	$0	
	Other Expenses										
40-10	Training	$13,000	$7,537	$5,463	$0	$0	$0	$0	$0	$0	As Delta Water Production
40-12	Meetings & Travel	1,500	870	630	0	0	0	0	0	0	As Delta Water Production
	Total Other Expenses	$14,500	$8,407	$6,093	$0	$0	$0	$0	$0	$0	
	Total DWSP Maintenance & Repair	**$495,514**	**$287,299**	**$208,215**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 15.1
Classification of the Revenue Requirement

Acct. #	FY 2017	Commodity (COM)	Capacity (CAP)	Customer Related: Actual Customer (AC)	Customer Related Weighted for: Cust. Acctg. (WCA)	Customer Related Weighted for: Meters & Services (WCMS)	Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Classification
Summary Account Expenses										
421-4311-572.10-97	$493,546	$225,606	$149,584	$33,615	$0	$75,297	$9,444	$0	$0	*As Plant in Service*
421-4311-572.20-97	225,802	$103,217	$68,436	$15,379	$0	$34,449	$4,321	$0	$0	*As Plant in Service*
421-4311-572.30-97	28,800	$13,165	$8,729	$1,962	$0	$4,394	$551	$0	$0	*As Plant in Service*
421-4311-572.40-97	87,911	40,185	26,644	5,987	0	13,412	1,682	0	0	*As Plant in Service*
421-4312-572.10-97	206,707	94,489	62,649	14,079	0	31,536	3,955	0	0	*As Plant in Service*
421-4312-572.20-97	33,007	15,088	10,004	2,248	0	5,036	632	0	0	*As Plant in Service*
421-4312-572.30-97	5,035	2,302	1,526	343	0	768	96	0	0	*As Plant in Service*
421-4312-572.40-97	6,435	2,942	1,950	438	0	982	123	0	0	*As Plant in Service*
421-4334-571.10-97	155,029	70,866	46,986	10,559	0	23,652	2,966	0	0	*As Plant in Service*
421-4334-571.20-97	89,236	40,791	27,046	6,078	0	13,614	1,707	0	0	*As Plant in Service*
421-4334-571.30-97	52,042	23,789	15,773	3,545	0	7,940	996	0	0	*As Plant in Service*
421-4334-571.40-97	4,292	1,962	1,301	292	0	655	82	0	0	*As Plant in Service*
421-4342-572.10-97	20,799	9,507	6,304	1,417	0	3,173	398	0	0	*As Plant in Service*
421-4342-572.20-97	89,189	40,769	27,031	6,075	0	13,607	1,707	0	0	*As Plant in Service*
421-4342-572.30-97	1,575	720	477	107	0	240	30	0	0	*As Plant in Service*
421-4342-572.40-97	1,920	878	582	131	0	293	37	0	0	*As Plant in Service*
421-4343-572.10-97	21,654	9,898	6,563	1,475	0	3,304	414	0	0	*As Plant in Service*
421-4343-572.20-97	187,116	85,533	56,711	12,744	0	28,547	3,580	0	0	*As Plant in Service*
421-4343-572.30-97	42,034	19,214	12,740	2,863	0	6,413	804	0	0	*As Plant in Service*
421-4343-572.40-97	1,636	748	496	111	0	250	31	0	0	*As Plant in Service*
421-4344-572.10-97	109,935	50,253	33,319	7,488	0	16,772	2,104	0	0	*As Plant in Service*
421-4344-572.20-97	129,829	59,347	39,349	8,842	0	19,807	2,484	0	0	*As Plant in Service*
421-4344-572.30-97	21,920	10,020	6,644	1,493	0	3,344	419	0	0	*As Plant in Service*
421-4344-572.40-97	2,240	1,024	679	153	0	342	43	0	0	*As Plant in Service*
421-4345-572.10-97	30,497	13,941	9,243	2,077	0	4,653	584	0	0	*As Plant in Service*
421-4345-572.20-97	46,587	21,296	14,120	3,173	0	7,107	891	0	0	*As Plant in Service*
421-4345-572.30-97	14,044	6,420	4,256	957	0	2,143	269	0	0	*As Plant in Service*
421-4345-572.40-97	1,526	698	463	104	0	233	29	0	0	*As Plant in Service*
Total Summary Account Expenses	$2,110,343	$964,666	$639,604	$143,733	$0	$321,961	$40,380	$0	$0	
Total Operations & Maintenance	**$25,865,506**	**$12,257,598**	**$10,662,251**	**$478,922**	**$973,226**	**$1,072,784**	**$420,725**	**$0**	**$0**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 15.1
Classification of the Revenue Requirement

Acct. #	FY 2017	Commodity (COM)	Capacity (CAP)	Customer Related: Actual Customer (AC)	Customer Related: Weighted for: Cust. Acctg. (WCA)	Customer Related: Weighted for: Meters & Services (WCMS)	Public Fire Protection (FP)	Revenue Related (RR)	Direct Assign. (DA)	Basis of Classification
Debt Service										
2002 A Revenue Bond	$309,341	$0	$0	$0	$0	$309,341	$0	$0	$0	100% WCMS
2005 A Revenue Bond	1,150,313	0	0	0	0	1,150,313	0	0	0	100% WCMS
2009 A Revenue Bond	0	0	0	0	0	0	0	0	0	100% WCMS
2009 B Revenue Bond	11,928,589	0	0	0	0	11,928,589	0	0	0	100% WCMS
Less BAB Interest Rebate	(3,874,406)	0	0	0	0	(3,874,406)	0	0	0	100% WCMS
2010 A Revenue Bond	3,317,138	0	0	0	0	3,317,138	0	0	0	100% WCMS
Drought Relief Loan	82,679	0	0	0	0	82,679	0	0	0	100% WCMS
New SRF Loans	0	0	0	0	0	0	0	0	0	100% WCMS
New Revenue Bonds	0	0	0	0	0	0	0	0	0	100% WCMS
Total Debt Service	$12,913,653	$0	$0	$0	$0	$12,913,653	$0	$0	$0	
Less Connection Fees	$0	$0	$0	$0	$0	$0	$0	$0	$0	*As Debt Service*
Less DWSP Fees	750,000	0	0	0	0	750,000	0	0	0	*As Debt Service*
Net Debt Service	**$12,163,653**	**$0**	**$0**	**$0**	**$0**	**$12,163,653**	**$0**	**$0**	**$0**	
Rate Funded Capital	**$2,350,000**	$0	$0	$0	$0	$2,350,000	$0	$0	$0	100% WCMS
Change in Working Capital										
To/(From) Operating Cash	$1,131,481	$0	$0	$0	$0	$1,131,481	$0	$0	$0	100% WCMS
To/(From) Capital Reserve	0	0	0	0	0	0	0	0	0	*As Total O&M*
To/(From) Rate Stabilization	0	0	0	0	0	0	0	0	0	*As Total O&M*
Total Change in Working Capital	**$1,131,481**	**$0**	**$0**	**$0**	**$0**	**$1,131,481**	**$0**	**$0**	**$0**	
Total Revenue Requirement	**$41,510,640**	**$12,257,598**	**$10,662,251**	**$478,922**	**$973,226**	**$16,717,918**	**$420,725**	**$0**	**$0**	
Less: Non-Operating Revenues										
Interest	$121,170	$35,780	$31,123	$1,398	$2,841	$48,800	$1,228	$0	$0	As Total Rev Req
Private Fire	169,099	0	0	0	0	0	169,099	0	0	100% FP
Linc Vill Maint	150,792	44,527	38,732	1,740	3,535	60,730	1,528	0	0	As Total Rev Req
Service Penalties	770,390	227,487	197,879	8,888	18,062	310,265	7,808	0	0	As Total Rev Req
Reconnection Admin Fees	299,929	88,565	77,038	3,460	7,032	120,793	3,040	0	0	As Total Rev Req
Repayment of In-Lieu Transfers	0	0	0	0	0	0	0	0	0	As Total Rev Req
Miscellaneous Other Revenues	1,707	504	438	20	40	687	17	0	0	As Total Rev Req
Total Non-Operating Revenues	$1,513,087	$396,864	$345,211	$15,506	$31,510	$541,275	$182,720	$0	$0	
Net Revenue Requirement	**$39,997,554**	**$11,860,734**	**$10,317,040**	**$463,416**	**$941,716**	**$16,176,643**	**$238,005**	**$0**	**$0**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 16
Allocation of Revenue Requirement - COM, CAP, & DA

		Single Family		Multi-Family		Non-Residential		Irrigation		
		Tier 1	*Tier 2*	*Winter*	*Summer*	*Winter*	*Summer*	*Winter*	*Summer*	***Factor***
Commodity	$11,860,734	$5,192,040	$1,830,929	$745,953	$633,473	$1,060,015	$1,153,420	$440,831	$804,073	*COM - W / COM - S*
Capacity	$10,317,040	$4,425,253	$2,245,709	$411,339	$439,082	$621,830	$977,889	$295,690	$900,247	*CAP - W / CAP - S*
Direct Assign.	$0	$0	$0	$0	$0	$0	$0	$0	$0	*Exhibit 15.2*
Net Revenue Requirement	**$22,177,774**	**$9,617,293**	**$4,076,638**	**$1,157,292**	**$1,072,555**	**$1,681,845**	**$2,131,309**	**$736,521**	**$1,704,320**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 17
Allocation of Revenue Requirement

	Total	Single Family	Multi-Family	Non-Residential	Irrigation	*Factor*
Commodity	**$11,860,734**	$7,022,969	$1,379,426.63	$2,213,435	$1,244,904	*From Exhibit 14*
Capacity	**$10,317,040**	$6,670,962	$850,421	$1,599,719	$1,195,938	*From Exhibit 14*
Customer						
Actual Customer	$463,416	$392,646	$48,552	$13,890	$8,328	*(AC)*
Cust. Acctg.	941,716	676,238	241,557	23,922	0	*(WCA)*
Meters & Services	16,176,643	12,363,571	1,804,763	1,313,047	695,262	*(WCMS)*
Total Customer	**$17,581,775**	$13,432,455	$2,094,871	$1,350,859	$703,590	
Public Fire Protection	**$238,005**	$153,568.83	$56,967.82	$27,468	$0	*(FP)*
Revenue Related	**$0**	$0	$0	$0	$0	*(RR)*
Direct Assign.	**$0**	$0	$0	$0	$0	*From Exhibit 14*
Net Revenue Requirement	**$39,997,554**	**$27,279,955**	**$4,381,687**	**$5,191,480**	**$3,144,431**	

City of Stockton MUD
Water Cost of Service Study
Exhibit 18
Summary of Cost of Service

	Total	Single Family	Multi-Family	Non-Residential	Irrigation	*Notes:*
Revenues at Present Rates	$34,282,742	$23,648,740	$3,751,201	$4,410,708	$2,472,093	
Net Revenue Requirement	$39,997,554	$27,279,955	$4,381,687	$5,191,480	$3,144,431	
Bal/Def of Funds	($5,714,812)	($3,631,215)	($630,485)	($780,773)	($672,339)	
Required % Change in Rates	16.7%	15.4%	16.8%	17.7%	27.2%	

City of Stockton MUD
Water Cost of Service Study
Exhibit 19
Summary of Unit Costs

		Single Family		Multi-Family		Non-Residential		Non-Residential	
		Tier 1	*Tier 2*	*Winter*	*Summer*	*Winter*	*Summer*	*Winter*	*Summer*
Consumption Related									
- $/CCF	$1.06	$1.06	$1.06	$1.06	$1.06	$1.06	$1.06	$1.06	$1.06
- $/CCF	0.93	0.91	1.31	0.59	0.74	0.62	0.90	0.71	1.19
RR/FP/DA - $/CCF	0.02	0.02	0.02	0.04	0.04	0.01	0.01	0.00	0.00
	$2.01	$2.00	$2.39	$1.70	$1.85	$1.70	$1.98	$1.78	$2.26
			$0.40		*$0.15*		*$0.28*		*$0.48*
Customer Related									
- $/Eq. Meter/Mo	$0.71	$0.79	$0.79	$0.67	$0.67	$0.26	$0.26	$0.30	$0.30
- $/Eq. Meter/Mo	1.36	1.36	1.36	3.32	3.32	0.45	0.45	0.00	0.00
- $/Eq. Meter/Mo	24.81	24.81	24.81	24.81	24.81	24.81	24.81	24.81	24.81
	$26.89	$26.96	$26.96	$28.80	$28.80	$25.53	$25.53	$25.11	$25.11

Rate Schedule
Single Family Rates
Proposed Rate Alternative

	Present Rates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
		18.5%	*11.0%*	*3.0%*	*3.0%*	*3.0%*
Fixed Charge - $/Month						
5/8"	$18.94	N/A	N/A	N/A	N/A	N/A
3/4"	22.25	N/A	N/A	N/A	N/A	N/A
1"	29.24	N/A	N/A	N/A	N/A	N/A
1" & less	N/A	$28.00	$31.00	$31.95	$32.90	$33.90
1 1/2"	42.17	56.00	62.00	63.90	65.80	67.80
2"	54.49	89.60	99.20	102.24	105.28	108.48
3"	96.36	168.00	186.00	191.70	197.40	203.40
4"	138.53	280.00	310.00	319.50	329.00	339.00
6"	228.20	560.00	620.00	639.00	658.00	678.00
8"	330.87	896.00	992.00	1,022.40	1,052.80	1,084.80
10"	412.91	1,288.00	1,426.00	1,469.70	1,513.40	1,559.40
12"	581.32	1,890.00	2,092.50	2,156.63	2,220.75	2,288.25
Consumption Charge						
All Usage	$1.67	N/A	N/A	N/A	N/A	N/A
0 - 15 Units	N/A	$2.00	$2.23	$2.31	$2.39	$2.47
15 + Units	N/A	2.39	2.66	2.76	2.86	2.95

Note: 1 Unit = 748 gallons

City of Stockton MUD
Water Cost of Service Study
Single Family Rates - 1" & less
Proposed Rate Alternative: Year 1 - FY 2017

Consumption (CCF)	Present Rates	Proposed Rates	Difference $	Difference %
5/8" Meter				
0	$18.94	$28.00	$9.06	47.8%
5	27.29	38.00	10.71	39.2%
10	35.64	48.00	12.36	34.7%
15	43.99	58.00	14.01	31.8%
20	52.34	69.95	17.61	33.6%
3/4" Meter				
0	$22.25	$28.00	$5.75	25.8%
5	30.60	38.00	7.40	24.2%
10	38.95	48.00	9.05	23.2%
15	47.30	58.00	10.70	22.6%
20	55.65	69.95	14.30	25.7%
1" Meter				
0	$29.24	$28.00	($1.24)	-4.2%
5	37.59	38.00	0.41	1.1%
10	45.94	48.00	2.06	4.5%
15	54.29	58.00	3.71	6.8%
20	62.64	69.95	7.31	11.7%

PRESENT RATES

Fixed Charge	$/Acct.
5/8"	$18.94
3/4"	22.25
1"	29.24

Consumption Charge	$/CCF
All Usage	$1.67

PROPOSED RATES

Fixed Charge	$/Acct.
1" & less	$28.00

Consumption Charge	$/CCF
0 - 15 Units	$2.00
15 + Units	2.39

Rate Schedule
Multi-Family Rates
Proposed Rate Alternative

	Present Rates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
		18.5%	*11.0%*	*3.0%*	*3.0%*	*3.0%*
Fixed Charge - $/Month						
5/8"	$18.94	N/A	N/A	N/A	N/A	N/A
3/4"	22.25	N/A	N/A	N/A	N/A	N/A
1"	29.24	N/A	N/A	N/A	N/A	N/A
1" & less	N/A	$28.00	$31.00	$31.95	$32.90	$33.90
1 1/2"	42.17	56.00	62.00	63.90	65.80	67.80
2"	54.49	89.60	99.20	102.24	105.28	108.48
3"	96.36	168.00	186.00	191.70	197.40	203.40
4"	138.53	280.00	310.00	319.50	329.00	339.00
6"	228.20	560.00	620.00	639.00	658.00	678.00
8"	330.87	896.00	992.00	1,022.40	1,052.80	1,084.80
10"	412.91	1,288.00	1,426.00	1,469.70	1,513.40	1,559.40
12"	581.32	1,890.00	2,092.50	2,156.63	2,220.75	2,288.25
Consumption Charge						
All Usage	$1.67	N/A	N/A	N/A	N/A	N/A
Winter (Oct - Apr)	N/A	$1.70	$1.90	$1.97	$2.04	$2.11
Summer (May - Sept)	N/A	1.85	2.07	2.14	2.22	2.30

Note: 1 Unit = 748 gallons

City of Stockton MUD
Water Cost of Service Study
Multi-Family Rates - 1" & less
Proposed Rate Alternative: Year 1 - FY 2017

Consumption (CCF)	Present Rates	Proposed Rates	Difference $	Difference %
Summer				
0	$29.24	$28.00	($1.24)	-4.2%
10	45.94	46.50	0.56	1.2%
20	62.64	65.00	2.36	3.8%
30	79.34	83.50	4.16	5.2%
50	112.74	120.50	7.76	6.9%
75	154.49	166.75	12.26	7.9%
100	196.24	213.00	16.76	8.5%
150	279.74	305.50	25.76	9.2%
Winter				
0	$29.24	$28.00	($1.24)	-4.2%
10	45.94	45.00	(0.94)	-2.0%
20	62.64	62.00	(0.64)	-1.0%
30	79.34	79.00	(0.34)	-0.4%
50	112.74	113.00	0.26	0.2%
75	154.49	155.50	1.01	0.7%
100	196.24	198.00	1.76	0.9%
150	279.74	283.00	3.26	1.2%

PRESENT RATES

Fixed Charge	$/Acct.
1"	$29.24

Consumption Charge	$/CCF
All Usage	$1.67

PROPOSED RATES

Fixed Charge	$/Acct.
1" & less	$28.00

Consumption Charge	$/CCF
Winter (Oct - Apr)	$1.70
Summer (May - Sept)	1.85

Rate Schedule
Non Residential Rates
Proposed Rate Alternative

	Present Rates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
		18.5%	*11.0%*	*3.0%*	*3.0%*	*3.0%*
Fixed Charge - $/Month						
5/8"	$18.94	N/A	N/A	N/A	N/A	N/A
3/4"	22.25	N/A	N/A	N/A	N/A	N/A
1"	29.24	N/A	N/A	N/A	N/A	N/A
1" & less	N/A	$28.00	$31.00	$31.95	$32.90	$33.90
1 1/2"	42.17	56.00	62.00	63.90	65.80	67.80
2"	54.49	89.60	99.20	102.24	105.28	108.48
3"	96.36	168.00	186.00	191.70	197.40	203.40
4"	138.53	280.00	310.00	319.50	329.00	339.00
6"	228.20	560.00	620.00	639.00	658.00	678.00
8"	330.87	896.00	992.00	1,022.40	1,052.80	1,084.80
10"	412.91	1,288.00	1,426.00	1,469.70	1,513.40	1,559.40
12"	581.32	1,890.00	2,092.50	2,156.63	2,220.75	2,288.25
Consumption Charge						
All Usage	$1.67	N/A	N/A	N/A	N/A	N/A
Winter (Oct - Apr)	N/A	$1.70	$1.90	$1.97	$2.04	$2.11
Summer (May - Sept)	N/A	1.98	2.21	2.29	2.38	2.46

Note: 1 Unit = 748 gallons

City of Stockton MUD
Water Cost of Service Study
Non Residential Rates - 2"
Proposed Rate Alternative: Year 1 - FY 2017

Consumption (CCF)	Present Rates	Proposed Rates	Difference $	Difference %
Summer				
50	$137.99	$188.60	$50.61	36.7%
100	221.49	287.60	66.11	29.8%
150	304.99	386.60	81.61	26.8%
250	471.99	584.60	112.61	23.9%
500	889.49	1,079.60	190.11	21.4%
1,000	1,724.49	2,069.60	345.11	20.0%
1,500	2,559.49	3,059.60	500.11	19.5%
2,000	3,394.49	4,049.60	655.11	19.3%
Winter				
50	$137.99	$174.60	$36.61	26.5%
100	221.49	259.60	38.11	17.2%
150	304.99	344.60	39.61	13.0%
250	471.99	514.60	42.61	9.0%
500	889.49	939.60	50.11	5.6%
1,000	1,724.49	1,789.60	65.11	3.8%
1,500	2,559.49	2,639.60	80.11	3.1%
2,000	3,394.49	3,489.60	95.11	2.8%

PRESENT RATES

Fixed Charge	$/Acct.
2"	$54.49

Consumption Charge	$/CCF
All Usage	$1.67

PROPOSED RATES

Fixed Charge	$/Acct.
2"	$89.60

Consumption Charge	$/CCF
Winter (Oct - Apr)	$1.70
Summer (May - Sept)	1.98

Rate Schedule
Irrigation Rates
Proposed Rate Alternative

	Present Rates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
		18.5%	*11.0%*	*3.0%*	*3.0%*	*3.0%*
Fixed Charge - $/Month						
5/8"	$18.94	N/A	N/A	N/A	N/A	N/A
3/4"	22.25	N/A	N/A	N/A	N/A	N/A
1"	29.24	N/A	N/A	N/A	N/A	N/A
1" & less	N/A	$28.00	$31.00	$31.95	$32.90	$33.90
1 1/2"	42.17	56.00	62.00	63.90	65.80	67.80
2"	54.49	89.60	99.20	102.24	105.28	108.48
3"	96.36	168.00	186.00	191.70	197.40	203.40
4"	138.53	280.00	310.00	319.50	329.00	339.00
6"	228.20	560.00	620.00	639.00	658.00	678.00
8"	330.87	896.00	992.00	1,022.40	1,052.80	1,084.80
10"	412.91	1,288.00	1,426.00	1,469.70	1,513.40	1,559.40
12"	581.32	1,890.00	2,092.50	2,156.63	2,220.75	2,288.25
Consumption Charge						
All Usage	$1.67	N/A	N/A	N/A	N/A	N/A
Winter (Oct - Apr)	N/A	$1.78	$1.99	$2.06	$2.13	$2.20
Summer (May - Sept)	N/A	2.26	2.53	2.62	2.70	2.79

Note: 1 Unit = 748 gallons

City of Stockton MUD
Water Cost of Service Study
Irrigation Rates - 2"
Proposed Rate Alternative: Year 1 - FY 2017

Consumption (CCF)	Present Rates	Proposed Rates	Difference $	Difference %
Summer				
0	$54.49	$89.60	$35.11	64.4%
15	79.54	123.50	43.96	55.3%
30	104.59	157.40	52.81	50.5%
45	129.64	191.30	61.66	47.6%
75	179.74	259.10	79.36	44.2%
100	221.49	315.60	94.11	42.5%
150	304.99	428.60	123.61	40.5%
200	388.49	541.60	153.11	39.4%
Winter				
0	$54.49	$89.60	$35.11	64.4%
15	79.54	116.30	36.76	46.2%
30	104.59	143.00	38.41	36.7%
45	129.64	169.70	40.06	30.9%
75	179.74	223.10	43.36	24.1%
100	221.49	267.60	46.11	20.8%
150	304.99	356.60	51.61	16.9%
200	388.49	445.60	57.11	14.7%

PRESENT RATES

Fixed Charge	$/Acct.
2"	$54.49

Consumption Charge	$/CCF
All Usage	$1.67

PROPOSED RATES

Fixed Charge	$/Acct.
2"	$89.60

Consumption Charge	$/CCF
Winter (Oct - Apr)	$1.78
Summer (May - Sept)	2.26

City of Stockton MUD
Water Cost of Service Study
Revenue Check - Proposed Rate Alternative

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Single Family					
Fixed	$13,831,751	$15,446,333	$15,919,688	$16,393,044	$16,891,312
Variable	13,544,281	15,450,674	16,012,825	16,574,976	17,119,928
	$27,376,033	$30,897,007	$31,932,513	$32,968,020	$34,011,241
Multi-Family					
Fixed	$1,997,570	$2,254,766	$2,323,864	$2,392,962	$2,465,696
Variable	2,270,172	2,563,071	2,653,773	2,750,426	2,847,078
	$4,267,742	$4,817,837	$4,977,637	$5,143,387	$5,312,774
Irrigation					
Fixed	$761,424	$868,620	$895,239	$921,858	$949,878
Variable	2,345,163	2,734,929	2,831,892	2,921,301	3,018,264
	$3,106,587	$3,603,549	$3,727,131	$3,843,159	$3,968,142
Non-Residential					
Fixed	$1,476,179	$1,690,666	$1,742,476	$1,794,287	$1,848,825
Variable	3,770,426	4,286,267	4,442,643	4,609,853	4,766,228
	$5,246,605	$5,976,933	$6,185,119	$6,404,140	$6,615,053
Total Revenue	**$39,996,967**	**$45,295,326**	**$46,822,400**	**$48,358,706**	**$49,907,210**
Target Revenue	**39,997,554**	**45,319,274**	**46,912,246**	**48,561,212**	**50,393,183**
Difference +/(-)	*($587)*	*($23,947)*	*($89,846)*	*($202,506)*	*($485,974)*
Percent	*0.0%*	*0.1%*	*0.2%*	*0.4%*	*1.0%*
Growth (cumulative)	*0.0%*	*0.5%*	*1.0%*	*1.5%*	*2.3%*
Fixed Revenue	*$18,066,925*	*$20,260,385*	*$20,881,268*	*$21,502,150*	*$22,155,711*
Variable Revenue	*$21,930,042*	*$25,034,941*	*$25,941,132*	*$26,856,555*	*$27,751,498*
% of Total Revenue					
Fixed	45.2%	44.7%	44.6%	44.5%	44.4%
Variable	54.8%	55.3%	55.4%	55.5%	55.6%

Technical Appendix B – Drought Surcharges

City of Stockton MUD
Water Cost of Service Study
Drought Surcharges

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Targeted Savings	*10.0%*	*20.0%*	*30.0%*	*40.0%*	*50.0%*
Single Family ($/Unit)					
0 - 15 Units	$0.23	$0.53	$0.90	$1.40	$2.10
15 + Units	0.23	0.53	0.90	1.40	2.10
Multi-Family ($/Unit)					
Winter (Oct - Apr)	$0.20	$0.44	$0.76	$1.18	$1.77
Summer (May - Sept)	0.20	0.44	0.76	1.18	1.77
Non Residential ($/Unit)					
Winter (Oct - Apr)	$0.21	$0.46	$0.79	$1.23	$1.85
Summer (May - Sept)	0.21	0.46	0.79	1.23	1.85
Irrigation ($/Unit)					
Winter (Oct - Apr)	$0.23	$0.52	$0.90	$1.39	$2.09
Summer (May - Sept)	0.23	0.52	0.90	1.39	2.09

City of Stockton MUD
Water Cost of Service Study
Drought Rates

	Proposed FY 2017 Rates	**Stage 1**	**Stage 2**	**Stage 3**	**Stage 4**	**Stage 5**
Targeted Savings		*10.0%*	*20.0%*	*30.0%*	*40.0%*	*50.0%*
Single Family	*$/Unit*					
0 - 15 Units	$2.00	$2.23	$2.53	$2.90	$3.40	$4.10
15 + Units	2.39	2.62	2.92	3.29	3.79	4.49
Multi-Family						
Winter (Oct - Apr)	$1.70	$1.90	$2.14	$2.46	$2.88	$3.47
Summer (May - Sept)	1.85	2.05	2.29	2.61	3.03	3.62
Non Residential						
Winter (Oct - Apr)	$1.70	$1.91	$2.16	$2.49	$2.93	$3.55
Summer (May - Sept)	1.98	2.19	2.44	2.77	3.21	3.83
Irrigation						
Winter (Oct - Apr)	$1.78	$2.01	$2.30	$2.68	$3.17	$3.87
Summer (May - Sept)	2.26	2.49	2.78	3.16	3.65	4.35

Total Monthly 1" or less Meter Bill - Proposed Single Family Rates

	Normal Water Conditions	Mandatory Conservation Stage 1	Mandatory Conservation Stage 2	Mandatory Conservation Stage 3	Mandatory Conservation Stage 4	Mandatory Conservation Stage 5
Target Reduction Goal	0%	10%	20%	30%	40%	50%
Residential Customer Using 15 Units						
Assuming No Change in Use (15 Units)	$58.00	$61.45	$65.95	$71.50	$79.00	$89.50
Assuming Reduced Usage -						
Revised Usage - Units	15.0	14.0	12.0	11.0	9.0	8.0
Total Monthly Bill	$58.00	$59.22	$58.36	$59.90	$58.60	$60.80
Residential Customer Using 30 Units						
Assuming No Change in Use (30 Units)	$93.85	$100.75	$109.75	$120.85	$135.85	$156.85
Assuming Reduced Usage -						
Revised Usage - Units	30.0	27.0	24.0	21.0	18.0	15.0
Total Monthly Bill	$93.85	$92.89	$92.23	$91.24	$90.37	$89.50
Residential Customer Using 45 Units						
Assuming No Change in Use (45 Units)	$129.70	$140.05	$153.55	$170.20	$192.70	$224.20
Assuming Reduced Usage -						
Revised Usage - Units	45.0	41.0	36.0	32.0	27.0	23.0
Total Monthly Bill	$129.70	$129.57	$127.27	$127.43	$124.48	$125.42

City of Stockton MUD
Water Cost of Service Study
Drought Surcharge Schedule

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Single Family					
Level 1	$0.23	$0.27	$0.28	$0.29	$0.30
Level 2	0.53	0.60	0.62	0.64	0.66
Level 3	0.90	1.03	1.07	1.11	1.15
Level 4	1.40	1.60	1.66	1.72	1.78
Level 5	2.10	2.40	2.49	2.58	2.66
Multi-Family					
Level 1	$0.20	$0.22	$0.23	$0.24	$0.25
Level 2	0.44	0.50	0.52	0.54	0.56
Level 3	0.76	0.86	0.89	0.92	0.95
Level 4	1.18	1.33	1.38	1.43	1.48
Level 5	1.77	2.00	2.07	2.15	2.23
Non Residential					
Level 1	$0.21	$0.23	$0.24	$0.25	$0.26
Level 2	0.46	0.52	0.54	0.56	0.58
Level 3	0.79	0.90	0.93	0.97	1.00
Level 4	1.23	1.40	1.45	1.50	1.55
Level 5	1.85	2.10	2.18	2.26	2.34
Irrigation					
Level 1	$0.23	$0.26	$0.27	$0.28	$0.29
Level 2	0.52	0.59	0.61	0.63	0.65
Level 3	0.90	1.02	1.06	1.10	1.14
Level 4	1.39	1.58	1.64	1.70	1.76
Level 5	2.09	2.38	2.47	2.56	2.65

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 1 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 1 - Target Conservation (Savings)	10.0%	659,692	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Estimated Savings (CCF)	Volume Savings (CCF)
0 - 15 Units	4,877,066	10.0%	487,707	4,389,359
15 + Units	1,719,856	10.0%	171,986	1,547,871
Total Consumption	6,596,922		659,692	5,937,230
Target Savings			659,692	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates

Revenue	$12,478,129
Balance/(Deficiency)	($1,386,459)
Consumption	5,937,230
Needed Increase per CCF	$0.23
Needed Rev Increase	10.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 1: *% Adjst. to Rates*	Proposed Rate $/CCF	Current Rates	Commodity Revenue
0 - 15 Units	4,389,359	11.5%	$2.23	$2.00	$9,788,271
15 + Units	1,547,871	9.6%	2.62	2.39	4,055,421
Total	5,937,230				$13,843,692
Plus: Targeted Additional Stage 1 Costs (Residential Share)					*$0*
Target - Total Revenue					$13,864,588
$ Difference					($20,896)

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

	STAGE 2 - REQUIRED TOTAL SAVINGS		
	Estimated % Savings	Est. Savings in Total CCF	
Stage 2 - Target Conservation (Savings)	20.0%	1,319,384	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Voluntary Savings Impacts: Estimated Savings (CCF)	Voluntary Savings Impacts: Volume Savings (CCF)
0 - 15 Units	4,877,066	20.0%	975,413	3,901,653
15 + Units	1,719,856	20.0%	343,971	1,375,885
Total Consumption	6,596,922		1,319,384	5,277,538
Target Savings			1,319,384	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates	
Revenue	$11,091,670
Balance/(Deficiency)	($2,772,918)
Consumption	5,277,538
Needed Increase per CCF	$0.53
Needed Rev Increase	20.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 2: *% Adjst. to Rates*	STAGE 2: Proposed Rate $/CCF	STAGE 2: Current Rates	STAGE 2: Commodity Revenue
0 - 15 Units	3,901,653	26.5%	$2.53	$2.00	$9,871,181
15 + Units	1,375,885	22.2%	2.92	2.39	4,017,584
Total	5,277,538				$13,888,765
Plus: Targeted Additional Stage 2 Costs (Residential Share)					*$0*
Target - Total Revenue					$13,864,588
$ Difference					$24,177

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 3 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 3 - Target Conservation (Savings)	30.0%	1,979,077	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Estimated Savings (CCF)	Volume Savings (CCF)
0 - 15 Units	4,877,066	30.0%	1,463,120	3,413,946
15 + Units	1,719,856	30.0%	515,957	1,203,899
Total Consumption	6,596,922		1,979,077	4,617,845
Target Savings			1,979,077	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates	
Revenue	$9,705,212
Balance/(Deficiency)	($4,159,376)
Consumption	4,617,845
Needed Increase per CCF	$0.90
Needed Rev Increase	30.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 3: *% Adjst. to Rates*	Proposed Rate $/CCF	Current Rates	Commodity Revenue
0 - 15 Units	3,413,946	45.0%	$2.90	$2.00	$9,900,443
15 + Units	1,203,899	37.7%	3.29	2.39	3,960,829
Total	4,617,845				$13,861,272
Plus: Targeted Additional Stage 3 Costs (Residential Share)					*$0*
Target - Total Revenue					$13,864,588
$ Difference					($3,316)

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 4 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 4 - Target Conservation (Savings)	40.0%	2,638,769	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Voluntary Savings Impacts: Estimated Savings (CCF)	Voluntary Savings Impacts: Volume Savings (CCF)
0 - 15 Units	4,877,066	40.0%	1,950,826	2,926,239
15 + Units	1,719,856	40.0%	687,943	1,031,914
Total Consumption	6,596,922		2,638,769	3,958,153
Target Savings			2,638,769	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates

Revenue	$8,318,753
Balance/(Deficiency)	($5,545,835)
Consumption	3,958,153
Needed Increase per CCF	$1.40
Needed Rev Increase	40.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 4: *% Adjst. to Rates*	STAGE 4: Proposed Rate $/CCF	STAGE 4: Current Rates	STAGE 4: Commodity Revenue
0 - 15 Units	2,926,239	70.0%	$3.40	$2.00	$9,949,214
15 + Units	1,031,914	58.6%	3.79	2.39	3,910,953
Total	3,958,153				$13,860,167
Plus: Targeted Additional Stage 3 Costs (Residential Share)					*$0*
Target - Total Revenue					$13,864,588
$ Difference					($4,421)

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 5 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 5 - Target Conservation (Savings)	50.0%	3,298,461	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Estimated Savings (CCF)	Volume Savings (CCF)
0 - 15 Units	4,877,066	50.0%	2,438,533	2,438,533
15 + Units	1,719,856	50.0%	859,928	859,928
Total Consumption	6,596,922		3,298,461	3,298,461
Target Savings			3,298,461	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates

Revenue	$6,932,294
Balance/(Deficiency)	($6,932,294)
Consumption	3,298,461
Needed Increase per CCF	$2.10
Needed Rev Increase	50.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 5: *% Adjst. to Rates*	Proposed Rate $/CCF	Current Rates	Commodity Revenue
0 - 15 Units	2,438,533	105.0%	$4.10	$2.00	$9,997,985
15 + Units	859,928	87.9%	4.49	2.39	3,861,077
Total	3,298,461				$13,859,062
Plus: Targeted Additional Stage 3 Costs (Residential Share)					*$0*
Target - Total Revenue					$13,864,588
$ Difference					($5,526)

[1] - Assumes FY 14/15 is normal consumption

Total Monthly 1" or less Meter Bill - Multi-Family WINTER

	Normal Water Conditions	Mandatory Conservation Stage 1	Mandatory Conservation Stage 2	Mandatory Conservation Stage 3	Mandatory Conservation Stage 4	Mandatory Conservation Stage 5
Target Reduction Goal	0%	10%	20%	30%	40%	50%
Non Residential Customer Using 25 CCF						
Assuming No Change in Use (25 CCF)	$70.50	$75.50	$81.50	$89.50	$100.00	$114.75
Assuming Reduced Usage -						
Revised CCF Usage	25.0	23.0	20.0	18.0	15.0	13.0
Total Monthly Bill	$70.50	$71.70	$70.80	$72.28	$71.20	$73.11
Non Residential Customer Using 50 CCF						
Assuming No Change in Use (50 CCF)	$113.00	$123.00	$135.00	$151.00	$172.00	$201.50
Assuming Reduced Usage -						
Revised CCF Usage	50.0	45.0	40.0	35.0	30.0	25.0
Total Monthly Bill	$113.00	$113.50	$113.60	$114.10	$114.40	$114.75
Non Residential Customer Using 75 CCF						
Assuming No Change in Use (75 CCF)	$155.50	$170.50	$188.50	$212.50	$244.00	$288.25
Assuming Reduced Usage -						
Revised CCF Usage	75.0	68.0	60.0	53.0	45.0	38.0
Total Monthly Bill	$155.50	$157.20	$156.40	$158.38	$157.60	$159.86

Total Monthly 1" or less Meter Bill - Multi-Family SUMMER

	Normal Water Conditions	Mandatory Conservation Stage 1	Mandatory Conservation Stage 2	Mandatory Conservation Stage 3	Mandatory Conservation Stage 4	Mandatory Conservation Stage 5
Target Reduction Goal	0%	10%	20%	30%	40%	50%
Non Residential Customer Using 25 CCF						
Assuming No Change in Use (25 CCF)	$74.25	$79.25	$85.25	$93.25	$103.75	$118.50
Assuming Reduced Usage -						
Revised CCF Usage	25.0	23.0	20.0	18.0	15.0	13.0
Total Monthly Bill	$74.25	$75.15	$73.80	$74.98	$73.45	$75.06
Non Residential Customer Using 50 CCF						
Assuming No Change in Use (50 CCF)	$120.50	$130.50	$142.50	$158.50	$179.50	$209.00
Assuming Reduced Usage -						
Revised CCF Usage	50.0	45.0	40.0	35.0	30.0	25.0
Total Monthly Bill	$120.50	$120.25	$119.60	$119.35	$118.90	$118.50
Non Residential Customer Using 75 CCF						
Assuming No Change in Use (75 CCF)	$166.75	$181.75	$199.75	$223.75	$255.25	$299.50
Assuming Reduced Usage -						
Revised CCF Usage	75.0	68.0	60.0	53.0	45.0	38.0
Total Monthly Bill	$166.75	$167.40	$165.40	$166.33	$164.35	$165.56

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 1 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 1 - Target Conservation (Savings)	10.0%	129,574	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Estimated Savings (CCF)	Volume Savings (CCF)
Winter (Oct - Apr)	700,700	10.0%	70,070	630,630
Summer (May - Sept)	595,044	10.0%	59,504	535,539
Total Consumption	1,295,744		129,574	1,166,170
Target Savings			129,574	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates			Usage After Vol. & Rate Impact (CCF)	STAGE 1: *% Adjst. to Rates*	Proposed Rate $/CCF	Current Rates	Commodity Revenue
Revenue	$2,062,819	Winter (Oct - Apr)	630,630	11.8%	$1.90	$1.70	$1,198,198
Balance/(Deficiency)	($229,202)	Summer (May - Sept)	535,539	10.8%	2.05	1.85	1,097,856
Consumption	1,166,170						
Needed Increase per CCF	$0.20	Total	1,166,170				$2,296,053
Needed Rev Increase	10.0%						
		Plus: Targeted Additional Stage 1 Costs (Non Residential Share)					*$0*
		Target - Total Revenue					$2,292,021
		$ Difference					$4,032

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 2 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 2 - Target Conservation (Savings)	20.0%	259,149	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Estimated Savings (CCF)	Volume Savings (CCF)
Winter (Oct - Apr)	700,700	20.0%	140,140	560,560
Summer (May - Sept)	595,044	20.0%	119,009	476,035
Total Consumption	1,295,744		259,149	1,036,595
Target Savings			259,149	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates	
Revenue	$1,833,617
Balance/(Deficiency)	($458,404)
Consumption	1,036,595
Needed Increase per CCF	$0.44
Needed Rev Increase	20.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 2: *% Adjst. to Rates*	Proposed Rate $/CCF	Current Rates	Commodity Revenue
Winter (Oct - Apr)	560,560	25.9%	$2.14	$1.70	$1,199,599
Summer (May - Sept)	476,035	23.8%	2.29	1.85	1,090,120
Total	1,036,595				$2,289,719
Plus: Targeted Additional Stage 2 Costs (Non Residential Share)					*$0*
Target - Total Revenue					$2,292,021
$ Difference					($2,302)

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 3 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 3 - Target Conservation (Savings)	30.0%	388,723	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Estimated Savings (CCF)	Volume Savings (CCF)
Winter (Oct - Apr)	700,700	30.0%	210,210	490,490
Summer (May - Sept)	595,044	30.0%	178,513	416,531
Total Consumption	1,295,744		388,723	907,021
Target Savings			388,723	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates			Usage After Vol. & Rate Impact (CCF)	STAGE 3: *% Adjst. to Rates*	Proposed Rate $/CCF	Current Rates	Commodity Revenue
Revenue	$1,604,415	Winter (Oct - Apr)	490,490	44.7%	$2.46	$1.70	$1,206,606
Balance/(Deficiency)	($687,606)	Summer (May - Sept)	416,531	41.1%	2.61	1.85	1,087,145
Consumption	907,021						
Needed Increase per CCF	$0.76	Total	907,021				$2,293,751
Needed Rev Increase	30.0%						
		Plus: Targeted Additional Stage 3 Costs (Non Residential Share)					*$0*
		Target - Total Revenue					$2,292,021
		$ Difference					$1,729

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 4 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 4 - Target Conservation (Savings)	40.0%	518,298	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Estimated Savings (CCF)	Volume Savings (CCF)
Winter (Oct - Apr)	700,700	40.0%	280,280	420,420
Summer (May - Sept)	595,044	40.0%	238,017	357,026
Total Consumption	1,295,744		518,298	777,446
Target Savings			518,298	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates

Revenue	$1,375,213
Balance/(Deficiency)	($916,809)
Consumption	777,446
Needed Increase per CCF	$1.18
Needed Rev Increase	40.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 4: *% Adjst. to Rates*	Proposed Rate $/CCF	Current Rates	Commodity Revenue
Winter (Oct - Apr)	420,420	69.4%	$2.88	$1.70	$1,210,810
Summer (May - Sept)	357,026	63.8%	3.03	1.85	1,081,789
Total	777,446				$2,292,600
Plus: Targeted Additional Stage 3 Costs (Residential Share)					*$0*
Target - Total Revenue					$2,292,021
$ Difference					$578

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 5 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 5 - Target Conservation (Savings)	50.0%	647,872	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Estimated Savings (CCF)	Volume Savings (CCF)
Winter (Oct - Apr)	700,700	50.0%	350,350	350,350
Summer (May - Sept)	595,044	50.0%	297,522	297,522
Total Consumption	1,295,744		647,872	647,872
Target Savings			647,872	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates

Revenue	$1,146,011
Balance/(Deficiency)	($1,146,011)
Consumption	647,872
Needed Increase per CCF	$1.77
Needed Rev Increase	50.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 5: *% Adjst. to Rates*	Proposed Rate $/CCF	Current Rates	Commodity Revenue
Winter (Oct - Apr)	350,350	104.1%	$3.47	$1.70	$1,215,715
Summer (May - Sept)	297,522	95.7%	3.62	1.85	1,077,029
Total	647,872				$2,292,744
Plus: Targeted Additional Stage 3 Costs (Residential Share)					*$0*
Target - Total Revenue					$2,292,021
$ Difference					$723

[1] - Assumes FY 14/15 is normal consumption

Total Monthly 1" or less Meter Bill - Non Residential WINTER

	Normal Water Conditions	Mandatory Conservation Stage 1	Mandatory Conservation Stage 2	Mandatory Conservation Stage 3	Mandatory Conservation Stage 4	Mandatory Conservation Stage 5
Target Reduction Goal	0%	10%	20%	30%	40%	50%
Non Residential Customer Using 25 CCF						
Assuming No Change in Use (25 CCF)	$70.50	$75.75	$82.00	$90.25	$101.25	$116.75
Assuming Reduced Usage -						
Revised CCF Usage	25.0	23.0	20.0	18.0	15.0	13.0
Total Monthly Bill	$70.50	$71.93	$71.20	$72.82	$71.95	$74.15
Non Residential Customer Using 50 CCF						
Assuming No Change in Use (50 CCF)	$113.00	$123.50	$136.00	$152.50	$174.50	$205.50
Assuming Reduced Usage -						
Revised CCF Usage	50.0	45.0	40.0	35.0	30.0	25.0
Total Monthly Bill	$113.00	$113.95	$114.40	$115.15	$115.90	$116.75
Non Residential Customer Using 75 CCF						
Assuming No Change in Use (75 CCF)	$155.50	$171.25	$190.00	$214.75	$247.75	$294.25
Assuming Reduced Usage -						
Revised CCF Usage	75.0	68.0	60.0	53.0	45.0	38.0
Total Monthly Bill	$155.50	$157.88	$157.60	$159.97	$159.85	$162.90

Total Monthly 1" of less Meter Bill - Non Residential SUMMER

	Normal Water Conditions	Mandatory Conservation Stage 1	Mandatory Conservation Stage 2	Mandatory Conservation Stage 3	Mandatory Conservation Stage 4	Mandatory Conservation Stage 5
Target Reduction Goal	0%	10%	20%	30%	40%	50%
Non Residential Customer Using 25 CCF						
Assuming No Change in Use (25 CCF)	$77.50	$82.75	$89.00	$97.25	$108.25	$123.75
Assuming Reduced Usage -						
Revised CCF Usage	25.0	23.0	20.0	18.0	15.0	13.0
Total Monthly Bill	$77.50	$78.37	$76.80	$77.86	$76.15	$77.79
Non Residential Customer Using 50 CCF						
Assuming No Change in Use (50 CCF)	$127.00	$137.50	$150.00	$166.50	$188.50	$219.50
Assuming Reduced Usage -						
Revised CCF Usage	50.0	45.0	40.0	35.0	30.0	25.0
Total Monthly Bill	$127.00	$126.55	$125.60	$124.95	$124.30	$123.75
Non Residential Customer Using 75 CCF						
Assuming No Change in Use (75 CCF)	$176.50	$192.25	$211.00	$235.75	$268.75	$315.25
Assuming Reduced Usage -						
Revised CCF Usage	75.0	68.0	60.0	53.0	45.0	38.0
Total Monthly Bill	$176.50	$176.92	$174.40	$174.81	$172.45	$173.54

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 1 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 1 - Target Conservation (Savings)	10.0%	207,916	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Estimated Savings (CCF)	Volume Savings (CCF)
Winter (Oct - Apr)	995,709	10.0%	99,571	896,138
Summer (May - Sept)	1,083,448	10.0%	108,345	975,103
Total Consumption	2,079,157		207,916	1,871,241
Target Savings			207,916	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates

Revenue	$3,454,139
Balance/(Deficiency)	($383,793)
Consumption	1,871,241
Needed Increase per CCF	$0.21
Needed Rev Increase	10.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 1: *% Adjst. to Rates*	Proposed Rate $/CCF	Current Rates	Commodity Revenue
Winter (Oct - Apr)	896,138	12.4%	$1.91	$1.70	$1,711,624
Summer (May - Sept)	975,103	10.6%	2.19	1.98	2,135,476
Total	1,871,241				$3,847,100
Plus: Targeted Additional Stage 1 Costs (Non Residential Share)					*$0*
Target - Total Revenue					$3,837,932
$ Difference					$9,167

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 2 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 2 - Target Conservation (Savings)	20.0%	415,831	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Voluntary Savings Impacts: Estimated Savings (CCF)	Voluntary Savings Impacts: Volume Savings (CCF)
Winter (Oct - Apr)	995,709	20.0%	199,142	796,567
Summer (May - Sept)	1,083,448	20.0%	216,690	866,758
Total Consumption	2,079,157		415,831	1,663,326
Target Savings			415,831	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates

Revenue	$3,070,346
Balance/(Deficiency)	($767,586)
Consumption	1,663,326
Needed Increase per CCF	$0.46
Needed Rev Increase	20.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 2: *% Adjst. to Rates*	STAGE 2: Proposed Rate $/CCF	STAGE 2: Current Rates	STAGE 2: Commodity Revenue
Winter (Oct - Apr)	796,567	27.1%	$2.16	$1.70	$1,720,585
Summer (May - Sept)	866,758	23.2%	2.44	1.98	2,114,890
Total	1,663,326				$3,835,476
Plus: Targeted Additional Stage 2 Costs (Non Residential Share)					*$0*
Target - Total Revenue					$3,837,932
$ Difference					($2,457)

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 3 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 3 - Target Conservation (Savings)	30.0%	623,747	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Voluntary Savings Impacts: Estimated Savings (CCF)	Voluntary Savings Impacts: Volume Savings (CCF)
Winter (Oct - Apr)	995,709	30.0%	298,713	696,996
Summer (May - Sept)	1,083,448	30.0%	325,034	758,414
Total Consumption	2,079,157		623,747	1,455,410
Target Savings			623,747	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates			Usage After Vol. & Rate Impact (CCF)	STAGE 3: *% Adjst. to Rates*	STAGE 3: Proposed Rate $/CCF	STAGE 3: Current Rates	STAGE 3: Commodity Revenue
Revenue	$2,686,553	Winter (Oct - Apr)	696,996	46.5%	$2.49	$1.70	$1,735,521
Balance/(Deficiency)	($1,151,380)	Summer (May - Sept)	758,414	39.9%	2.77	1.98	2,100,806
Consumption	1,455,410						
Needed Increase per CCF	$0.79	Total	1,455,410				$3,836,326
Needed Rev Increase	30.0%						
		Plus: Targeted Additional Stage 3 Costs (Non Residential Share)					*$0*
		Target - Total Revenue					$3,837,932
		$ Difference					($1,606)

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 4 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF
Stage 4 - Target Conservation (Savings)	40.0%	831,663 CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Voluntary Savings Impacts: Estimated Savings (CCF)	Voluntary Savings Impacts: Volume Savings (CCF)
Winter (Oct - Apr)	995,709	40.0%	398,284	597,425
Summer (May - Sept)	1,083,448	40.0%	433,379	650,069
Total Consumption	2,079,157		831,663	1,247,494
Target Savings			831,663	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates

Revenue	$2,302,759
Balance/(Deficiency)	($1,535,173)
Consumption	1,247,494
Needed Increase per CCF	$1.23
Needed Rev Increase	40.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 4: *% Adjst. to Rates*	STAGE 4: Proposed Rate $/CCF	STAGE 4: Current Rates	STAGE 4: Commodity Revenue
Winter (Oct - Apr)	597,425	72.4%	$2.93	$1.70	$1,750,456
Summer (May - Sept)	650,069	62.1%	3.21	1.98	2,086,721
Total	1,247,494				$3,837,177
Plus: Targeted Additional Stage 3 Costs (Residential Share)					*$0*
Target - Total Revenue					$3,837,932
$ Difference					($755)

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 5 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 5 - Target Conservation (Savings)	50.0%	1,039,579	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Estimated Savings (CCF)	Volume Savings (CCF)
Winter (Oct - Apr)	995,709	50.0%	497,855	497,855
Summer (May - Sept)	1,083,448	50.0%	541,724	541,724
Total Consumption	2,079,157		1,039,579	1,039,579
Target Savings			1,039,579	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates

Revenue	$1,918,966
Balance/(Deficiency)	($1,918,966)
Consumption	1,039,579
Needed Increase per CCF	$1.85
Needed Rev Increase	50.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 5: *% Adjst. to Rates*	Proposed Rate $/CCF	Current Rates	Commodity Revenue
Winter (Oct - Apr)	497,855	108.8%	$3.55	$1.70	$1,767,383
Summer (May - Sept)	541,724	93.4%	3.83	1.98	2,074,803
Total	1,039,579				$3,842,186
Plus: Targeted Additional Stage 3 Costs (Residential Share)					*$0*
Target - Total Revenue					$3,837,932
$ Difference					$4,254

[1] - Assumes FY 14/15 is normal consumption

Total Monthly 1" or less Meter Bill - Irrigation WINTER

	Normal Water Conditions	Mandatory Conservation Stage 1	Mandatory Conservation Stage 2	Mandatory Conservation Stage 3	Mandatory Conservation Stage 4	Mandatory Conservation Stage 5
Target Reduction Goal	0%	10%	20%	30%	40%	50%
Irrigation Customer Using 25 CCF						
Assuming No Change in Use (25 CCF)	$72.50	$78.25	$85.50	$95.00	$107.25	$124.75
Assuming Reduced Usage -						
Revised CCF Usage	25.0	23.0	20.0	18.0	15.0	13.0
Total Monthly Bill	$72.50	$74.23	$74.00	$76.24	$75.55	$78.31
Irrigation Customer Using 50 CCF						
Assuming No Change in Use (50 CCF)	$117.00	$128.50	$143.00	$162.00	$186.50	$221.50
Assuming Reduced Usage -						
Revised CCF Usage	50.0	45.0	40.0	35.0	30.0	25.0
Total Monthly Bill	$117.00	$118.45	$120.00	$121.80	$123.10	$124.75
Irrigation Customer Using 75 CCF						
Assuming No Change in Use (75 CCF)	$161.50	$178.75	$200.50	$229.00	$265.75	$318.25
Assuming Reduced Usage -						
Revised CCF Usage	75.0	68.0	60.0	53.0	45.0	38.0
Total Monthly Bill	$161.50	$164.68	$166.00	$170.04	$170.65	$175.06

Total Monthly 1" or less Meter Bill - Irrigation SUMMER

	Normal Water Conditions	Mandatory Conservation Stage 1	Mandatory Conservation Stage 2	Mandatory Conservation Stage 3	Mandatory Conservation Stage 4	Mandatory Conservation Stage 5
Target Reduction Goal	0%	10%	20%	30%	40%	50%
Irrigation Customer Using 25 CCF						
Assuming No Change in Use (25 CCF)	$84.50	$90.25	$97.50	$107.00	$119.25	$136.75
Assuming Reduced Usage -						
Revised CCF Usage	25.0	23.0	20.0	18.0	15.0	13.0
Total Monthly Bill	$84.50	$85.27	$83.60	$84.88	$82.75	$84.55
Irrigation Customer Using 50 CCF						
Assuming No Change in Use (50 CCF)	$141.00	$152.50	$167.00	$186.00	$210.50	$245.50
Assuming Reduced Usage -						
Revised CCF Usage	50.0	45.0	40.0	35.0	30.0	25.0
Total Monthly Bill	$141.00	$140.05	$139.20	$138.60	$137.50	$136.75
Irrigation Customer Using 75 CCF						
Assuming No Change in Use (75 CCF)	$197.50	$214.75	$236.50	$265.00	$301.75	$354.25
Assuming Reduced Usage -						
Revised CCF Usage	75.0	68.0	60.0	53.0	45.0	38.0
Total Monthly Bill	$197.50	$197.32	$194.80	$195.48	$192.25	$193.30

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 1 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 1 - Target Conservation (Savings)	10.0%	116,938	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Estimated Savings (CCF)	Volume Savings (CCF)
Winter (Oct - Apr)	414,088	10.0%	41,409	372,679
Summer (May - Sept)	755,294	10.0%	75,529	679,765
Total Consumption	1,169,382		116,938	1,052,444
Target Savings			116,938	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates			Usage After Vol. & Rate Impact (CCF)	STAGE 1: *% Adjst. to Rates*	Proposed Rate $/CCF	Current Rates	Commodity Revenue
Revenue	$2,199,637	Winter (Oct - Apr)	372,679	12.9%	$2.01	$1.78	$749,085
Balance/(Deficiency)	($244,404)	Summer (May - Sept)	679,765	10.2%	2.49	2.26	1,692,614
Consumption	1,052,444						
Needed Increase per CCF	$0.23	Total	1,052,444				$2,441,699
Needed Rev Increase	10.0%						
		Plus: Targeted Additional Stage 1 Costs (Non Residential Share)					*$0*
		Target - Total Revenue					$2,444,041
		$ Difference					($2,342)

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 2 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 2 - Target Conservation (Savings)	20.0%	233,876	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Estimated Savings (CCF)	Volume Savings (CCF)
Winter (Oct - Apr)	414,088	20.0%	82,818	331,270
Summer (May - Sept)	755,294	20.0%	151,059	604,235
Total Consumption	1,169,382		233,876	935,506
Target Savings			233,876	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates			Usage After Vol. & Rate Impact (CCF)	STAGE 2: *% Adjst. to Rates*	Proposed Rate $/CCF	Current Rates	Commodity Revenue
Revenue	$1,955,233	Winter (Oct - Apr)	331,270	29.2%	$2.30	$1.78	$761,922
Balance/(Deficiency)	($488,808)	Summer (May - Sept)	604,235	23.0%	2.78	2.26	1,679,774
Consumption	935,506						
Needed Increase per CCF	$0.52	Total	935,506				$2,441,696
Needed Rev Increase	20.0%						
		Plus: Targeted Additional Stage 2 Costs (Non Residential Share)					*$0*
		Target - Total Revenue					$2,444,041
		$ Difference					($2,345)

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 3 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF	
Stage 3 - Target Conservation (Savings)	30.0%	350,815	CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Voluntary Savings Impacts: Estimated Savings (CCF)	Voluntary Savings Impacts: Volume Savings (CCF)
Winter (Oct - Apr)	414,088	30.0%	124,226	289,862
Summer (May - Sept)	755,294	30.0%	226,588	528,706
Total Consumption	1,169,382		350,815	818,567
Target Savings			350,815	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates			Usage After Vol. & Rate Impact (CCF)	STAGE 3: *% Adjst. to Rates*	STAGE 3: Proposed Rate $/CCF	STAGE 3: Current Rates	STAGE 3: Commodity Revenue
Revenue	$1,710,829	Winter (Oct - Apr)	289,862	50.6%	$2.68	$1.78	$776,829
Balance/(Deficiency)	($733,212)	Summer (May - Sept)	528,706	39.8%	3.16	2.26	1,670,710
Consumption	818,567						
Needed Increase per CCF	$0.90	Total	818,567				$2,447,539
Needed Rev Increase	30.0%						
		Plus: Targeted Additional Stage 3 Costs (Non Residential Share)					*$0*
		Target - Total Revenue					$2,444,041
		$ Difference					$3,498

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 4 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF
Stage 4 - Target Conservation (Savings)	40.0%	467,753 CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF) [1]	Voluntary Savings Impacts: Estimated % Savings by Block	Voluntary Savings Impacts: Estimated Savings (CCF)	Voluntary Savings Impacts: Volume Savings (CCF)
Winter (Oct - Apr)	414,088	40.0%	165,635	248,453
Summer (May - Sept)	755,294	40.0%	302,118	453,176
Total Consumption	1,169,382		467,753	701,629
Target Savings			467,753	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates			Usage After Vol. & Rate Impact (CCF)	STAGE 4: *% Adjst. to Rates*	STAGE 4: Proposed Rate $/CCF	STAGE 4: Current Rates	STAGE 4: Commodity Revenue
Revenue	$1,466,425	Winter (Oct - Apr)	248,453	78.1%	$3.17	$1.78	$787,595
Balance/(Deficiency)	($977,616)	Summer (May - Sept)	453,176	61.5%	3.65	2.26	1,654,094
Consumption	701,629						
Needed Increase per CCF	$1.39	Total	701,629				$2,441,689
Needed Rev Increase	40.0%						
		Plus: Targeted Additional Stage 3 Costs (Residential Share)					*$0*
		Target - Total Revenue					$2,444,041
		$ Difference					($2,352)

[1] - Assumes FY 14/15 is normal consumption

Step 1 - Determine Total Targeted Stage 1 Savings and Savings Achieved from Voluntary Impacts

STAGE 5 - REQUIRED TOTAL SAVINGS

	Estimated % Savings	Est. Savings in Total CCF
Stage 5 - Target Conservation (Savings)	50.0%	584,691 CCF

Step 2 - Estimate the Voluntary Impacts (Savings) By Price Block

	Normal Water Conditions (CCF)	Voluntary Savings Impacts: Estimated % Savings by Block	Voluntary Savings Impacts: Estimated Savings (CCF)	Voluntary Savings Impacts: After Vol. Savings (CCF)
Winter (Oct - Apr)	414,088	50.0%	207,044	207,044
Summer (May - Sept)	755,294	50.0%	377,647	377,647
Total Consumption	1,169,382		584,691	584,691
Target Savings			584,691	
Difference (CCF)			0	

Step 3 - Determine the Price (Rate) By Block Needed to Achieve Needed Savings and Meet Revenue Requirement

Revenue @ Present Rates

Revenue	$1,222,021
Balance/(Deficiency)	($1,222,021)
Consumption	584,691
Needed Increase per CCF	$2.09
Needed Rev Increase	50.0%

	Usage After Vol. & Rate Impact (CCF)	STAGE 5: *% Adjst. to Rates*	STAGE 5: Proposed Rate $/CCF	STAGE 5: Current Rates	STAGE 5: Commodity Revenue
Winter (Oct - Apr)	207,044	117.4%	$3.87	$1.78	$801,260
Summer (May - Sept)	377,647	92.5%	4.35	2.26	1,642,764
Total	584,691				$2,444,025
Plus: Targeted Additional Stage 3 Costs (Residential Share)					*$0*
Target - Total Revenue					$2,444,041
$ Difference					($16)

[1] - Assumes FY 14/15 is normal consumption