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Borrego Water District

Water and Wastewater Rate Study Report

March 28, 2016

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Murrieta, CA 92562

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March 28, 2016

Mr. Jerry Rolwing
General Manager
Borrego Water District
PO Box 1870,
806 Palm Canyon Drive,
Borrego Springs, CA 92004

Subject: Water and Wastewater Rate Study Report

Dear Mr. Rolwing,
Raftelis Financial Consultants, Inc. (RFC) is pleased to provide this Water Rate and Wastewater Rate Cost of Service Study Report (Report) for Borrego Water District (District) to address financial needs of the District and to establish updated water and wastewater rates that provide sufficient revenue over a five-year planning period. The rate structure is consistent with direction provided to us from District staff and the District Board.

The major objectives of the study include the following:

1. Develop financial plans for the District to ensure financial sufficiency, meet operation and maintenance (O&M) costs, ensure sufficient funding for capital replacement and refurbishment (R&R) needs, and build up reserves over the five years
2. Perform cost-of-service analyses for the water and wastewater utility based on recent historical usage
3. Develop fair and equitable water and wastewater rates

The Report summarizes the key findings and recommendations related to the development of the financial plan and the development of rates the for water and wastewater enterprise.

It has been a pleasure working with you, and we thank you and the District staff for the support provided during the course of this study.

Sincerely,

RAFTELIS FINANCIAL CONSULTANTS, INC.

Habib Isaac	**Victor Smith**
Manager	Consultant

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1 EXECUTIVE SUMMARY

1.1 BACKGROUND OF THE BORREGO WATER DISTRICT

The Borrego Water District (the District) contracted with RFC to conduct a Water and Wastewater Cost of Service and Rate Study (Study) to develop a financial plan as well as design water and wastewater rates for the District over the next five years.

The District is located approximately 50 miles northeast of the City of San Diego and serves the census designated place of Borrego Springs, as well as other sections of the unincorporated area of San Diego County. The District provides potable water service to a population of approximately 3,500 customers in Borrego Springs through over 2,000 connections. On an annual basis, the District delivers approximately 1,500 acre-feet of potable water, which is obtained from groundwater pumped from the Borrego Valley Groundwater Basin.

The District's Water Utility, like other agencies in San Diego County, is faced with challenges related to the reduction in water usage as a result of conservation, the slow economy, and increasing capital improvement costs as well as the recent Executive Order by Governor Brown (Executive Order B-29-15) related to mandatory conservation. The District is operating in an environment where operational costs continue to increase and the reinvestment of funds to its infrastructure is estimated to be substantial in the near term due to the long-standing critical overdraft of the Borrego Valley Groundwater Basin. This is not a situation that is unique to the District, as many agencies throughout the state are faced with water availability, conservation and the need to update capital infrastructure and treatment that is necessary to continue providing reliable water services, adhere to new regulations and mandates, and meet service demands while water supplies are strained in the face of the current statewide drought and groundwater overdraft.

1.2 WATER UTILITY

The current water rate structure of the District consists of two main components: a monthly service charge and a water usage rate or commodity charge. The service charge varies based on meter size whereas the water usage rate is a uniform rate for all customers. The following tables summarize the current rate structure of the District. **Table 1-1** provides a summary of water accounts by meter size, with the majority of residential customers served by 3/4" meters. **Table 1-2** identifies the monthly service charges. **Table 1-3** identifies the commodity charges by customer class. As shown in **Table 1-3,** the District's uniform commodity rates applies to all customers.

Table 1-1: Water Accounts by Meter Size

Meter Size	Meter Count in FY 2016
3/4 "	1,398
1"	545
1-1/2"	77
2"	25
3"	3
4"	7
6"	2
Total Meters	2,057

Table 1-2: Monthly Service Charge by Meter Size

Meter Size	Monthly Service Charge
3/4"	$42.04
1"	$61.45
1 1/2"	$103.62
2"	$156.85
3"	$284.86
4"	$454.12
6"	$906.10

Table 1-3: FY 2015-16 Uniform Commodity Rate

Customer Class	Structure	Commodity Rate (per unit[1])
All Customers	Uniform	$2.42

1.3 FINANCIAL HEALTH AND PROPOSED RECOMMENDATIONS

1.3.1 Water Utility Recommendations

The beginning balance for the Water Utility in Fiscal Year (FY) 2015-16 reserves is expected to be approximately $2.4M. It is projected that the District would have positive net cash above its operating expenses at Fiscal Year End (FYE) 2015-16; however, without future revenue adjustments, the water utility would only cover operating expenses, but not its necessary capital expenses. The District's annual planned capital improvement expenditures average $2.2M over the next five years, and the District is unable to fund this capital improvement program without an influx of revenue and reserves would be depleted as a result.

After review of the water utilities current revenues, revenue requirements, and reserves, it is recommended that the District adjust revenue by 8% in FY 2016-17 and 6% in each subsequent year through FY 2020-21. Additionally, to mitigate significant rate increases and to adequately fund its capital

[1] Commodity rates are per unit whereby 1 unit equals one hundred cubic feet, or 748 gallons of water.

improvement plan, it is recommended that the District issue debt totaling $9M in FY 2017-18 and potentially $2.7M in FY 2020-21. The District is currently pursuing grant opportunities and exploring the possibility of using State Revolving Fund loans to pay for these projects, which would reduce either the magnitude of the loan or potentially mitigate future rate increases. Given the useful life of these capital improvements, funding these items through debt provides inter-generation equity between existing customers and future customers by spreading the cost over an amortized term that is in-line with the life of improvements. As such, current customers are not funding the entire project in advance of those that will also benefit from these projects.

Overall, the proposed financial plan for the water system aims to strike a balance between maintaining a strong financial position and minimizing rate increases to its customers through a multi-year measured approach. Under the proposed plan, the water utility will maintain a positive net income and will meet the minimum reserve targets over the five-year study period.

In addition to reviewing the water utility's current financial health, RFC also reviewed the current rate structure and consumption data to determine the most appropriate rate structure moving forward. As such, RFC is recommending the following proposed adjustments to the current structure:

- RFC recommends changing the uniform rate to a two customer class rate structure (Residential and Non-Residential) with a 2-tiered rate for Residential customers, reflecting a first tier width of 7 units. 7 units covers the indoor need[2] of the average home in the District's service area. All other usage above this indoor allotment will be in Tier 2. Non-residential usage will be charged a uniform rate based on their proportionate share of the District's revenue requirements.
- RFC also recommends changing the current revenue recovery structure. The utility in FY 2016 is projected to have received 45% of its revenue from fixed charges and 55% of its revenue from commodity charges. This 45% fixed charge recover has increased due to a reduction in usage from conservation and; therefore, a corresponding reduction of total revenue generated by the commodity charges. As such, RFC recommends recalibrating the fixed/variable split to an amount of 33% fixed and 67% commodity for FY 2017-18.

Table 1-4 through **Table 1-6** summarizes the proposed water rates.

Table 1-4: Proposed Monthly Service Charge

Meter Size	FY 2016 (Current)	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
3/4"	$42.04	$34.89	$36.99	$39.21	$41.57	$44.07
1"	$61.45	$45.27	$47.99	$50.87	$53.93	$57.17
1 1/2"	$103.62	$71.20	$75.48	$80.01	$84.82	$89.91
2"	$156.85	$102.32	$108.46	$114.97	$121.87	$129.19
3"	$284.86	$185.31	$196.43	$208.22	$220.72	$233.97
4"	$454.12	$278.68	$295.41	$313.14	$331.93	$351.85
6"	$906.10	$538.03	$570.32	$604.54	$640.82	$679.27

[2] The target average indoor need is set by the State of California at 55 gallons per capita per day. This target is found in California Water Code Section 10608.20.

Table 1-5: Proposed Commodity Charges (FYE 2017)

Customer Class	Tier width	FY 2016-17 Rate (per unit)
Residential		
Tier 1	1 - 7 Units	$3.16
Tier 2	>7 Units	$3.48
Non-Residential	N/A	$3.35

Table 1-6: Proposed Commodity Charges through FYE 2021

Customer Class	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Residential					
Tier 1	$3.16	$3.35	$3.56	$3.78	$4.01
Tier 2	$3.48	$3.69	$3.92	$4.16	$4.41
Non-Residential	$3.35	$3.55	$3.77	$4.00	$4.24

2 INTRODUCTION

In 2014, Borrego Water District (the District) contracted with RFC to conduct a Water and Wastewater Cost of Service and Rate Study (Study) to develop a financial plan as well as design water and wastewater rates for the District over the next five years. The major objectives of the study include the following:

1. Develop financial plans for the District to ensure financial sufficiency, meet operation and maintenance (O&M) costs, account for recent conservation reductions in total water use, ensure sufficient funding for capital replacement and refurbishment (R&R) needs, and build up reserves over the five years
2. Perform cost-of-service analyses for the water and wastewater utility based on recent historical usage
3. Develop proportionate water rates in compliance with Proposition 218

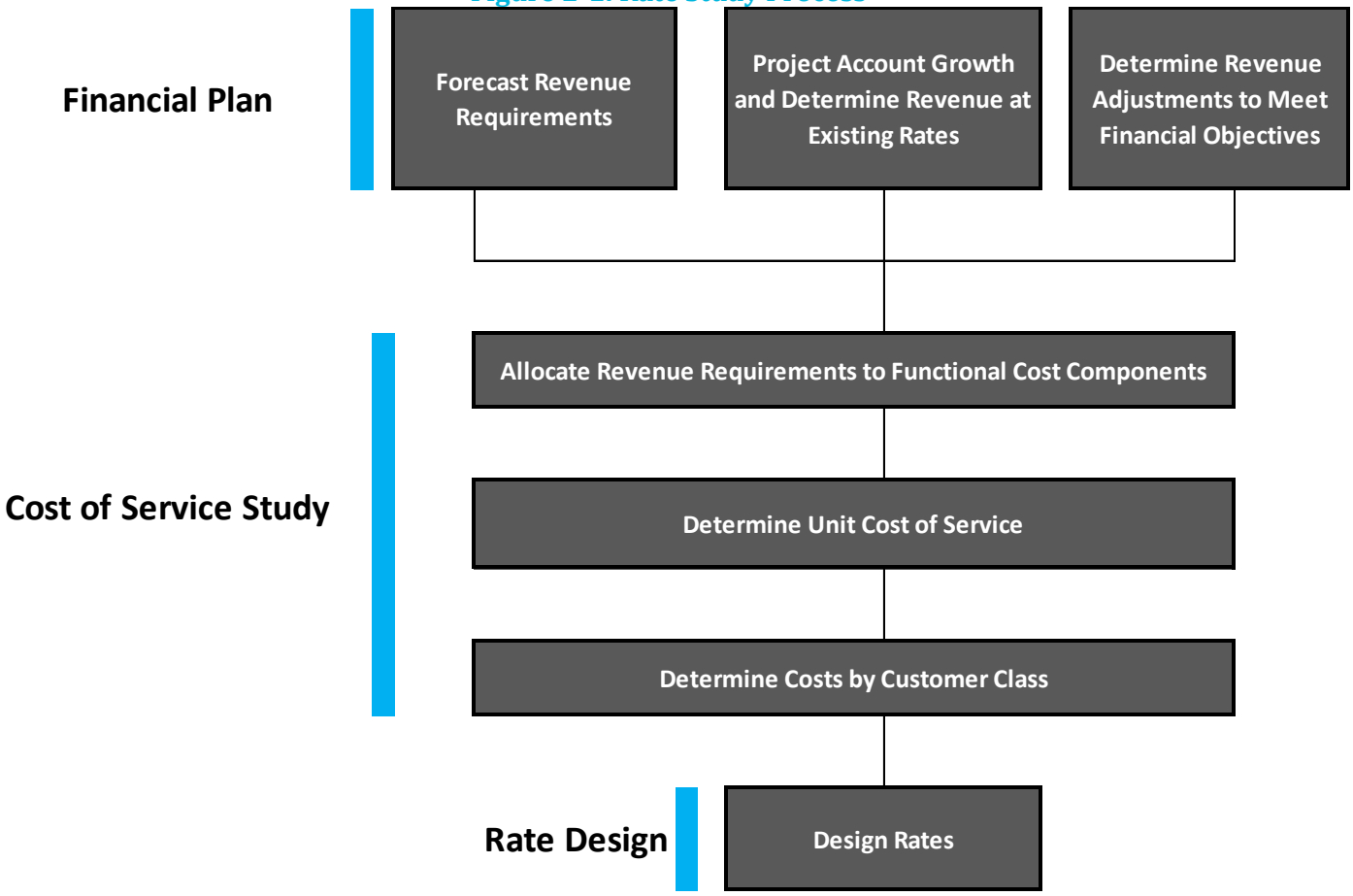
2.1 STUDY APPROACH

The Study approach is summarized as follows:

- **Financial Plan:** District water consumption was compiled and projected to forecast revenue at existing rates. This forecast revenue was compared against a forecast of the District's operation and maintenance (O&M) and capital expenditures to determine any necessary revenue adjustments. The ultimate outcomes are the operating and capital revenue requirements for the year in which cost of service rates will be implemented, FY 2016-17 (the "test year").
- **Cost of Service Analysis:** The Cost of Service Analysis involves allocating the annual revenue requirements determined by the financial plan to the District's customer classes based on their proportionate use of the system, and contribution to the cost of its operation.
- **Rate Design:** Rate Design involves the development of rates for all customer classes, which recover their proportionate share of system costs, determined by the cost of service analysis.

Figure 2-1 provides a graphical representation of the various steps involved in the comprehensive cost of service and rate design process.

Figure 2-1: Rate Study Process



This Study report includes the following sections in addition to the Executive Summary and the Introduction:

- ***Section 3*** summarizes the development of the long-term financial plan for the water utility.
- ***Section 4*** describes the water utility study's findings and results of the cost of service analysis.
- ***Section 5*** describes the methodology and calculation of the District's water rates.
- ***Section 6*** describes development of the long term financial plan and the methodology and calculation of the District's wastewater utility.

However, before discussing the development of the financial plan, the general assumptions used during the course of the study have been discussed below.

2.2 ASSUMPTIONS USED IN THE STUDY

The period for the Water Rate Cost of Service Study uses Fiscal Year 2015-16 as the budget year and the model projects through Fiscal Year 2025-26; however, the proposed rates herein are for the next five (5) years, as the District will continue to periodically review rates and take a measured approach with any potential rate adjustments[3]. Certain cost escalation assumptions and inputs were incorporated into the Study to adequately model expected future costs of the Water Utility. These assumptions were based on industry standards and discussions with District management. Assumptions include growth rates for customer accounts, reduced water demand factors for recent conservation goals of the District, inflation

[3] Tables in this report show a five-year period, starting with FYE 2017 through FYE 2021.

factors, and other miscellaneous assumptions. These assumptions are presented in **Table 2-1** and **Table 2-2**.

Table 2-1: Industry Specific Inflation Factors

Key Factors	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021
Inflation		3.0%	3.0%	3.0%	3.0%	3.0%
Repairs & Maintenance		3.0%	3.0%	3.0%	3.0%	3.0%
Professional Services		3.0%	3.0%	3.0%	3.0%	3.0%
Insurance		3.0%	3.0%	3.0%	3.0%	3.0%
Personnel Expense		5.0%	5.0%	5.0%	5.0%	5.0%
Employee Benefits		5.0%	5.0%	5.0%	5.0%	5.0%
Office expense		3.0%	3.0%	3.0%	3.0%	3.0%
Utilities		5.0%	5.0%	5.0%	5.0%	5.0%
CIP Inflation		5.0%	5.0%	5.0%	5.0%	5.0%

Table 2-2: Growth & Demand Assumptions

Key Factors	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021
Growth Rate						
All Accounts	0%	0%	0%	0%	0%	0%
Other Revenue Projections						
Interest Earnings	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Proposed Debt Terms						
Interest Rates	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Term (years)	30	30	30	30	30	30
Issuance Cost	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Water Demand Factor	98%	95%	95%	95%	95%	95%

3 WATER SYSTEM - FINANCIAL PLAN

This section describes the development of the financial plan, the results of which were used to determine the revenue adjustments needed to meet ongoing expenses and provide fiscal stability to the District.

3.1 REVENUE REQUIREMENTS

A review of a utility's revenue requirements is a key step in the rate design process. The review involves analyses of annual operating revenues under the current rates, operation and maintenance (O&M) expenses, capital expenditures, transfers between funds and reserve requirements. This section of the report provides a discussion on projected revenues, O&M and capital expenditures, the capital improvement financing plan, debt service requirements, and overall revenue requirements over the 5-year period of the Water Utility.

3.1.1 Revenues from Current Rates

The current water rate structure consists of two main components: a monthly service charge and a water usage charge

The monthly service charges by meter size are shown below.

Table 3-1: Monthly Service Charge by Meter Size

Meter Size	FY 2015-16 (Current)
3/4"	$42.04
1"	$61.45
1 1/2"	$103.62
2"	$156.85
3"	$284.86
4"	$454.12
6"	$906.10

The number of meters by meter size are shown in **Table 3-2** below.

Table 3-2: Meters by Meter Size

Meter Size	FY 2015-16 (Current)
3/4"	1,398
1"	545
1 1/2"	77
2"	25
3"	3
4"	7
6"	2

The District's variable rates are shown below. Note that Prior to FY 2015-16 the District had distinct rates for residential customers, which is why the usage information is broken out by tier and class despite being

charged a uniform rate. **Table 3-3** shows current commodity charges through FY 2021 with no rate adjustment. **Table 3-4** shows projected water sales through FY 2021, which account for the Water Demand factor shown in **Table 2-2**.

Table 3-3: Current Commodity Charges

Customer Class	FY 2015-16
Residential	
Tier 1	$2.42
Tier 2	$2.42
Non-Residential	$2.42

Table 3-4: Projected Usage through FY 2020-21 (ccf)

Customer Class	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021
Residential						
Tier 1	329,209	312,749	297,112	282,256	268,143	268,143
Tier 2	63,659	60,476	57,452	54,579	51,850	51,850
Non-Residential	274,310	260,595	247,565	235,187	223,428	223,428

The projected water revenues for the Water Utility derived from current rates and calculated from **Table 3-1** through **Table 3-4** are shown in **Table 3-5**.

Table 3-5: Projected Water Rate Revenues at Current FY 2015-16 Rates

	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021
Fixed Revenue	**$1,320,093**	**$1,320,093**	**$1,320,093**	**$1,320,093**	**$1,320,093**	**$1,320,093**
Variable Revenue	**$1,614,571**	**$1,533,844**	**$1,457,152**	**$1,384,293**	**$1,315,079**	**$1,315,079**
Total Water Revenues*	**$2,934,664**	**$2,853,938**	**$2,777,246**	**$2,704,387**	**$2,635,172**	**$2,635,172**

3.1.2 O&M Expenses

The District's Fiscal Year 2015-16 budget values and the assumed inflation factors for the study period were used as the basis for projecting O&M costs. **Table 3-6** shows total budgeted and projected O&M expenses, from Fiscal Year 2015-16 through Fiscal Year 2020-21.

Table 3-6: Projected Water O&M Expenses

	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021
Repairs & Maintenance	$242,000	$249,260	$256,738	$264,440	$272,373	$280,544
Professional Services	$123,819	$127,534	$131,360	$135,301	$139,360	$143,540
Insurance	$64,249	$66,176	$68,162	$70,206	$72,313	$74,482
Personnel Expense	$676,737	$710,574	$746,103	$783,408	$822,578	$863,707
Employee Benefits	$303,426	$318,598	$334,527	$351,254	$368,816	$387,257
Office expense	$69,303	$71,382	$73,523	$75,729	$78,001	$80,341
Utilities	$391,062	$410,615	$431,146	$452,703	$475,338	$499,105
Total	**$1,870,596**	**$1,954,138**	**$2,041,558**	**$2,133,041**	**$2,228,779**	**$2,328,977**

3.1.3 Debt Service

A summary of the District's current debt service payments are shown in **Table 3-7** below.

Table 3-7: Current Debt Service Schedule

	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021
COP 2008						
Principal	$140,000	$145,000	$150,000	$160,000	$165,000	$175,000
Interest	$114,525	$108,113	$101,475	$94,500	$87,188	$79,538
Viking Ranch Refinance						
Water ID1, ID3, ID 5 Portion	$49,107	$49,107	$49,107	$49,107	$49,107	$49,107
Water ID 4 Portion	$73,661	$73,661	$73,661	$73,661	$73,661	$73,661
Total	**$377,294**	**$375,881**	**$374,244**	**$377,269**	**$374,956**	**$377,306**

3.1.4 Capital Improvement Plan

The District has adopted a long-term capital improvement plan (CIP) to address future Water Utility needs. **Table 3-8** shows a summary of the most recent 5-year CIP provided by the District. The Water Utility's future CIP needs will be funded through a combination of rates on a Pay-As-You-Go basis (PAYGO) and proposed debt.

Table 3-8: CIP Summary

	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021
Total CIP – Water	$373,590	$846,701	$5,529,285	$1,323,986	$762,026	$2,129,011
Short Live Assets Replacement Program – Water	$512,600	$397,168	$304,266	$402,655	$292,810	$336,969
Total	**$886,190**	**$1,243,869**	**$5,833,551**	**$1,726,641**	**$1,054,836**	**$2,465,980**

3.1.5 Reserve Requirements

Currently, the District maintains two reserve funds.

Operating Reserve – The purpose of an operating reserve is to have liquid cash on hand for the continued day-to-day operations of the utility. The Operating Reserve may be used for cash flow purposes to fund necessary expenses without the need to wait for billed revenue to come in as well as any unexpected increases in operating expenses. The amount of the Operating Reserve is commonly pegged to a certain percentage of the utility's total operating expenses. The set percentage is usually dictated by the utility's bill frequency; if customers are billed on a monthly basis, then revenue continuously come is and the need to have a significant amount of funds within the Operating Reserve is not necessary. Based on industry standards, The Operating Reserve, in the case of monthly billing, should equal around 90 days of expenses (3 months). As the bill frequency is less frequent, the Operating Minimum Reserve should be increased to account for the time delay of receiving cash on hand. As such, utilities with bi-monthly billing should set the target at 90 to 120 days (3-4 months) of operating expenses. For the Borrego Water District, RFC recommends establishing a minimum reserve of no less than 90 days of O&M, with an ideal operating reserve target of 120-days of O&M expenses.

Capital Improvement Projects Reserve – A Capital Repair and Replacement Reserve is used primarily to meet and ensure the timely construction of necessary capital improvements without any delays due to cash flow concerns. Capital expenses can fluctuate quite a bit from year-to-year and the Capital Reserve may be leveraged to smooth out significant changes in expenses and; thereby, avoiding any unduly rate shock to District customers. It may also serve as collateral and reassurance when awarding a construction contract. A sound target for a utility's Capital Reserve is to have an average years' worth of capital expenses based on the agency's adopted Capital Improvement Plan (CIP). At a minimum, the Capital Reserve should be funded to at least an amount equivalent to the total annual depreciation value of the system and these funds can be used as a reasonable reinvestment amount into the system. RFC recommends a reserve equal to the inflated value of a rolling average of the subsequent 5 years of the District's Capital Improvements.

Collectively, the total minimum reserves of the water utility is approximately $3M in FY 2015-16, and the total reserve target of the water utility is approximately $3.2M in FY 2015-16. The District is roughly $200,000 short of its FY 2016 reserve target.

Reserves for the water enterprise and the sewer and wastewater enterprise will be funded by rates specific to those enterprises so as to meet California Proposition 218 requirements. That is, reserves specific to the needs of the District's water enterprise will be accumulated from water rates. Reserves specific to the needs of the District's sewer and wastewater enterprise will be funded from sewer and wastewater treatment rates.

3.1.6 Financial Outlook at Current Rates

Revenues generated from current rates and other miscellaneous revenues exceed operational expenses through FYE 2021 and the District has adequate reserves to fund its capital costs until FYE 2018; however,

from the beginning of the study period, starting in FY 2015-16, reserves will be below the minimum target and used to fund the shortfall of the District's revenue requirements. The District's O&M costs continue to increase through annual inflationary adjustments as previously listed under **Table 2-1** – "Assumptions". As such, current revenues cannot fully fund both O&M and capital without drawing down reserves each year. By FYE 2018, the Total Reserves would be depleted.

In conclusion, the District will not be able to fund its CIP program under the current rates over the next five years. **Figure 3-1** illustrates operating position of the Water Utility, where the expenses, inclusive of reserve funding and debt service, are shown by stacked bars; and total revenues at current rates is shown by the downward sloping red trend line. It shows decreasing revenues due to the assumed 2% reduction in water consumption in FYE 2017 and the ongoing 5% reductions through FYE 2021. **Figure 3-2** summarizes the projected CIP and its funding sources (currently 100% PAYGO) and **Figure 3-3** displays the ending total reserve balance for the water utility.

Figure 3-1: Operating Position at Current Rates

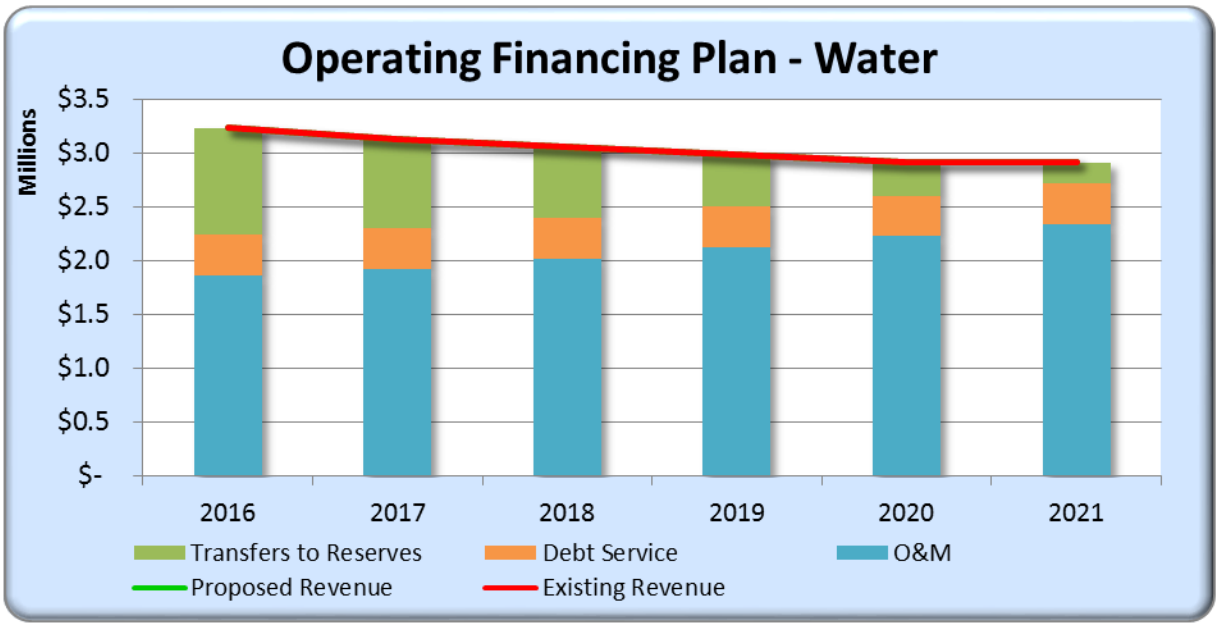


Figure 3-2: Capital Improvement Plan and Funding Source

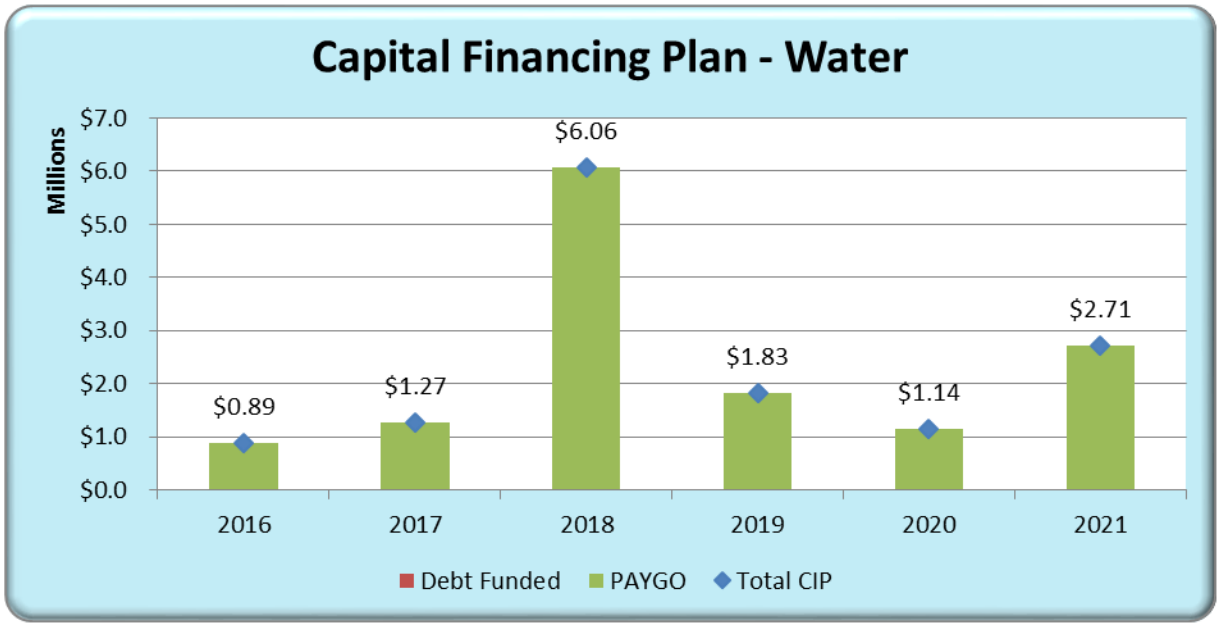
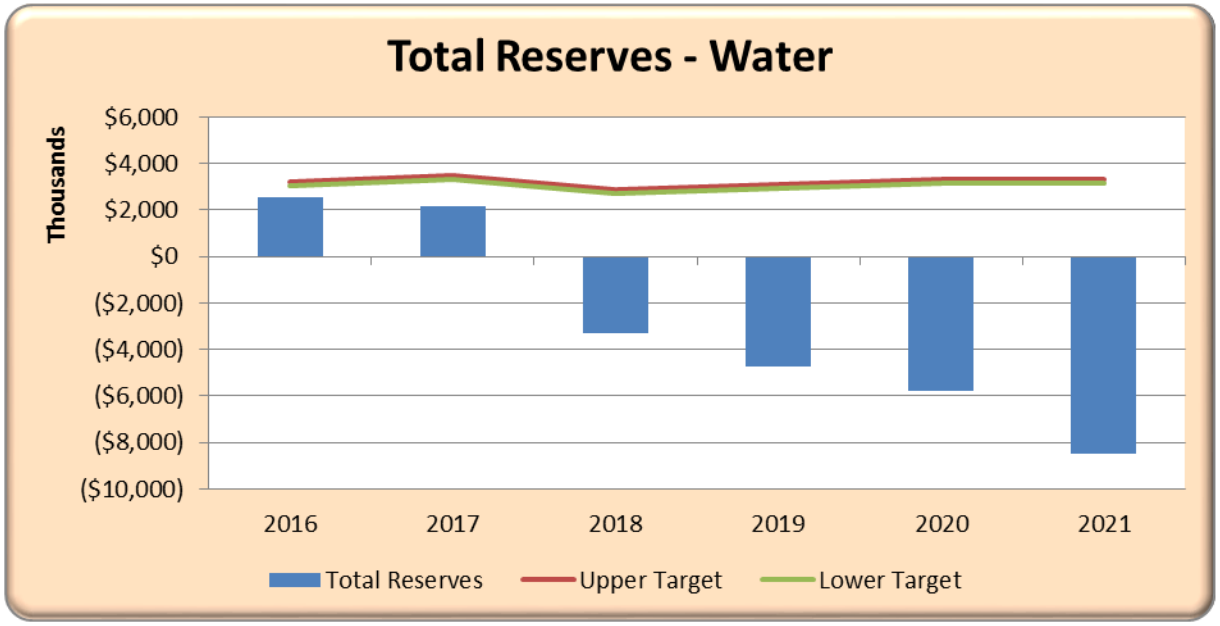


Figure 3-3: Projected Ending Reserves at Current Rates



3.2 PROPOSED FINANCIAL PLAN

To ensure that the water utility will have adequate revenues to fund operating expenses, capital expenditures, and comply with future bond covenants, it is recommended that the District increase rates over the next five years, FY 2016-17 through FY 2020-21. The first revenue adjustment would be an 8% adjustment and would occur on July 1, 2016 with the remaining adjustments being 6% adjustments and occurring on July 1 of each subsequent year.

In addition, RFC recommends issuing $9M in debt in FY 2017-18 to help finance a significant increase of capital related improvements in FY 2017-18. The combination of additional revenue and debt issuance

would enable the agency to complete the planned capital projects for the Study period while building up a healthy level of reserves over the next five years.

A pro forma of the proposed revenue requirements is shown in **Table 3-4** below. The proposed revenue requirements account for the District's annual financial needs while building up reserves, maintaining positive net revenues through the study period, and complying with debt covenants.

Table 3-9: Five-Year Water Utility Proposed Financial Plan - Pro-forma

Borrego Water District
Operating Cash Flow

Line No.		FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
1	**Revenue from Meter Charges**	$1,320,093	$1,320,093	$1,320,093	$1,320,093	$1,320,093
2	**Revenue from Commodity Rates**	$1,533,844	$1,457,152	$1,384,293	$1,315,079	$1,249,325
3	**Revenue from Existing Retail Rates**	$2,853,938	$2,777,246	$2,704,387	$2,635,172	$2,569,418
4	Revenue from Rate Adjustments	$228,315	$402,145	$577,354	$754,443	$933,920
5						
6	**Total Rate Revenue**	**$3,082,253**	**$3,179,391**	**$3,281,741**	**$3,389,615**	**$3,503,338**
7	Other Revenue	$259,000	$259,000	$259,000	$259,000	$259,000
8	Interest Revenue	$9,782	$6,833	$7,092	$7,395	$6,727
9	**Total Revenue**	**$3,351,034**	**$3,445,224**	**$3,547,833**	**$3,656,009**	**$3,769,065**
	Revenue Requirements					
10	O&M	$1,954,138	$2,041,558	$2,133,041	$2,228,779	$2,328,977
11	Existing Debt Service	$375,881	$374,244	$377,269	$374,956	$377,306
12	Proposed Debt Service	$0	$639,886	$639,886	$639,886	$831,852
13	Transfer to Contingency					
14	Transfer to Rate Stabilization					
15	**Total Revenue Requirements**	**$2,330,020**	**$3,055,688**	**$3,150,195**	**$3,243,621**	**$3,538,135**
16	**Net Annual Cash Balance**	$1,021,015	$389,536	$397,637	$412,388	$230,929
17	**Coverage Requirements**	115%	115%	115%	115%	115%
18	**Coverage Ratio**	372%	138%	139%	141%	119%

Table 3-10: Five-Year Water Utility Proposed Financial Plan – Reserve Fund Levels

Borrego Water District
Reserve Funds

Line No.			FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
	Operating Reserve						
1	*Source of Funds*						
2	Beginning Balance		$467,649	$488,535	$510,390	$533,260	$557,195
3	Transfer to Capital Reserve		-$1,000,129	-$367,681	-$374,767	-$388,453	-$205,880
4	Net Annual Cash Balance		1,021,015	389,536	397,637	412,388	230,929
5	**Total Funds Available**		488,535	510,390	533,260	557,195	582,244
	Use of Funds						
6	Net Annual Cash Balance		-	-	-	-	-
7							
8	**Total Use of Funds**		-	-	-	-	-
9	**Ending Fund Balance**		**488,535**	**510,390**	**533,260**	**557,195**	**582,244**
10	Upper Target	**33%**	644,866	673,714	703,903	735,497	768,562
11	Lower Target	**25%**	488,535	510,390	533,260	557,195	582,244
	Capital Reserve						
12	*Source of Funds*						
13	Beginning Balance		$2,068,574	$1,820,028	$5,160,139	$3,750,048	$3,033,066
14	Bond Proceeds		$0	$9,000,000	$0	$0	$2,700,000
15	Transfer from Cash Reserve		$1,000,129	$367,681	$374,767	$388,453	$205,880
16	**Total Funds Available**		3,068,703	11,187,708	5,534,906	4,138,501	5,938,946
	Use of Funds						
17	CIP Spending & Short Lived Assets		1,268,022	6,062,296	1,829,188	1,139,182	2,714,875
18							
19	**Total Use of Funds**		1,268,022	6,062,296	1,829,188	1,139,182	2,714,875
20	**Fund Balance Before Interest**		**1,800,681**	**5,125,412**	**3,705,719**	**2,999,319**	**3,224,071**
21	Interest		19,346	34,727	44,329	33,747	31,286
22	**Ending Fund Balance**		**1,820,028**	**5,160,139**	**3,750,048**	**3,033,066**	**3,255,356**
	Target	**100%**	**2,839,775**	**2,232,702**	**2,412,681**	**2,573,465**	**2,573,465**

Figure 3-4 illustrates the operating position of the Water Utility, where the expenses, inclusive of reserve funding and debt service, are shown by stacked bars; and total revenues at current rates and proposed rates are shown by the horizontal trend lines. **Figure 3-5** summarizes the projected CIP and its funding sources, either PAYGO or debt financed. **Figure 3-6** displays the ending total reserve balance for the water utility, inclusive of operating and capital funds, where the horizontal trend line indicates the target reserve balance (as recommended by the reserve requirements discussed in Section 3.1.5) and the bars indicate ending reserve balance.

Figure 3-4: Proposed Operating Financial Plan

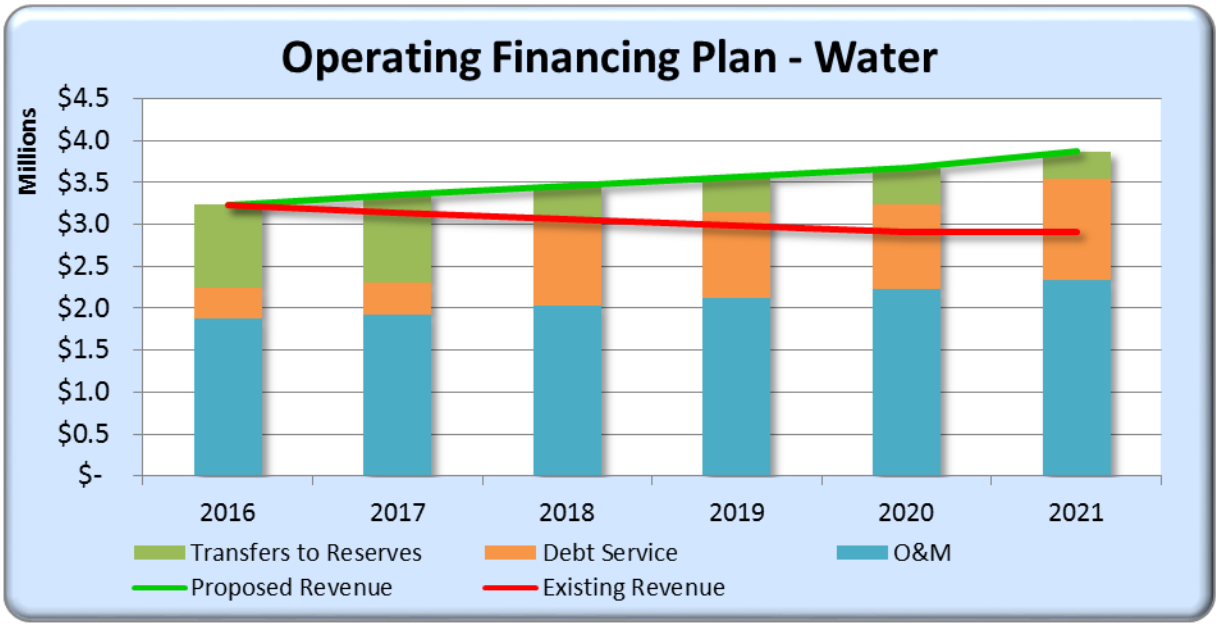


Figure 3-5: Projected CIP and Funding Sources

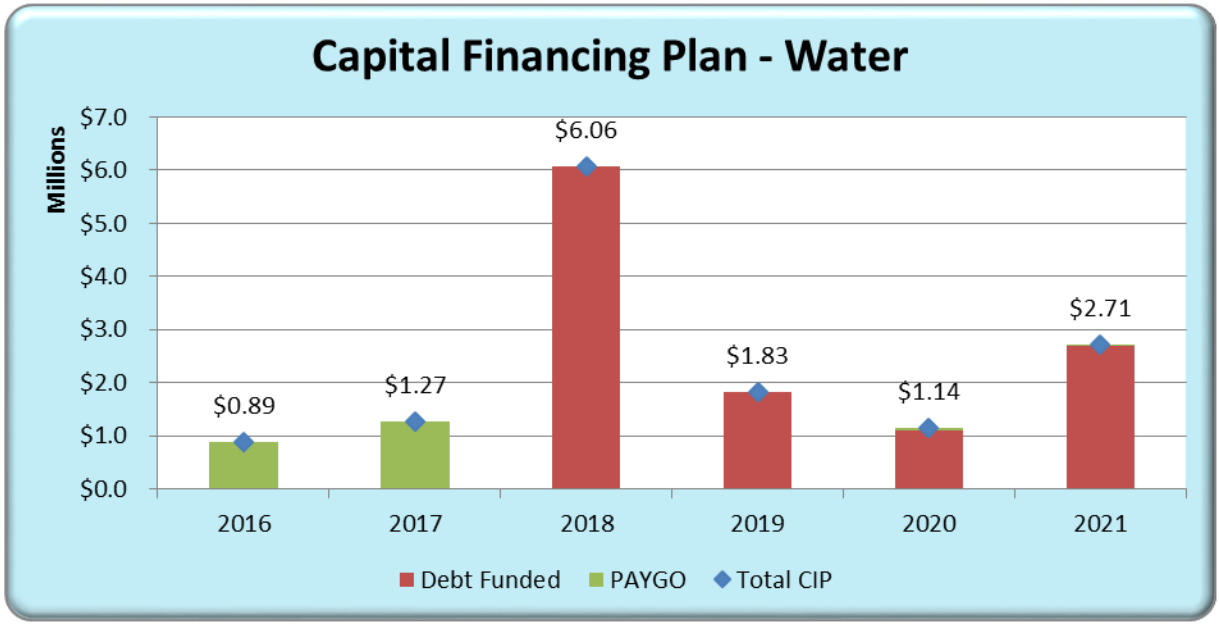
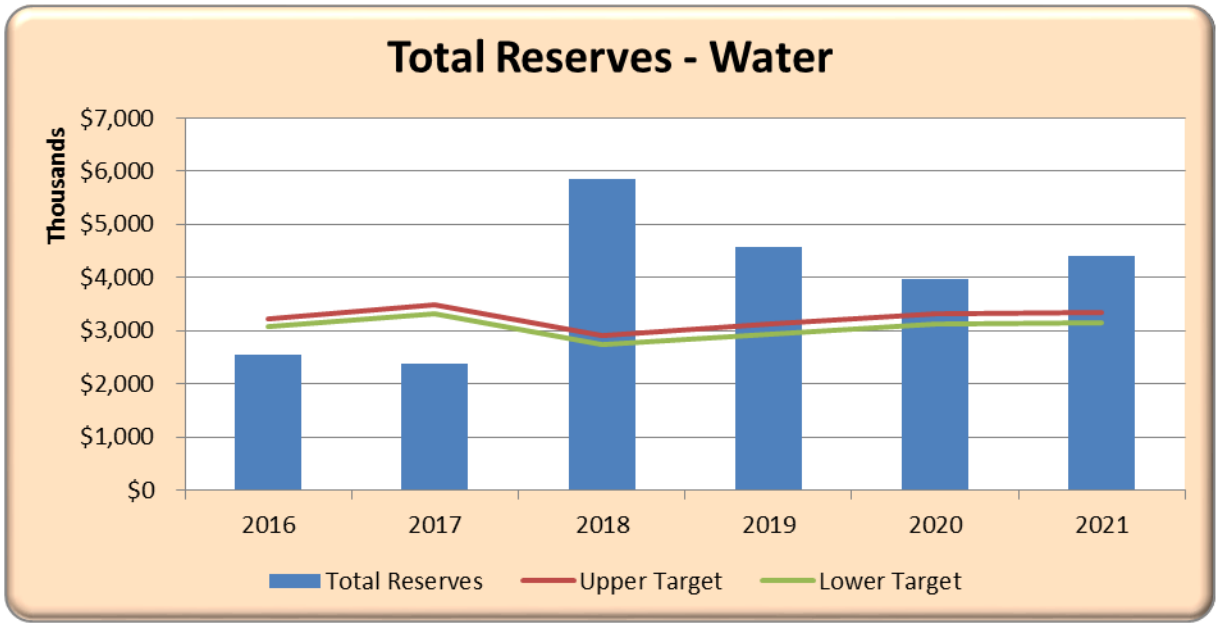


Figure 3-6: Projected Ending Reserve Balances



4 WATER SYSTEM - COST OF SERVICE AND RATE DESIGN

4.1 LEGAL FRAMEWORK AND RATE METHODOLOGY BACKGROUND

Proposition 218 (California Constitution Article 13D sec(6)) states that:

1. A property-related charge (such as water rates) imposed by a public agency on a parcel shall not exceed the funds required to provide the property related service.
2. Revenues derived by the charge shall not be used for any other purpose other than that for which the charge was imposed.
3. The amount of the charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of property.
5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing, when the agency considers all written protests against the charge.

As stated in the Manual M1, "the costs of water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers." Prop 218 ensures that water rates cannot be "arbitrary and capricious", meaning that the rate-setting methodology must be sound and that there must be a nexus between costs and the rates charged.

In conjunction with Proposition 218, Article X (2) of the State Constitution establishes the need to preserve the State's water supplies and to discourage the wasteful or unreasonable use of water by encouraging conservation. In addition, Section 106 of the Water Code declares that the highest priority use of water is for domestic purposes, with irrigation secondary. In connection with meeting the objectives of Article X, Water Code Sections 370 (AB2882) and 375 authorize a water purveyor to utilize its water rate design to incentivize the efficient use of water. Although incentives to conserve water could be provided by implementing a higher rate as consumption increases, a nexus between the rates and cost incurred to provide the water must be developed in order to achieve compliance with Proposition 218.

4.2 COST BASED RATE SETTING METHODOLOGY

As stated in the Manual M1, the AWWA Rates and Charges Subcommittee agree with the Proposition 218 that "the costs of water rates and charges should be recovered from classes of customers ***in proportion*** to the cost of serving those customers".

The utilities revenue requirements are, by definition, the cost of providing service. This cost is then used as the basis to develop unit costs for the water components and to allocate costs to the various customer classes in proportion to the water services rendered. The concept of proportionality requires that cost allocations consider both the average quantity of water consumed (base) and the peak rate at which it is consumed (peaking). Use of peaking is consistent with cost of providing service because the water system is designed to handle peak demands, and the additional costs associated with design, construction operating and maintenance of facilities specified to meet these peak demands need to be allocated to those imposing such costs on the utility so that the costs can be recovered appropriately.

4.2.1 Cost Components

The total cost of water service is analyzed by system function in order to equitably distribute costs in relation to how it's incurred, in general, which then allows each cost component to be recovered through the most appropriate revenue recovery (i.e. fixed versus variable). For this analysis, water utility costs of service are assigned under the Base-Extra Capacity method to the following functional cost components: Water Supply, Base, Peaking (Max Day / Max Hour), Customer Service (Billing), and Metering. **Table 4-1** provides a summary of the District's budgeted expenses by cost category.

Table 4-1: Summary of Water Budget Items

Water Budget Item	FYE 2017 Revenue Requirements
Repairs & Maintenance	$249,260
Professional Services	$127,534
Insurance	$66,176
Personnel Expense	$710,574
Employee Benefits	$318,598
Office expense	$71,382
Utilities	$410,615
Debt	$375,881
Total	**$2,330,020**

4.2.2 Functionalizing Cost Components

The next step in the cost of service is to allocate budget items into functional cost components. This is done by categorizing the water budget items by their cost function. For this study, RFC identified seven cost categories. These are: General/Administrative costs, Base costs, Max Day costs, Max Hour costs, Capacity costs, Supply costs, and Billing and Customer Service Costs. These cost categories correspond to functional cost categories. For example, costs that are allocated to General/Admin are allocated 50 percent to Billing and 50 percent to Metering. **Table 4-2** shows the functional cost allocation for each Cost Category. Note that the functional costs that are indicated in gray are fixed cost categories, and those in blue are variable cost categories.

Table 4-2: Cost Category Allocation Percentages

Cost Categories	Billing	Metering	Supply	Base	Max Day	Max Hour
General/Admin	50.0%	50.0%				
Base				100.0%		
Max Day[1]		0.0%		70.6%	29.4%	
Max Hour[2]				47.1%	19.6%	33.3%
Capacity		50.0%		35.3%	14.7%	
Supply			100.0%			
Billing and Customer Service	100.0%					

[1] Max Day was derived based on the water production figures from the District

[2] Max Hour is 1.5x Max Day

4.2.3 Cost of Service

After obtaining the summary of revenue requirements from the budget, the revenue requirements are allocated to functional cost components. **Table 4-3** illustrates how costs were allocated to the functional costs. As mentioned above, costs in light blue are recovered by variable rates, costs in gray are recovered by fixed rate mechanisms.

Table 4-3: Fixed vs. Variable Cost Allocation to Revenue Components

			Fixed Percentage		Variable Percentage			
			33%		67%			
Water Cost Item	Expense	Allocation	Billing	Metering	Supply	Base	Max Day	Max Hour
Repairs & Maintenance	$249,260	Max Hour	$0	$0	$0	$117,288	$48,885	$83,087
Professional Services	$127,534	General/Admin	$63,767	$63,767	$0	$0	$0	$0
Insurance	$66,176	Billing and Customer Service	$66,176	$0	$0	$0	$0	$0
Personnel Expense	$710,574	Max Day	$0	$0	$0	$501,537	$209,037	$0
Employee Benefits	$318,598	General/Admin	$159,299	$159,299	$0	$0	$0	$0
Office expense	$71,382	Billing and Customer Service	$71,382	$0	$0	$0	$0	$0
Utilities	$410,615	Supply	$0	$0	$410,615	$0	$0	$0
Debt	$375,881	Capacity	$0	$187,941	$0	$132,652	$55,288	$0
Viking Ranch Refinance	$0	General/Admin	$0	$0	$0	$0	$0	$0

Monthly fixed charges recover all of the costs associated with Billing and Metering. Commodity rates recover all of costs associated with Supply, Base, Max Day, and Max Hour.

This study calculated water rates based on FY 2016-17 as the base year through FY 2020-21 for the new proposed rates. The annual revenue requirements or costs of service to be recovered from rates include O&M expenses, and the amount of the proposed revenue adjustment, as well as have the revenue offsets subtracted. The revenue offsets include the utility's non-operating revenues and the negative of the projected revenues to fund. These additional offsets and adjustments are allocated by the percentages shown in **Table 4-3**. The results are summarized below in **Table 4-4**.

Table 4-4: Revenue Requirements by Function – Fiscal Year 2015-16

		Fixed Percentage		Variable Percentage			
		33%		67%			
Water Cost Item	**Expense**	**Billing**	**Metering**	**Supply**	**Base**	**Max Day**	**Max Hour**
Subtotal O&M	$2,330,020	$360,624	$411,006	$410,615	$751,477	$313,211	$83,087
Percentage of Total		15%	18%	18%	32%	13%	4%
Revenue Adjustment	$228,315						
Less Revenue Offset							
Non-Operating Revenues	$268,782						
Fund Balance	-$792,700						
Mid-year adjustment	$0						
Total Cost of Service to be Recovered from Rates	$3,082,253	$477,049	$543,697	$543,179	$994,088	$414,329	$109,911

5 PROPOSED RATES

5.1 PROPOSED RATE STRUCTURE

The proposed commodity rate structures vary by customer class and are discussed below.

5.1.1 Residential 2-Tiered Inclining Rate Structure

RFC recommends adjusting the District's current uniform rate structure and replacing it with a 2-tiered rate structure that provides a straight-forward connection between water needs and tiered allotments. The goal of the first tier is to provide for basic indoor water demand with the second tier for all other usage above tier 1. Tier 1 is based on the District's density of approximately 3 persons[4] per household at 55 gallons per capita per day[5] over the 30-day billing period (rounded to the next whole unit of water). **Figure 5-1** shows the calculation used to derive the single-family residential Tier 1 allocation of 7 units of water.

Figure 5-1: Tier 1 Residential Allotment Calculation

$$\frac{3.00 \text{ density} \times 55 \text{ gpcd} \times 30 \text{ days}}{748.05 \text{ gallons}} = 6.70 = \text{Rounded to 7 Units}$$

The single-family residential Tier 2 covers the rest of the SFR customer class's usage.

Table 5-1: Residential Tier Allotments

Customer Class	Tier width / Allotments[1]
Residential	
Tier 1	1 - 7 Units
Tier 2	> 7 Units

5.1.2 Non-Residential Uniform Rate Structure

For non-residential customers, RFC recommends maintaining a uniform rate. However, despite not being tiered, the uniform rate structure is based on the same cost components and non-residential customers are allocated their proportionate share of costs based on the cost to provide service.

[4] Actually density is approximately 2.2 persons, which is rounded up to the next integer (3).
[5] The state's per capita target for indoor use

5.2 PROPOSED RATES

5.2.1 Fixed Charges

The monthly fixed service charge has the following main components: Billing (Customer Service) related costs and Metering (capacity) related costs. Customer costs are uniform for all customers and include such costs as meter reading, billing, collecting and accounting. **Table 5-2** shows the customer costs allocated evenly over the number of units. There are 2,057 accounts in the District's service area, which equates to 24,684 bills annually.

Table 5-2: Billing Cost Component of the Fixed Charge

Billing Costs per Unit	FYE 2016
Total Customer Accounts Costs	$477,049
Annual Bills	÷ 24,684
Monthly Charge per Unit	$19.33

Metering costs include a portion of the capacity related costs and a portion of general/admin related costs. RFC utilized the American Water Works Association meter capacity ratios in calculating the meter component of the fixed charge. These costs are assigned based on meter size. Based on these ratios, the total equivalent meters equals 2,912, therefore the number of equivalent meters per year is 2,912 multiplied by 12, which equals 34,940. **Table 5-4** shows Metering costs allocated over the number of equivalent meters.

Table 5-3: Metering Cost Component of the Fixed Charge

Metering Costs	FYE 2016
Total Metering Costs	$543,697
Number of Equivalent Meters	÷ 34,940
Monthly Charge per ⅝" Meter	$15.56

Table 5-5 summarizes the proposed monthly fixed meter for FY 2017. The monthly fixed meter charge includes both the Billing cost component and the Metering cost component.

Table 5-4: Monthly Fixed Charge Calculation

Meter Size	Number of Meters	Billing Charge	Capacity Ratio	Metering Charge	FY 2017 Proposed Charge
3/4"	1,398	$19.33	1.00	$15.56	$34.89
1"	545	$19.33	1.67	$25.93	$45.27
1 1/2"	77	$19.33	3.33	$51.87	$71.20
2"	25	$19.33	5.33	$82.99	$102.32
3"	3	$19.33	10.67	$165.98	$185.31
4"	7	$19.33	16.67	$259.35	$278.68
6"	2	$19.33	33.33	$518.70	$538.03

Table 5-5 shows the proposed rates through FY 2021.

Table 5-5: Proposed Monthly Service Charge (FYE 2016 – FYE 2021)

Meter Size	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
3/4"	$34.89	$36.99	$39.21	$41.57	$44.07
1"	$45.27	$47.99	$50.87	$53.93	$57.17
1 1/2"	$71.20	$75.48	$80.01	$84.82	$89.91
2"	$102.32	$108.46	$114.97	$121.87	$129.19
3"	$185.31	$196.43	$208.22	$220.72	$233.97
4"	$278.68	$295.41	$313.14	$331.93	$351.85
6"	$538.03	$570.32	$604.54	$640.82	$679.27

5.2.2 Variable Charges

Approximately 67% of the District's revenue requirements are proposed to be recovered from the commodity charges (based on the amount of water used). Variable cost components include Supply costs, Base costs, and Peaking costs (max day / max hour), as well as an economic cost component.

For this analysis, consumption and peaking characteristics of customers were analyzed to appropriately allocate costs between each tier. Variable costs were separated into four discrete components- Supply, Base, Peaking, and the Economic Cost. The sum of each of the variable cost components, equals the rate per unit of water per tier. This approach synchronizes the objectives of Article X (2) and Proposition 218 in developing a cost of service tiered rate structure.

5.2.2.1 Water Supply Costs

The District relies entirely on pumped groundwater from the Borrego Valley Basin for their water supply. Thus the price of water is highly dependent on the cost of operating the pumps that provide water to the District. **Table 5-6** shows the calculation that gives the Supply cost per unit of water.

Table 5-6: FY 2016-17 Water Supply Costs

Source of Supply	Production Quantity (ccf)	Supply Cost Recovery	Cost per ccf
Groundwater	633,820	$543,179	$0.86

5.2.2.2 Base Costs

Base costs, also commonly referred to as Delivery costs, are those operating and capital costs of the water system associated with delivering water to all customers at a constant average rate of use. Therefore, Base costs are spread over all units of water, irrespective of customer classes or tiers, to calculate a uniform rate. **Table 5-7** shows the allocation of Base costs to each customer class.

Table 5-7: Base Costs per Unit of Water

Source of Supply	Production Quantity (ccf)	Base Cost Recovery	Cost per ccf
Groundwater	633,820	$994,088	$1.57

5.2.2.3 Peak Costs (Max Day / Max Hour) and Conservation Costs

Extra capacity or peaking costs represent those costs incurred to meet customer peak demands for water in excess of a baseline usage. Total extra capacity costs are apportioned between maximum day and maximum hour demands based on the type of expense. The maximum day demand is the maximum amount of water used in a single day in a year. The maximum hour demand is the maximum usage in an hour on the maximum usage day. Different facilities are designed to meet different peaking characteristics. Therefore, extra capacity costs include repair & maintenance, personnel, capital improvements and a portion of debt, and have been apportioned between base, maximum day, and maximum hour. Costs allocated to base are allocated above.

Costs associated with peaking and conservation are apportioned to each defined customer class based on their total demand (total water used weighted by peak factor). Peaking factors are calculated for each customer class based on the customer class's maximum monthly consumption divided by their average monthly consumption. A weighted peaking factor is calculated by multiplying the peaking factor by the customer class's annual usage. The customer class's weighted peak over the total of the weighted peaking factor yields that class's percentage of total peak. Total peaking costs are multiplied by percentage of peak in order to determine the total to be recovered from peaking charges from each customer class. This ensures that accounts within each customer class will only recover the costs allocated to their respective customer class in proportion to the cost of providing service. **Table 5-8** show the peak costs allocated between each customer class.

Table 5-8: Peak Cost Allocation to Customer Class

	A	B	C	D=C/B	A*D		
Customer Class	Annual Usage	Average Month	Max Month	Peaking Factor	Weighted Peak	Percentage of Peak	Allocated Peak Costs
Residential	373,225	33,407	44,278	1.33	494,674	60%	$314,150
Non-Residential	260,595	23,326	29,611	1.27	330,815	40%	$210,089
Total	**633,820**					**100%**	**$524,239**

Once peak and conservation costs are allocated to each customer class, the next step is to design the most equitable and appropriate rate structure to recover such costs from the corresponding customer class to ensure proportionality between accounts. The proposed variable rate structure for residential customers is a 2-tiered structure, and a uniform rate structure for non-residential customers.

5.2.2.3.1 Peaking Cost Allocation by Tiers and Customer Class

Using the defined tiers and allotments from Section 5.1, the functional variable costs are then applied to each tier. Similar to how costs may be apportioned to different groups of customers based on usage characteristics to show proportionality, maximum day and maximum hour costs were apportioned between tiers based on the unique usage characteristics of customers within each tier

As part of allocating costs between each tier, usage as well as the peaking characteristics of each Tiered Customer Class was analyzed, where Tier 1 is the baseline with a Peak Factor of 1.0. The peaking factor for Tier2 was calculated by taking the maximum average usage of the tier and dividing by the average usage within the tier for the full year. **Table 5-12** shows the residential peaking factors by tier.

Table 5-9: Peaking Factors for Residential Tiers

Tier	Average number of monthly accounts	Average Usage (per Month)	Maximum Usage (per Month)	Peak Factor
Tier 1	516	7.00	7.00	1.00
Tier 2	1042	29.76	37.89	1.27

Table 5-10 illustrates FY 2016 peak costs allocated between tiers by weighting the peak factors by the total usage in each Tier. Note the respective unit costs derived from this analysis become the tier demand values in the variable rate component.

Table 5-10: FY 2016-17 Residential Allocation of Peak Costs by Tier

Residential	FY 2017 Usage	Peaking Factors	Weighted Peak Factor	Percent of Weighted Peak Factor	Allocated Peak Cost	Unit Rate
Residential						
Tier 1	104,028	1.00	104,028	23%	$73,158	$0.71
Tier 2	269,197	1.27	342,685	77%	$240,993	$0.90
Total	**373,225**			**100.00%**	**$314,150**	

5.2.2.3.2 Non-Residential Peaking Allocation

For non-residential customers, all variable charges including peak costs are summed to derive a uniform rate per hcf rather than a tiered rate structure. **Table 5-11** presents the non-residential allocation of peak costs.

Table 5-11: FY 2016-17 Non-Residential Allocation of Peak Costs

Customer Class	Annual Usage	Peaking Factor	Weighted Peak Factor	Percentage of Peak	Allocated Peak Costs	Unit Rate
Non-Residential	260,595	1.27	330,815	40%	$210,089	$0.81

5.2.2.4 Economic Costs

The District instructed RFC to design a portion of the rates to recover the economic cost of water in the Borrego Valley. The costs discussed in this section were taken from a Technical Memorandum from Dudek entitled "Water Replacement and Treatment Cost Analysis for the Borrego Valley Groundwater Basin" (Groundwater Report).

The report stated that roughly 30% of the District's annual water use can be naturally recharged in the basin. However, after a certain point the groundwater will have to be treated to remain in compliance with California State water quality standards. Therefore, RFC constructed an economic charge based on

the Groundwater Report to account for the capital cost associated with treating groundwater to the state mandated standards.

This charge is assessed on all water deemed unsustainable, or unable to be recharged by natural recharge processes. In light of the current prolonged drought, RFC used a lower figure of 25% of total demand as being able to naturally recharge. Therefore, 25% of the water used by each customer class was classified as sustainable, and the remaining 75% of usage is assessed for the capital costs of treatment ($62 per acre foot.[6]) to ensure the continued delivery of safe and healthy potable water. This $62 per acre foot (AF) cost is charged on 75% of the water sold in FY 2017. The total cost is shown in **Figure 5-2** below.

The Dudek Technical Memo lists other economic costs beyond the $62 per AF that RFC used as an economic cost. However, the $62 per AF represents the Capital Cost of treatment, whereas other costs represent the O&M costs associated with operating these plants or the costs associated with importing water. These costs were omitted because the District isn't currently importing water and the additional operational cost related to the treatment facilities will be incurred after the facilities are constructed.

Figure 5-2: Economic Cost of Water Recovery

$$\$62 * 1455AF * .75 = \$67,660$$

Table 5-12A shows the Residential Economic Cost allocated to each tier and **Table 5-13B** shows the non-residential Economic Cost calculation. These tables explain the allocation of the economic cost of water. Column A shows total projected water usage in FY 2017. Column B shows the amount considered sustainable, which is 25% of the total for each class. Sustainable use was allocated first to Tier 1 for residential customers. Column C is the difference between Columns A and B. The total economic cost of water from **Figure 5-2** is then allocated to each according to the percentage of unsustainable water use, and divided by total usage in FY 2017 to determine the unit rate. Note that, with the exception of columns A and D, the Total line shows the total for the entire utility, columns A and D show the total only for the class.

Table 5-12A: FY 2016-17 Residential Economic Cost Allocation

	A	B=.25*A	C=A-B	D	E= D*Figure 5-2	F=E/A
Residential	Usage in FY 2017	Sustainable Use	Unsustainable Use	Percent of Unsustainable Use	Allocated Economic Cost	Cost Per hcf
Residential						
Tier 1	104,028	93,306	10,722	2.3%	$1,526	$0.02
Tier 2	269,197	0	269,197	56.6%	$38,315	$0.15
Total	**373,225**	**158,455**	**475,365**	**58.9%**	**$67,660**	

[6] See Dudek, "Water Replacement and Treatment Cost Analysis for the Borrego Valley Groundwater Basin" (December 18, 2015) available at http://www.borregowd.org/uploads/2016.02.16_BWD_Board_Package.pdf, pp. 37-50

Table 5-13B: Non-Residential Economic Cost Allocation

	A	B=.25*A	C=A-B	D	E= D*Figure 5-2	F=E/A
Non-Residential	Usage in FY 2017	Sustainable Use	Unsustainable Use	Percent of Unsustainable Use	Allocated Economic Cost	Cost Per hcf
Non-Residential	**260,595**	65,149	195,446	41.1%	$27,818	$0.11
Total	**260,595**	**158,455**	**475,365**	**41.1%**	**$67,660**	

5.2.2.5 Proposed Variable Rates

The above costs are totaled in **Table 5-14** below which shows the proposed Commodity Rates for FY 2016-17 and **Table 5-14** shows proposed rates through FY 2020-21. These rates are multiplied by the rate adjustments in Section 3.2 to determine the rates for the next year.

Table 5-14: Proposed Residential Variable (Commodity) Rates by Tier

	Supply Cost	Base Cost	Peaking Cost	Economic Cost	Total
Residential					
Tier 1	$0.86	$1.57	$0.71	$0.02	$3.16
Tier 2	$0.86	$1.57	$0.90	$0.15	$3.48
Non-Residential	$0.86	$1.57	$0.81	$0.11	$3.35

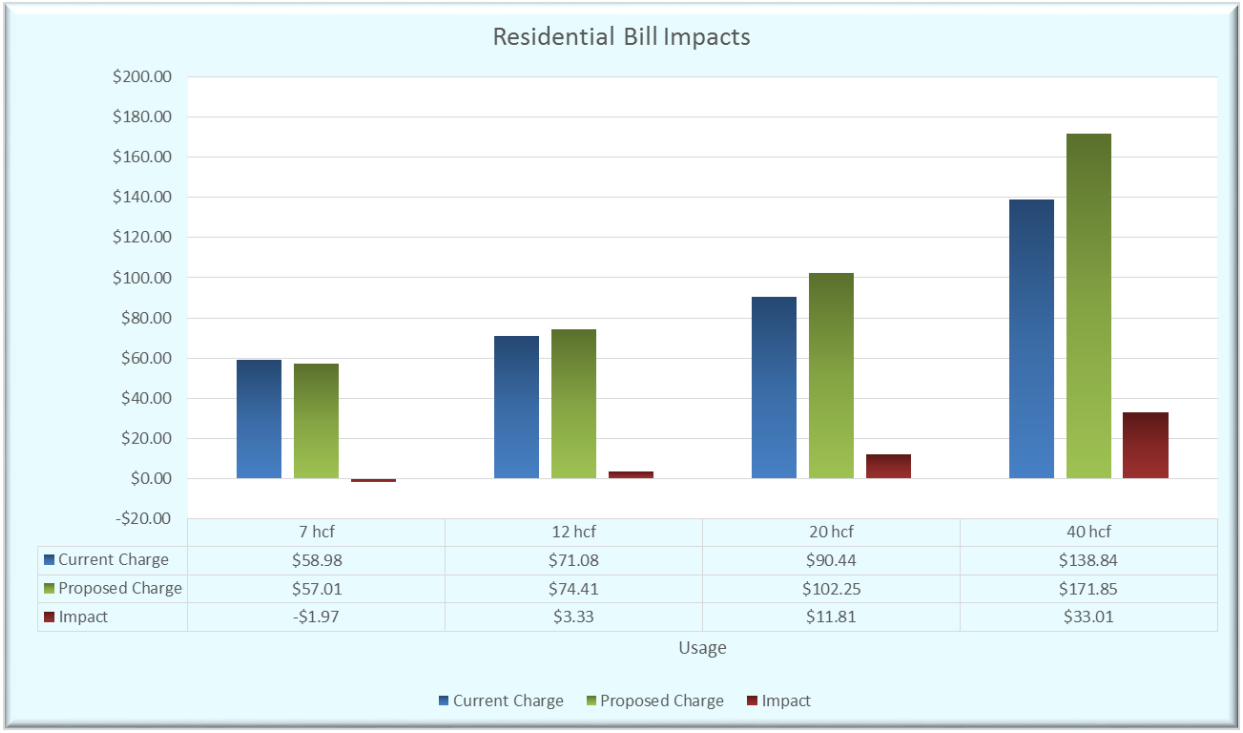
Table 5-14: Proposed Five-Year Commodity Base Rates

Customer Class	FYE 2017 Rates	FYE 2018 Rates	FYE 2019 Rates	FYE 2020 Rates	FYE 2021 Rates
Residential					
Tier 1	$3.16	$3.35	$3.56	$3.78	$4.01
Tier 2	$3.48	$3.69	$3.92	$4.16	$4.41
Non-Residential	$3.35	$3.55	$3.77	$4.00	$4.24

5.3 CUSTOMER IMPACTS

Figure 5-3 shows the relative residential bill impact of the new rates and adjusted rate structure. The below figure shows the comparative impacts of bills at different usages for accounts with a ¾" meter.

Figure 5-3: Residential Bill Impacts



	7 hcf	12 hcf	20 hcf	40 hcf
Current Charge	$58.98	$71.08	$90.44	$138.84
Proposed Charge	$57.01	$74.41	$102.25	$171.85
Impact	-$1.97	$3.33	$11.81	$33.01

6 WASTEWATER FUND - FINANCIAL PLAN AND RATES

6.1 WASTEWATER REVENUE REQUIREMENTS

Similar to water, a review of wastewater's revenue requirements is a key first step in the rate study process. The review involves an analysis of annual operating revenues under the status quo, operation and maintenance (O&M) expenses, transfers between funds and reserve requirements. This section of the report provides a discussion of the projected revenues, O&M expenses, other reserve funding and revenue adjustments estimated as required to ensure the fiscal sustainability and solvency of the Wastewater Fund.

6.1.1 Revenues from Current Sewer Rates

The District provides sewer collection services within its service area for both residential and commercial use. The District provides Wastewater service to three separate Improvement Districts (IDs). These Districts are: ID 1, ID 2, and ID 5. With the exception of the Borrego Springs Resort in ID 5, all sewer users pay a flat monthly charge that changes depending on ID. Borrego Springs Resort pays an additional usage charge per unit of water used.

Table 6-1: Current Wastewater Charges

ID/ Customer	FY 2016 Monthly Charge
ID-1	$33.56
ID-2 Holders	$19.42
ID-2 Users	$10.00
ID-5	$62.62
Borrego Springs Resort (Account)	$62.62
Borrego Springs Resort (Usage)	$1.30

The District also assesses a charge on ID-2 permit Holders. These are customers that have yet to connect to the Sewer system. ID-2 Users, those actually connected to and using the sewer system, pay the sum of both the Holder and User charge.

District staff provided RFC with the estimated number of accounts for FYE 2015. **Table 6-2** provides a summary of the projected number of sewer accounts by customer type.

Table 6-2: Account and Usage Summary

Customer Type	FY 2016 (Current)	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
ID-1	266	266	266	266	266	266
ID-2 Holders	735	735	735	735	735	735
ID-2 Users	333	333	333	333	333	333
ID-5	275	275	275	275	275	275
Borrego Springs Resort (Account)	5	5	5	5	5	5
Borrego Springs Resort (Usage)	11,643	11,643	11,643	11,643	11,643	11,643

By multiplying the charges outlined above by the relevant number of accounts or amount of usage, RFC projected revenues for the utility for the Study Period. Projected operating revenues are shown in **Table 6-3** below.

Table 6-3 shows the projected revenue based on rates and total accounts identified in **Table 6-1** and **Table 6-2**, respectively.

Table 6-3: Projected Operating Revenues at Current Rates

Customer Type	FYE 2016 (Current)	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021
ID-1	$107,124	$107,124	$107,124	$107,124	$107,124	$107,124
ID-2 Holders	$171,284	$171,284	$171,284	$171,284	$171,284	$171,284
ID-2 Users	$39,960	$39,960	$39,960	$39,960	$39,960	$39,960
ID-5	$206,646	$206,646	$206,646	$206,646	$206,646	$206,646
Borrego Springs Resort (Account)	$3,757	$3,757	$3,757	$3,757	$3,757	$3,757
Borrego Springs Resort (Usage)	$15,136	$15,136	$15,136	$15,136	$15,136	$15,136
Total	$543,907	$543,907	$543,907	$543,907	$543,907	$543,907

6.1.2 Wastewater Operations and Maintenance Expenses

The District's FYE 2016 budget values and the assumed inflation factors for the Study Period (as detailed in Section 2.1) were used as the basis for projecting O&M costs. **Table 6-4** summarizes budgeted and projected O&M expenses for the Wastewater Fund.

Table 6-4: Wastewater O&M Summary

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Repairs & Maintenance	$132,000	$135,960	$140,039	$144,240	$148,567	$153,024
Professional Services	$20,719	$21,341	$21,981	$22,641	$23,320	$24,019
Insurance	$10,751	$11,074	$11,406	$11,748	$12,100	$12,464
Personnel Expense	$113,242	$118,904	$124,850	$131,092	$137,647	$144,529
Employee Benefits	$50,774	$53,313	$55,978	$58,777	$61,716	$64,802
Office expense	$11,597	$11,945	$12,303	$12,672	$13,052	$13,444
Utilities	$65,439	$68,710	$72,146	$75,753	$79,541	$83,518
Total	$404,522	$421,247	$438,703	$456,923	$475,944	$495,800

6.1.3 Projected Capital Improvement Plan (CIP)

While the wastewater utility has a less capital intensive CIP than the water utility, it still has a significant slate of projects upcoming. The District is anticipating spending roughly $1.85 million in Wastewater CIP through FY 2021. A summary of the inflated cost of the Wastewater CIP is shown in **Table 6-5**.

Table 6-5: Wastewater CIP Summary

	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021
Total CIP – Wastewater	$477,588	$400,260	$46,786	$282,124	$54,723	$59,182
Short Live Assets Replacement Program – Wastewater	$142,000	$59,850	$89,104	$68,937	$81,735	$85,398
Total	**$619,588**	**$460,110**	**$135,890**	**$351,061**	**$136,458**	**$144,580**

6.1.4 Current Debt

Currently the wastewater utility only has one debt obligation outstanding. This is the 2009 Private Placement. The annual debt service for this loan totals $20,544 annually. This obligation can be seen in **Table 6-6** below.

Table 6-6: Wastewater Existing Debt

	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021
Viking Ranch Refinance						
Wastewater Portion	$20,544	$20,544	$20,544	$20,544	$20,544	$20,544
Total	**$20,544**	**$20,544**	**$20,544**	**$20,544**	**$20,544**	**$20,544**

6.2 WASTEWATER STATUS QUO FINANCIAL PLAN

6.2.1 Wastewater Proforma

Table 6-7 displays the proforma of the District's Wastewater Fund under current rates over the Study Period. All projections shown in the Table are based upon the current rate structure and do not include any rate adjustments. The pro-forma incorporates the data shown in Section **6.1**.

Under the "status-quo" scenario, revenues generated from rates are inadequate to sufficiently recover both operating and capital expenses of the utility beginning in FYE 2016. Though current operating revenues do exceed operating costs, they are insufficient to also fund the utility's capital program and would require the use of reserves. While the ending reserve balance is already below target levels, it dives further below target levels under the status quo scenario and is negative by FYE 2017.

Table 6-7: Status Quo Wastewater Operating Cash Flow

Borrego Water District
Operating Cash Flow

Line No.		FY 2016 $	FY 2017 $	FY 2018 $	FY 2019 $	FY 2020 $	FY 2021 $
4	**Total Rate Revenue**	$543,907	$543,907	$543,907	$543,907	$543,907	$543,907
5	Other Revenue	$0	$0	$0	$0	$0	$0
6							
7	Interest Revenue	$6,473	$1,633	$1,587	$1,539	$1,490	$1,438
8	**Total Revenue**	**$550,380**	**$545,540**	**$545,494**	**$545,446**	**$545,397**	**$545,345**
	Revenue Requirements						
9	O&M	$404,522	$421,247	$438,703	$456,923	$475,944	$495,800
10							
11	Existing Debt Service	$20,544	$20,544	$20,544	$20,544	$20,544	$20,544
12	Proposed Debt Service	$0	$0	$0	$0	$0	$0
15	**Total Revenue Requirements**	**$425,066**	**$441,791**	**$459,246**	**$477,467**	**$496,487**	**$516,344**
16	**Net Annual Cash Balance**	$125,314	$103,749	$86,248	$67,979	$48,909	$29,001
17	**Coverage Requirements**	115%	115%	115%	115%	115%	115%
18	**Coverage Ratio**	710%	605%	520%	431%	338%	241%

Table 6-8: Status Quo Wastewater Reserve Balances

Borrego Water District
Reserve Funds

Line No.			FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
	Cash Reserve							
1	*Source of Funds*							
2	Beginning Balance		574,347	$101,131	$105,312	$109,676	$114,231	$118,986
	Transfer to CIP Spending		-$598,530	-$99,568	-$81,884	-$63,424	-$44,154	-$24,037
3	Net Annual Cash Balance		$125,314	$103,749	$86,248	$67,979	$48,909	$29,001
4	**Total Funds Available**		$101,131	$105,312	$109,676	$114,231	$118,986	$123,950
9	Reserve Target	33%	$133,492	$139,011	$144,772	$150,785	$157,061	$163,614
10	Minimum Reserve Balance	25%	$101,131	$105,312	$109,676	$114,231	$118,986	$123,950
	Capital Reserve							
11	*Source of Funds*							
12	Beginning Balance			-$21,058	-$381,600	-$435,606	-$723,243	-$815,546
13	Bond Proceeds		$0	$0	$0	$0	$0	$0
14	Transfer from Cash Reserve		$598,530	$99,568	$81,884	$63,424	$44,154	$24,037
15	**Total Funds Available**		$598,530	$78,510	-$299,716	-$372,182	-$679,088	-$791,509
	Use of Funds							
16	CIP Spending & Short Lived Assets		$619,588	$460,110	$135,890	$351,061	$136,458	$144,580
17								
18	**Total Use of Funds**		$619,588	$460,110	$135,890	$351,061	$136,458	$144,580
19	**Fund Balance Before Interest**		**-$21,058**	**-$381,600**	**-$435,606**	**-$723,243**	**-$815,546**	**-$936,089**
20	Interest		$0	$0	$0	$0	$0	$0
21	**Ending Fund Balance**		**-$21,058**	**-$381,600**	**-$435,606**	**-$723,243**	**-$815,546**	**-$936,089**
	Target		**$340,621**	**$245,620**	**$253,216**	**$262,235**	**$206,995**	**$530,888**

6.3 PROPOSED FINANCIAL PLAN

6.3.1 Proposed Revenue Adjustments

As shown in the proforma above, the District's current capital improvement plan cannot be completed under current rates without significant reserve drawdown, which would result in a negative reserve balance by FYE 2017. RFC proposes the following revenue adjustments through FY 2020-21 which will allow the sewer enterprise to meet its obligations: 9 percent (9%) revenue adjustment for FY 2016-17 and 4 percent (4%) revenue adjustments in subsequent years. These revenue adjustments are scheduled to go into effect on July 1 of each Fiscal Year.

6.3.2 Proposed Debt Issuances

RFC proposes that the utility issue debt, once in FY 2017 and again in FY 2019 with a value of $0.46 million and $0.5 million, respectively.

6.3.3 Proposed Wastewater Proforma

Table 6-9 shows the proforma for the Wastewater enterprise under proposed revenue adjustments and with the additional proposed debt issuance. These revenue adjustments and the addition of the debt issuances allows the utility to maintain financial viability through the Study Period and begin to build its reserves so that funding its capital program does not result in significant reserve drawdown.

Table 6-9: Proposed Wastewater Operating Cash Flow

Borrego Water District
Operating Cash Flow

Line No.		FY 2016 $	FY 2017 $	FY 2018 $	FY 2019 $	FY 2020 $	FY 2021 $
1	**Revenue from Existing Retail Rates**	$543,907	$543,907	$543,907	$543,907	$543,907	$543,907
2	Revenue from Rate Adjustments	$0	$48,952	$72,666	$97,329	$122,978	$149,654
3							
4	**Total Rate Revenue**	$543,907	$592,859	$616,573	$641,236	$666,885	$693,561
6							
7	Interest Revenue	$6,473	$1,879	$1,952	$2,028	$2,108	$2,190
8	**Total Revenue**	**$550,380**	**$594,737**	**$618,525**	**$643,264**	**$668,993**	**$695,750**
	Revenue Requirements						
9	O&M	$404,522	$421,247	$438,703	$456,923	$475,944	$495,800
10							
11	Existing Debt Service	$20,544	$20,544	$20,544	$20,544	$20,544	$20,544
12	Proposed Debt Service	$0	$33,067	$33,067	$69,009	$69,009	$69,009
13	Transfer to Contingency						
14	Transfer to Rate Stabilization						
15	**Total Revenue Requirements**	**$425,066**	**$474,857**	**$492,313**	**$546,476**	**$565,496**	**$585,352**
16	**Net Annual Cash Balance**	$125,314	$119,880	$126,212	$96,789	$103,497	$110,398
17	**Coverage Requirements**	115%	115%	115%	115%	115%	115%
18	**Coverage Ratio**	710%	324%	335%	208%	216%	223%

Table 6-10: Proposed Wastewater Reserve Levels

Borrego Water District
Reserve Funds

Line No.			FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
	Cash Reserve							
1	*Source of Funds*							
2	Beginning Balance		574,347	$101,131	$105,312	$109,676	$114,231	$118,986
	Transfer to CIP Spending		-$598,530	-$115,699	-$121,848	-$92,233	-$98,742	-$105,434
3	Net Annual Cash Balance		$125,314	$119,880	$126,212	$96,789	$103,497	$110,398
4	**Total Funds Available**		$101,131	$105,312	$109,676	$114,231	$118,986	$123,950
9	Reserve Target	33%	$133,492	$139,011	$144,772	$150,785	$157,061	$163,614
10	Minimum Reserve Balance	25%	$101,131	$105,312	$109,676	$114,231	$118,986	$123,950
	Capital Reserve							
11	*Source of Funds*							
12	Beginning Balance			-$21,058	$94,899	$81,736	$324,931	$290,276
13	Bond Proceeds		$0	$460,000	$0	$500,000	$0	$0
14	Transfer from Cash Reserve		$598,530	$115,699	$121,848	$92,233	$98,742	$105,434
15	**Total Funds Available**		$598,530	$554,641	$216,747	$673,969	$423,673	$395,710
	Use of Funds							
16	CIP Spending & Short Lived Assets		$619,588	$460,110	$135,890	$351,061	$136,458	$144,580
17								
18	**Total Use of Funds**		$619,588	$460,110	$135,890	$351,061	$136,458	$144,580
19	**Fund Balance Before Interest**		**-$21,058**	**$94,531**	**$80,857**	**$322,908**	**$287,215**	**$251,130**
20	Interest		$0	$367	$879	$2,023	$3,061	$2,707
21	**Ending Fund Balance**		**-$21,058**	**$94,899**	**$81,736**	**$324,931**	**$290,276**	**$253,837**
	Target		**$340,621**	**$245,620**	**$253,216**	**$262,235**	**$206,995**	**$224,630**

Figure 6-1 through **Figure 6-4** show a snapshot of the financial plan in graphical form.

Figure 6-1 shows the proposed rate adjustments as blue bars, the resulting debt coverage ratio as a green line, and the required debt coverage of 125% of debt service as a red line.

Figure 6-2 shows the proposed wastewater operating financial plan. The stacked bars are the utility's projected revenue requirements, the red line indicates the projected revenues without the revenue adjustments, and the green line is the projected revenue with proposed revenue adjustments.

Figure 6-3 shows the wastewater utility fund's projected annual CIP spending and the source of the funding. Green bars indicate pay-as-you go (PAYGO) funding, and red bars indicate debt funded projects.

Figure 6-4 shows the wastewater utility fund's yearly ending balance. The blue lines indicate the ending balance, the red line indicates the utility's upper target balance and the green line indicates the lower target balance. The red dots indicate when the utility's ending balance is below the target balance.

Figure 6-1: Wastewater Revenue Adjustments and Debt Coverage

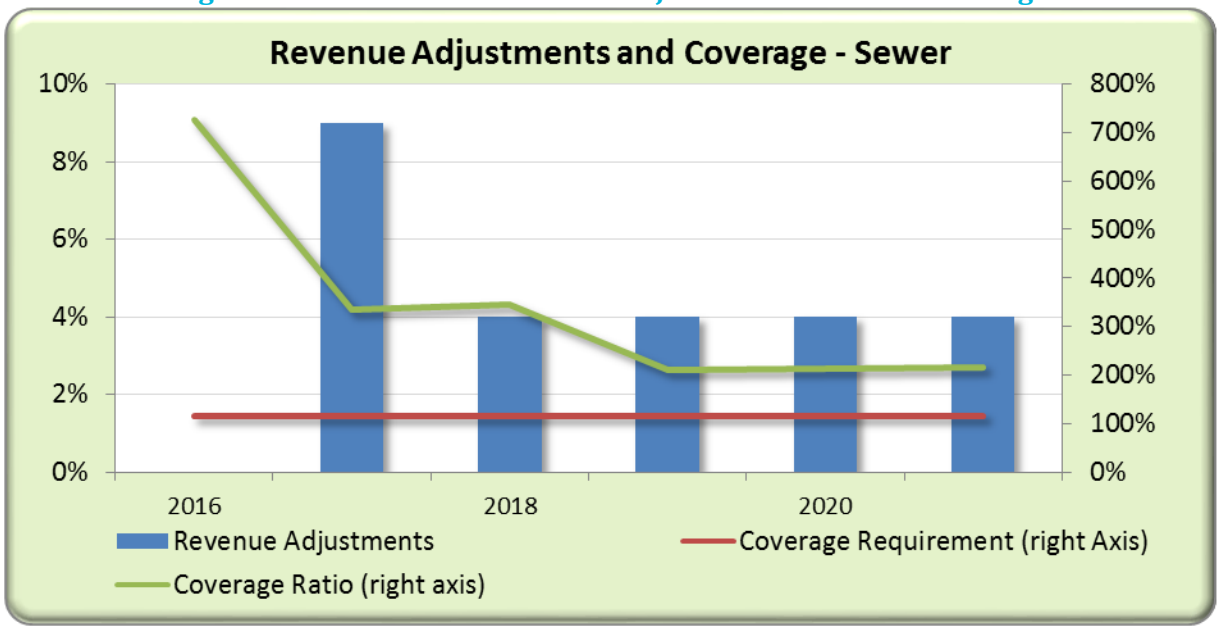


Figure 6-2: Wastewater Operating Financial Plan

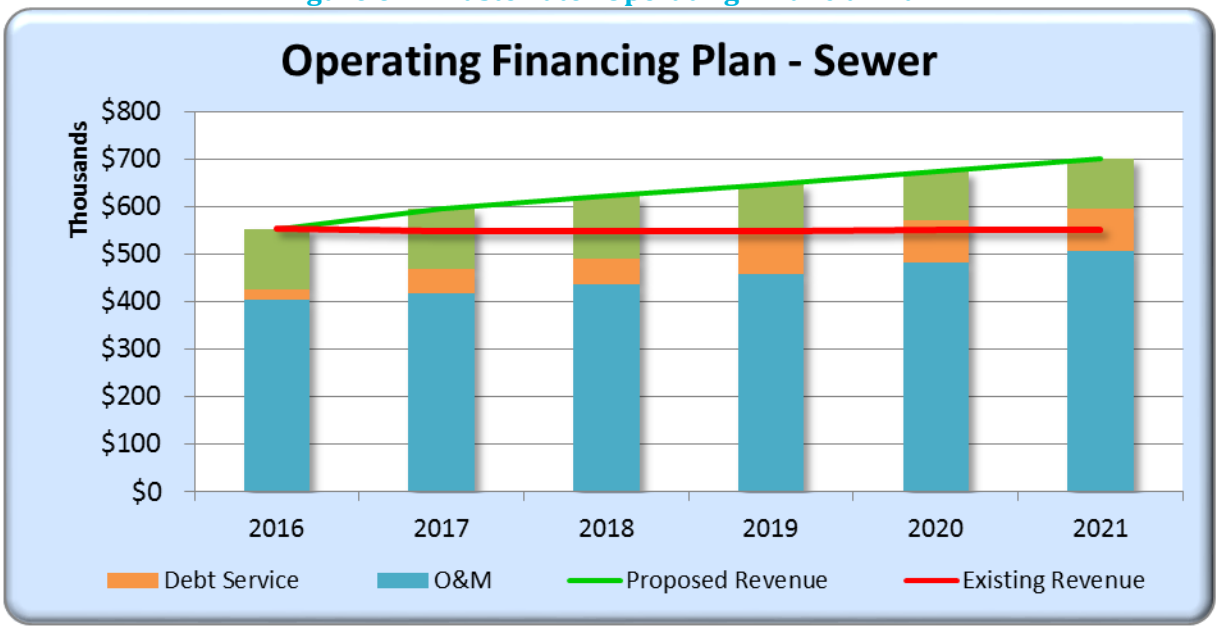


Figure 6-3: Wastewater Utility CIP Funding

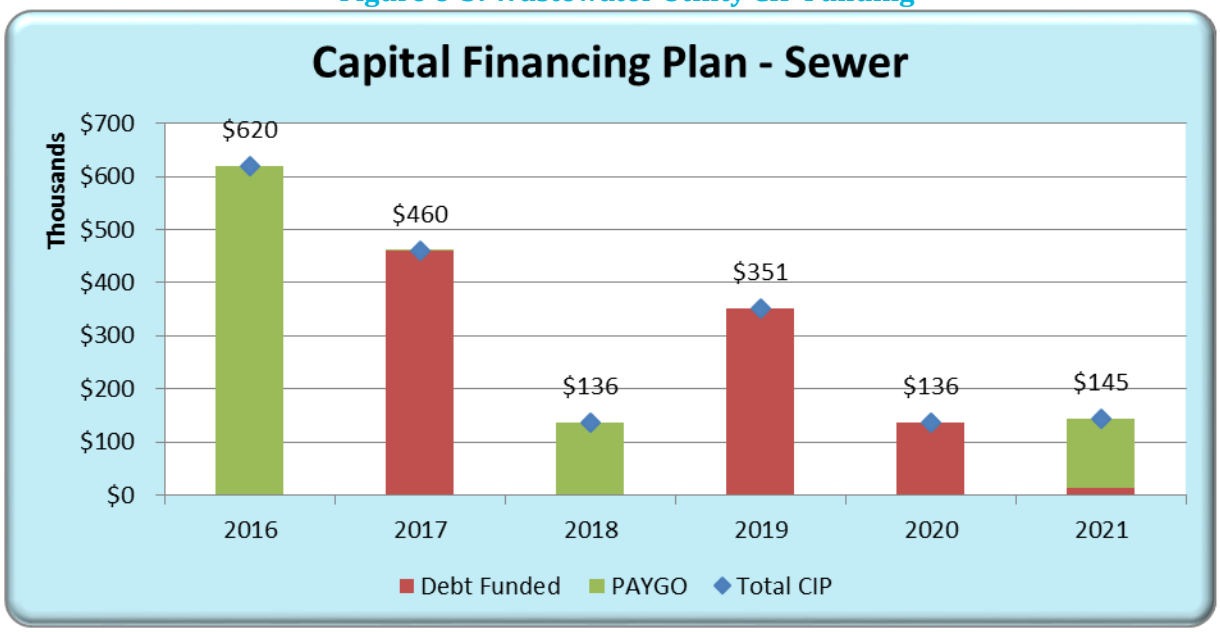
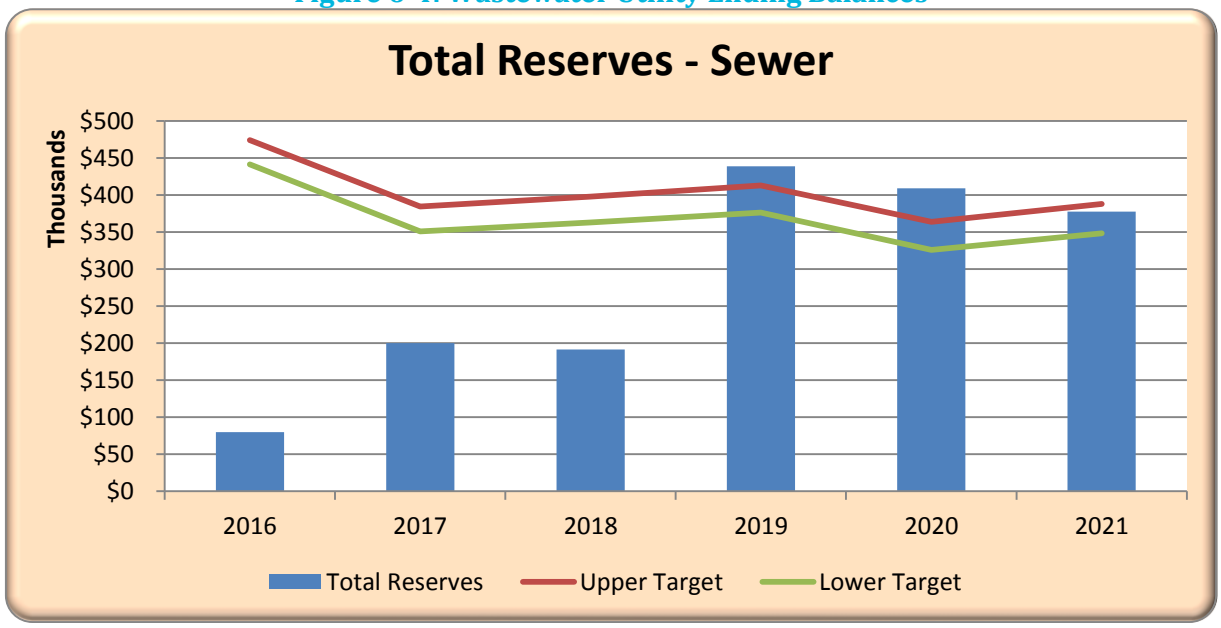


Figure 6-4: Wastewater Utility Ending Balances



6.4 WASTEWATER COST OF SERVICE AND RATE DEVELOPMENT

For the analysis, a "test" year was established in which revenue requirements for that year were evaluated and the resulting rates for that year were calculated. The following analysis uses FY 2016-17 as the test year.

6.4.1 Wastewater Cost of Service Allocation

Proposition 218 requires a nexus between the rates charged and the costs of providing service. Based on the proposed financial plan, the cost of service analysis translates this financial requirement into actual rates.

The first step in the cost of service analysis is to determine how much revenue is required to be collected from rates. The methodology used is based upon the premise that the utility must generate annual revenues adequate to meet its estimated annual expenses. As part of the cost of service analysis, several adjustments are made to the appropriate cost elements to ensure adequate collection of revenue by determining the annual revenues needed from rates: revenues from sources other than rates and charges (e.g. revenues from miscellaneous services) are deducted. **Table 6-11** shows the initial allocation process. The cost of service analysis is dependent on each ID's flow. The cost of service for each class also depends on the revenue requirement for the utility. The following section describes the methodology used to allocate the utility's operating and capital costs to three cost causation components – 1) wastewater flow, 2) bio-oxygen demand (BOD), 3) total suspended solids (TSS), 4) lift expenses and 5) fixed costs.

RFC received input from with District Staff to functionalize O&M costs. The results are shown below in **Table 6-11**.

Table 6-11: Initial Wastewater Cost Allocation

Description	Total Wastewater Expenses	Variable (Flow) %	BOD %	TSS %	Lift (%)	Fixed %
Repairs & Maintenance	$135,960	14.17%	14.17%	14.17%	15.00%	42.50%
Professional Services	$21,341				15.00%	85.00%
Insurance	$11,074				15.00%	85.00%
Personnel Expense	$118,904					100.00%
Employee Benefits	$53,313					100.00%
Office expense	$11,945					100.00%
Utilities	$68,710	85.00%			15.00%	

Table 6-12 shows the calculated results of the cost allocation process.

Table 6-12: Initial Wastewater Cost Allocation Amounts

Description	Total Wastewater Expenses	Flow	BOD	TSS	Lift	Fixed
Repairs & Maintenance	$135,960	$19,261	$19,261	$19,261	$20,394	$57,783
Professional Services	$21,341	$0	$0	$0	$3,201	$18,140
Insurance	$11,074	$0	$0	$0	$1,661	$9,413
Personnel Expense	$118,904	$0	$0	$0	$0	$118,904
Employee Benefits	$53,313	$0	$0	$0	$0	$53,313
Office expense	$11,945	$0	$0	$0	$0	$11,945
Utilities	$68,710	$58,404	$0	$0	$10,307	$0
Total	$421,247	$77,665	$19,261	$19,261	$35,563	$269,497
Existing Debt Service	$20,544					
Proposed Debt Service	$33,067					
Fund Balance	$119,880					
Total	**$594,737**	**$109,651**	**$27,194**	**$27,194**	**$50,209**	**$380,490**
Percent		18.44%	4.57%	4.57%	8.44%	63.98%

The next step was to allocate FY 2017's projected revenues to the correct cost center. This was done by taking the utility's FY 2017 expected revenue and multiplying by its total allocation percentage to calculate the final Revenue Allocation for the utility. The resulting Revenue Requirement is just under $0.6 million, and was allocated amongst the cost centers in the percentages shown in **Table 6-12**.

6.4.2 Wastewater Rate Development

Table 6-13 shows the utility's FY 2017 projected accounts and flows alongside the relevant revenue requirement for each cost center, as well as the costs per unit. The unit rates in the column at the right are obtained by dividing the FY 2017 projected cost by the FY 2017 projected totals.

Table 6-13: Total Revenue Requirement and FY 2016-17 Projected Totals

Totals	FYE 2017 Projected Totals	Projected FYE 2017 Cost
Accounts/Units	1,281	$380,490
Flow (hcf)	33,442	$109,651
BOD	72,481	$27,194
TSS	76,569	$27,194
Lifted Flow (hcf)	23,866	$50,209
Total		$594,737

The unit costs shown in **Table 6-13** are then applied to the wastewater flow and estimated loadings from each customer class, shown in **Table 6-15**, **Table 6-16**, **Table 6-17**, and **Table 6-18** to determine the cost to serve (or cost of service) for each Improvement District.

The assumed flow for all accounts that are not the Borrego Springs Resort is 3 hcf/month. This figure is in part based on the Water Tier 1 allocation of 6 hcf per month but also takes into account the snowbird nature of the District's community, and therefore the return factor is 50%. The total flow in hcf is based on the flow in FY 2015 as provided to RFC by the District. It was assumed that the Borrego Springs Resort would account for the remainder of flow.

The loading figures in **Table 6-15** through **Table 6-18** are taken from the 2014 Update of the Los Angeles County Sewer District Revenue Program Report. This report lists average TSS and BOD strength of flow by customer type. RFC assumed that all customers in IDs 1, 2 and most in ID 5, would have Residential strength characteristics (denoted by the values of 338 mg/L for BOD and 272 mg/L for TSS). The exceptions in ID 5 are the Borrego Springs Resort accounts which have the assumed strength of 500 mg/L of BOD and 600 mg/L of TSS.

The Flow Calculation is shown in **Table 6-14**. The total flow per account per day in ID-1, ID-2, and ID-5, works out to nearly 75 gallons.

Table 6-14: Annual Flow Calculation

ID/Customer Class	Residential Accounts	Gallons Per day	Gallons per Month	Gallons Per Year	Units per Year
Total Flow	874	69,489	2,084,684	25,016,209	33,442
ID 1	266	19,897	596,904	7,162,848	9,576
ID 2	333	24,908	747,252	8,967,024	11,988
ID 5	275	20,570	617,100	7,405,200	9,900
Borrego Springs Resort	5	4,114	123,428	1,481,137	1,978

Table 6-15: FYE 2017 ID-1 Allocation

ID 1	Residential	FY 2017 Projected	Percentage of Total	Projected FY 2017 Cost
	Accounts/Units	266	21%	$79,009
3.00	Flow (hcf/account/month)	9,576	29%	$31,398
338	BOD	20,181	28%	$7,571
272	TSS	16,266	21%	$5,777
	Total Variable Cost			$44,747

Table 6-16: FYE 2017 ID-2 Allocation

ID 2	Users	FY 2017 Projected	Percentage of Total	Projected FY 2017 Cost
	Accounts/Units	333	26%	$98,909
3.00	Flow (hcf/account/month)	11,988	36%	$39,307
338	BOD	25,264	35%	$9,478
272	TSS	20,363	27%	$7,232
	Total Variable Cost			$56,017

ID 2	Holders	FY 2017 Projected	Percentage of Total	Projected FY 2017 Cost
	Accounts/Units	402	31%	$119,404

Table 6-17: FYE 2017 ID-5 and Borrego Springs Resort Allocation

ID 5	Residential	FY 2017 Projected	Percentage of Total	Projected FY 2017 Cost
	Accounts/Units	275	21%	$81,682
3.0	Flow (hcf/account/month)	9,900	30%	$32,461
338	BOD	20,863	29%	$7,828
272	TSS	16,816	22%	$5,972
	Total Variable Cost			$46,261

ID 5	Borrego Springs Resort	FY 2017 Projected	Percentage of Total	Projected FY 2017 Cost
	Accounts/Units	5	0%	$1,485
	Flow (hcf)	1,978	6%	$6,485
500	BOD	6,174	9%	$2,316
600	TSS	23,124	30%	$8,213
	Total Variable Cost			$17,014

Table 6-18: FY 2017 Lift Allocation

Lift Accounts	FY 2017 Projected	Percentage of Total	Projected FY 2017 Cost
Total Lifted Flow	23,866		$50,209
ID 2	11,988	50%	$25,221
ID 5	9,900	41%	$20,828
Borrego Springs	1,978	8%	$4,161

For FY 2017 rates, the final rates for each improvement district were calculated by dividing the costs associated with each Improvement District by the total number of accounts in that district multiplied by the number of bills per year. For example: the FY 2017 monthly rate for ID 1 is calculated by dividing the account cost by the total number of accounts in ID 1 multiplied by 12. By doing the same process for the Variable Cost, and adding it to the monthly account charge the totally rate for FY 2017 is calculated. These are shown in **Table 6-19**.

Table 6-19: FY 2017 Rate Calculation

Customer Class	Total Accounts	Account Cost	Account Charge	Variable Cost	Variable Charge	Lift Cost	Lift Charge	FY 2017 Monthly Rate
ID 1	266	$79,009	**$24.76**	$44,747	**$14.02**			***$38.78***
ID 2 User	333	$98,909	**$24.76**	$56,017	**$14.02**	$25,221	**$6.32**	***$45.10***
ID 2 Holder	402	$119,404	**$24.76**					***$24.76***
ID 5	275	$81,682	**$24.76**	$46,261	**$14.02**	$20,828	**$6.32**	***$45.10***
Borrego Springs Resort	5	$1,485	**$24.76**					***$24.76***

Table 6-20 shows the cost per unit of Borrego Springs Resort. It is the sum of both the Lift Cost and Variable Cost divided by the total water usage that the Resort is projected to be billed for in FY 2017. Note that the Resort's total water usage is expected to be more than its projected flow.

Table 6-20: FY 2017 Borrego Springs Usage Rate Calculation

Usage	Total Usage	Lift Cost	Variable Cost	Cost per Unit
Borrego Springs Usage	11,643	$4,161	$17,014	$1.82

These rates were escalated by the revenue adjustment percentages in the financial plan to find the rates for the remainder of the study period. These are shown in **Table 6-21**.

Table 6-21: Wastewater Rates through FY 2021

Customer Class	Current Rate	Proposed FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
ID 1	$33.56	$38.78	$40.33	$41.94	$43.62	$45.37
ID 2 User	$29.42	$45.10	$46.90	$48.78	$50.73	$52.76
ID 2 Holder	$19.42	$24.76	$25.75	$26.78	$27.85	$28.97
ID 5	$62.62	$45.10	$46.90	$48.78	$50.73	$52.76
Borrego Springs Resort	$62.62	$24.76	$25.75	$26.78	$27.85	$28.97
Borrego Springs Usage	$1.30	$1.82	$1.89	$1.97	$2.05	$2.13