Your Water

- Water Quality
- Questions About Your Water
- Water Supply
- Water and Sewer Rates
- About Your Tax Bill
- Water Links
- Emergency Preparedness
- Water Pressure
- Leak Detection

Water and Sewer Rates

2016 Rate Restructure

The District's rate restructure separates fixed rates from volumetric rates for both water and wastewater. It also establishes five distinct customer classifications based on the demands placed on the water and wastewater utility: single-family residential; multi-family residential; commercial; domestic irrigation; and non-domestic irrigation. Since all customers benefit from the pipes, pumps, reservoirs, and future water reliability programs, these fixed infrastructure costs are the same for all customers within their classification and are reflected by the fixed meter charges. The volumetric rates are based on the actual demands placed on the water and wastewater utility and customers are charged per unit of water used. For residential (single-family and multi-family) and irrigation (domestic and non-domestic) customers the volumetric water rates consist of five tiers which results in higher rates as water used increases. Single-family residential and irrigation (domestic and non-domestic) customer's tiered rates are tied to a "water budget" which allocates a reasonable amount of water based on a particular customer's needs, such as irrigable area and household size.

This restructure represents the second phase of five adjustments to the water and wastewater rate structure which is scheduled through 2019. Additionally, the District's water wholesaler, the Metropolitan Water District of Southern California (MWD), announced an increase of $0.04 per CCF (1 CCF = 100 cubic feet = 748 gallons) to the water they sell. This amount will be passed-through to District customers.

Fixed Rates + Volumetric Rates = Monthly Water Bill

Fixed Rates	Volumetric Rates
Residential & Commercial Fixed Water Rate + Fixed Wastewater Rate **Irrigation & Recycled** Fixed Water Rate	**Residential** Volumetric Water* + Volumetric Wastewater **Single-Family Res. Tiers tied to Water Budget* **Commercial** Volumetric Water + Volumetric Wastewater **Domestic Irrigation** Budget Based Tier Rated **Non-Domestic Irrigation** Budget Based Tier Rates

Bill Estimator

Click here to estimate your bill. (Single Family Home)

Resources

- 2016 Rate Restructure Mailer
- 2015 Rate Increase (Prop. 218) Mailer
- District's Complete Rate Analysis
- Open House Flyer
- Rate Restructure FAQ

Water Budgets for Single-Family Residential (SFR)

Residential water budgets comprise both indoor and outdoor budgets. Each single-family residential customer will be allocated a reasonable amount of water for their monthly use, split into indoor and outdoor water budgets. At the conclusion of the rate restructure in 2019, each property will have a water budget specific to its irrigable area.

Indoor Water Budget Calculated Using:

1. Number of persons in a household (default of four people)
2. 55 gallons of water per person, per day
3. Number of days in the billing cycle

Outdoor Water Budgets Calculated Using:

1. Irrigable landscape area per parcel
2. Daily weather (Evapotranspiration, ET)
3. Evapotranspiration adjustment factor

Residential Water Budget

For residential customers, the rate structure for the volumetric charge has five tiers. Residential customer who stay within their water budget remain in the first two tiers:

Tier 1: Indoor Water Budget
Tier 2: Outdoor Water Budget
Tier 3: 101% to 150% of Total Water Budget
Tier 4: 151% to 200% of Total Water Budget
Tier 5: Over 201% of Total Water Budget

Variance Requests for Single Family Residential Customers:

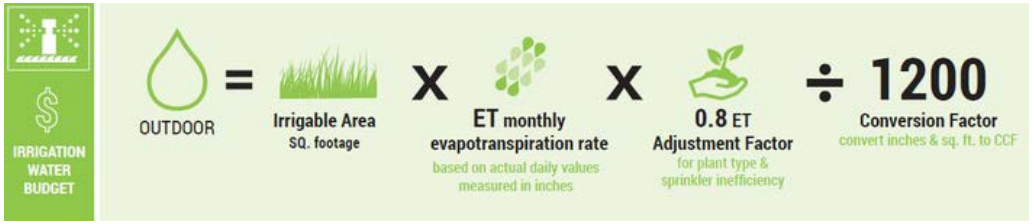
Single-Family residential customers who require more water than the default water budget can submit a request for a variance. Variances may be given for: Additional residents; Medical Needs; Licensed Care Facilities; and Additional Landscaping areas. Variances are effective the date the request is approved by the District and are subject to periodic review. The variance request form can be completed online digitally (CLICK HERE) or by hard copy (PDF download here).

Water Budgets for Dedicated Irrigation (Domestic & Non-Domestic) Accounts

Dedicated Irrigation water budgets comprise of just an outdoor budget. Each dedicated irrigation account will be allocated a reasonable amount of water for their monthly use, based on the irrigable area served by that irrigation account (meter) and the Evapotranspiration (ET) for the billing period.

Outdoor Water Budgets Calculated Using:

1. Irrigable landscape area per meter
2. Daily weather (evapotranspiration, ET)
3. Evapotranspiration (ET) adjustment factor



For irrgation customers, the rate structure for the volumetric charge has five tiers. Irrigation customers who stay within their water budget remain in the first two tiers:

- **Tier 1:** 50% of Outdoor Budget
- **Tier 2**: 100% of Outdoor Budget
- **Tier 3**: 101% to 150% of Outdoor Budget
- **Tier 4**: 151% to 200% of Outdoor Budget
- **Tier 5**: Over 201% of Outdoor Budget

Irrigation Meter Area Change Request Form:

asdf

Power Surcharge

You may see a line item on your bill called, “Power Surcharge.” Certain customers—residential, commercial, and irrigation—are in areas of the District that require more power to pump water for delivery. For customers in those areas, SMWD applies a nominal Power Surcharge to cover the additional power costs.

See the District's complete rate analysis.

District Efforts to Reduce Impact

The Board authorized use of District rate stabilization reserve funds to ease the transition over the next three years. $4.9 million was authorized for 2015 and an additional $4.2 million was set aside for 2016 to soften the impact of the recently implemented water and sewer fixed-rate charges.

Over the years, the District has worked hard to keep its costs low. For example, despite the fact that service connections in the District have doubled in the last twenty years, the District’s staff has actually decreased- from 165 employees in 1994 to just 128 employees today.

At the same time, SMWD has invested in a number of projects aimed at managing and even reducing costs. Earlier in 2015, the District installed in a major solar energy system that currently provides about 80% of the District headquarters power needs and helps contain power costs overall. A similar solar project is planned for the Chiquita Water Reclamation Plant in 2016 which will significantly reduce power costs for that facility as well.

District Expenditures

- 50 percent goes to buying water and paying for power to run pumps, operate and maintain plants and equipment and more
- 25 percent covers supplies, chemicals, and other necessities
- 25 percent covers staff costs

Background

In March of 2015 the Santa Margarita Water District Board of Directors took an important step in ensuring the District’s long-term financial health and stability on behalf of its customers by phasing in a water and wastewater rate restructure. The purpose behind the rate restructure is for the District to better align its costs and its revenues in order to protect customers from rate volatility. Knowing that the restructure would be challenging, the Board authorized the use of District rate stabilization reserve funds to ease the transition over the next three years. Additionally, the District has taken steps to hold costs down by installing a major solar energy project to address rising energy costs, deferring non-critical capital expenditures, and managing employee costs. The next round of the restructuring and adjustments takes effect January 1, 2016.

Prior to the rate restructure announced in March of 2015, SMWD was recovering only 40 percent of fixed costs through service

charges; the rest was included in the cost of water usage. By fairly allocating the fixed charges across all customers, the District will, over the next four years, cover all of its fixed costs and keep the District financially stable.

Rate Stabilization Over Three Years

A restructuring as significant as this is bound to be challenging, so the Board authorized use of the District's rate stabilization reserve funds to ease the transition over the next three years. $4.9 million was authorized for 2015 and an additional $4.2 million was set aside for 2016 to soften the impact of the recently implemented water and wastewater fixed-rate charges.

Two-Way Communications Encouraged

Over the next two months, SMWD will provide customers with additional information about the new rate structure, including a rate calculator at **www.smwd.com/rates** that customers can use to see how the rate restructure specifically changes their bill. You will continue to hear from us, but we really want to hear from you! Customers will have opportunities to get more info and ask questions at several scheduled open house receptions. Be sure to visit our website for the latest information.

www.smwd.com/rates
949-459-6420

smwdnews

Santa Margarita Water District
26111 Antonio Parkway,
Rancho Santa Margarita,
CA 92688

IMPORTANT: WATER RATE INFORMATION ENCLOSED

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Santa Margarita Water District

SMWD continues rate restructure to ensure district's long-term health

Restructuring Rates to provide fixed, flat and fair rates for infrastructure; customer control for water usage

Background

In March of 2015 the Santa Margarita Water District (SMWD) Board of Directors took an important step in ensuring the District's long-term financial health and stability on behalf of its customers by phasing in a water and wastewater rate restructure. The purpose behind the rate restructure is for the District to better align its costs and its revenues in order to protect customers from rate volatility. Knowing that the restructure would be challenging, the Board authorized the use of District rate stabilization reserve funds to ease the transition over the next three years. Additionally, the District has taken steps to hold costs down by installing a major solar energy project to address rising energy costs, deferring non-critical capital expenditures, and managing employee costs. The next round of restructuring and adjustments takes effect January 1, 2016. This communication is the official notice of the change in rates and the next step in overall restructuring.

Prior to the rate restructure announced in March of this year, SMWD was recovering only 40 percent of fixed costs through service charges; the rest was included in the cost of water usage. By fairly allocating the fixed charges across all customers, the District will, over the next four years, cover all its fixed costs and keep the District financially stable.

Average water/wastewater bill to rise by $9.92 on January 1, 2016

Most residential homes in the SMWD service area have a 3/4 inch meter. Therefore, the average residential monthly water and wastewater bill will increase $9.92 per month; from $67.08 to $77.00. Additionally, the Metropolitan Water District of Southern California, SMWD's supplier of potable water, announced an increase of $0.04/ccf (ccf means 100 cubic feet or 748 gallons.) This amount will also be passed through to customers on January 1, 2016.

In an effort to minimize the direct and immediate impact to its customers, SMWD has allocated more than $9 million over the past two years to cover some of the required costs and mitigate the impact of this rate adjustment.

Average Water Use:
15 units
(11,221 gallons of water)

Average Sewer Use:
10 units
(7,481 gallons of sewer flow)

Average Residential Cost:

Flat, Fair and Fixed Costs for Water and Wastewater Infrastructure

Since everyone benefits from the pipes, pumps, reservoirs, water recycling efforts and future water reliability planning programs, the infrastructure costs associated with those items will be the same for all customers within their classification. The majority of residential customers (3/4 inch meter) will be within the same classification and will all pay the same fixed costs for water and wastewater infrastructure. This applies to other classifications as well.

Fixed Potable and Recycled Water Service Charge Rates ($/meter size)

Meter Size	3/10/2015	1/1/2016
3/4"	$8.72	$14.89
1"	$10.96	$20.59
1-1/2"	$16.58	$29.01
2"	$24.22	$42.03
2-1/2"	$38.54	$72.94
3"	$52.86	$103.84
4"	$78.23	$150.96
6"	$146.58	$274.90
8"	$230.22	$428.94
10"	$344.22	$642.46

Fixed Monthly Wastewater Service Charge Rates ($/Account)

	3/10/2015	1/1/2016
Single Family Residence	$12.92	$20.30
MFR* (Single meter)	$12.92	$20.30
MFR* (Common meter)	$12.92	$20.30
C1-Med-Low Strength	$12.92	$20.30
C2-Med-Low Strength	$12.92	$20.30
C3-Med-High Strength	$12.92	$20.30
C4-High Strength	$12.92	$20.30
Recreational	$12.92	$20.30

Charts are provided for general information. For information on how the new rate structure and rates will affect you please visit **www.smwd.com/rates** and click on our rate calculator.
*Multi-Family Residence.

Customers Maintain Control of Water Use Costs through "Water Budgets"

Another element in the restructuring process is the phasing-in of "water budgets." Residential "water budgets" comprise both indoor and outdoor budgets. The indoor budget is based on household size (with a default of four people). The outdoor "budget" is based on the amount of irrigable landscape for a given parcel size and factors that reflect the water needs of suburban landscapes and irrigation efficiencies established under guidelines provided by state law. When customers' usage stays within their "budget" they pay the lowest price. The price only escalates when more than the "budget" is consumed. This information is also available at **www.smwd.com/rates** and will be discussed in detail at open house receptions that will be held throughout the District in December and January. Watch for further information to come your way. Dedicated irrigation customers will also be included in the water budget structure effective January 1, 2016. For full information visit our website.

Potable Water Commodity Charge Rates ($/ccf)

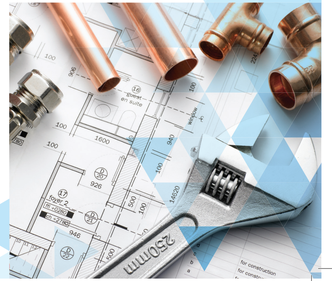
Single Family/ Multi-Family/ Residential Tier	3/10/2015	1/1/2016
1	$2.04	1.86
2	$2.29	2.11
3	$2.77	2.61
4	$3.28	3.12
5	$4.50	4.67

Potable Water Commodity Charge ($/ccf)

Commercial and Lake Fill (Domestic Water)	3/10/2015	1/1/2016
	$2.25	$2.00

Volumetric Wastewater Service Charge Rates ($/ccf)

	3/10/2015	1/1/2016
Single Family Residence	$1.03	$1.03
MFR* (Single meter)	$1.03	$1.03
MFR* (Common meter)	$1.03	$1.03
C1-Med-Low Strength	$0.87	$0.87
C2-Med-Low Strength	$1.03	$1.03
C3-Med-High Strength	$1.49	$1.49
C4-High Strength	$2.19	$2.19
Recreational	$0.84	$0.84



SANTA MARGARITA
WATER DISTRICT

Water, Recycled Water and Wastewater Rate Study 2014 Report

Final – February 26, 2015

RAFTELIS
FINANCIAL CONSULTANTS, INC.

Santa Margarita Water District

RAFTELIS
FINANCIAL CONSULTANTS, INC.

201 S. Lake Ave
Suite 301
Pasadena, CA 91101

Phone 626.583.1894
Fax 626.583.1411

www.raftelis.com

February 26, 2015

Daniel R. Ferons
General Manager
Santa Margarita Water District
26111 Antonio Parkway
Rancho Santa Margarita, CA 92688

Subject: Water, Recycled Water and Wastewater Rate Study Report

Dear Mr. Ferons,

Raftelis Financial Consultants, Inc. (RFC) is pleased to provide this Water, Recycled Water and Wastewater Rate Study Report (Report) for the Santa Margarita Water District (District) to develop water, recycled water and wastewater rates that are equitable and in compliance with Proposition 218.

The major objectives of the study include the following:

1. Develop financial plans for the water, recycled water and wastewater enterprises to ensure financial sufficiency, meet operation and maintenance (O&M) costs, ensure sufficient funding for capital replacement and refurbishment (R&R) needs and improve the financial health of the enterprises;
2. Develop a cost-of-service analysis for the water, recycled water and wastewater enterprises;
3. Develop fair and equitable water, recycled water and wastewater rates to achieve the goals and objectives of the District including rate stability, promoting water use efficiency and providing affordability for essential use while in compliance with Proposition 218 requirements; and
4. Develop a 5-year rate structure change proposal with 3-year phase-in implementation strategy to smooth out rate transitions.

The Report summarizes the key findings and recommendations related to the development of the financial plans for Water, Recycled Water and Wastewater utilities and the development of the associated water, recycled water and wastewater rates.

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.

Sanjay Gaur
Vice President

Khanh Phan
Senior Consultant

TABLE OF CONTENTS

LIST OF TABLES & FIGURES

GLOSSARY

Commonly Used Terms

Terms	Descriptions
AF	Acre foot / Acre feet, 1 AF = 435.6 CCF
AWWA	American Water Works Association
BOD	Biochemical Demand
CCF	Centum cubic feet or 100 cubic feet, 1 CCF = 748 gallons
CIP	Capital Improvement Projects
COS	Cost of Service
CPI	Consumer Price Indices
DF	Drought Factors for indoor and outdoor use
Domestic	Potable Water
ENR CCI	Engineering News Records Construction Cost Indices
ET_0	Reference EvapoTranspiration (ET) – amount of water loss (in inches of water) to the atmosphere over a given time period at specific atmospheric conditions for 4"-7" tall well-watered cool season turfgrass to maintain its health and appearance
ETAF	ET Adjustment Factor – a coefficient that adjusts ET_0 values based on a plant factor (PF) and irrigation efficiency (IE)
FY	Fiscal Year
GPCD	Gallons per capita per day
GPD	Gallons per day
IWB	Indoor Water Budget
M1 Manual	"Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1" published by AWWA
MFR	Multi-Family Residential
MGD	Million gallons per day
MWD	Metropolitan Water District of Southern California
MWDOC	Municipal Water District of Orange County
Non-Domestic	Non-Potable Water or Recycled Water
O&M	Operations and Maintenance
OWB	Outdoor Water Budget
PAYGO	Pay-As-You-Go
R&R	Repairs and Replacements
RFC	Raftelis Financial Consultants, Inc.
RW	Recycled Water
SFR	Single Family Residential
SOCWA	South Orange County Wastewater Authority
Sq. Ft.	Square feet

SRF Loan	State Revolving Fund loan
TSS	Total Suspend Solids
WRP	Water Reclamation Plant
WTP	Water Treatment Plant
WW	Wastewater

Utility Funds

Fund Name	Fund Descriptions
Capital Replacement and Refurbishment (CRR) Fund	To fund capital expenditures for Water, Recycled Water and Wastewater Utilities, including new capital projects.
Recycled Water (RW) Operating Fund	To fund non-domestic or non-potable or recycled water operations and reserve funding obligations using revenues from rates and other operating and non-operating revenues
Wastewater (WW) Operating Fund	To fund wastewater operations and reserve funding obligations using revenues from rates and other operating and non-operating revenues
Water Operating Fund	To fund domestic or potable water operations and reserve funding obligations using revenues from rates and other operating and non-operating revenues

DISCLAIMER

This Study does not include financial activities of funds associated with general obligation bonds and Mello-Roos Community Facilities Districts.

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1 INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Santa Margarita Water District (District) is the second largest retail water agency serving Orange County. The District provides water, recycled water and wastewater services to over 155,000 residents and businesses in a portion of the cities of Mission Viejo, San Clemente and all of Rancho Santa Margarita, and the unincorporated areas of Coto de Caza, Las Flores, Wagon Wheel, Ladera Ranch, and the Village of Sendero.

The District operates the sewage collection system and three wastewater treatment plants and is also a member of the South Orange County Wastewater Authority (SOCWA), which is a Joint Powers Authority that operates regional treatment plants. The District owns capacity in two treatment plants operated by SOCWA, the Jay B. Latham and the 3A Water Reclamation Plants and approximately 2.5 million gallons per day (MGD) are treated on behalf of the District. The plants operated by the District are:

- Chiquita Water Reclamation Plant treating approximately 6.3 MGD
- Oso Creek Water Reclamation Plant treating approximately 1.8 MGD
- Nichols Water Reclamation Plant, a small plant operated by the District under contract with Quest Diagnostics

The District is located in a series of valleys and requires the operation of 17 sewage lift stations to pump wastewater to the various treatment plants.

The District is a member of Municipal Water District of Orange County (MWDOC), which wholesales water within Orange County and is a member of the Metropolitan Water District of Southern California (MWD). All potable water in the District's service area is purchased from MWD through MWDOC. Currently, the District provides potable water treated by MWD at the Diemer Filtration Plant. The District has made major improvements over the last 10 years to enhance the reliability of the water supply system including the construction of the Upper Chiquita Reservoir, interconnections with Irvine Ranch Water District to deliver water from North Orange County and participation in the ongoing construction of the Baker Filtration Plant, which will treat raw water delivered by MWD via MWDOC or water from Irvine Lake. These facilities, in addition to the other District storage facilities including the El Toro Water District R-6 Reservoir, help provide the District with up to 30 days of average water supply in the event of a failure of the importation system.

To reduce its dependence on and demand for imported water, increase the availability and reliability of potable water and diversify its water supply portfolio, the District established a recycled water program. The program currently produces over 1.9 billion gallons of recycled water at the District's three treatment plants. The District has the capacity to produce up to 7.8 MGD. Currently 17% of the District's water supply is from recycled water and urban return flows and is used for irrigation and construction purposes within the District. Recycled water is an important element of the District's current and future water supply

portfolio with plans to increase to 30% of the overall supply. Recycled water is produced at the Oso Creek and Chiquita Water Reclamation Plants and stored in the Upper Oso Seasonal Storage Reservoir. The water is delivered to parks, medians, slopes, golf courses and schools in Mission Viejo, Las Flores, Ladera Ranch, Village of Sendero and the Talega community. The District is actively working on sites for conversion to recycled water to offset the demand for domestic water.

Current water rates, established in 2009, consist of base rates that vary by meter sizes and five-tiered volumetric rates for single-family residential (SFR) and multi-family (MFR) customers and uniform quantity rates for all other customers. Water supply cost increases for water purchased from MWD are passed through to ratepayers.

In light of the recent statewide drought and legislation regarding conservation and efficient water use, the District expressed its interests in developing a water budget tiered rate structure for residential and dedicated irrigation meters, while enhancing revenue stability and remaining in compliance with Proposition 218 requirements. Moreover, recent legal and public scrutiny has pressured utilities and public agencies to be more transparent and to have clear administrative records of the nexus between the cost of providing the services and the rates assessed to ratepayers.

In 2013, the District engaged Raftelis Financial Consultants, Inc. (RFC) to conduct a comprehensive Water, Recycled Water and Wastewater Rate Study (Study) to develop water, recycled water and wastewater rates. The goals of the study were to develop rates that: would maintain financial sufficiency; are consistent with the District's policies; comply with general cost of service principles; and most importantly, are in compliance with Proposition 218 requirements.

1.2 OBJECTIVES OF THE STUDY

This report was prepared using the principles established by the American Water Works Association. The American Water Works Association "Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1 (the "M1 Manual") establishes commonly accepted professional standards for cost of service studies. The M1 Manual general principles of rate structure design and the objectives of the Study are described below.

According to the M1 Manual, the first step in the ratemaking analysis is to determine the adequate and appropriate funding of a utility. This is referred to as the "revenue requirements" analysis. This analysis considers the short-term and long-term service objectives of the utility over a given planning horizon, including capital facilities and system operations and maintenance, to determine the adequacy of a utility's existing rates to recover its costs. A number of factors may affect these projections, including the number of customers served, water-use trends, nonrecurring sales, weather, conservation, use restrictions, inflation, interest rates, wholesale contracts, capital finance needs, changes in tax laws, and other changes in operating and economic conditions.

After determining a utility's revenue requirements, a utility's next step is determining the cost of service. Utilizing a public agency's approved budget, financial reports, operating data, and capital improvement

plans, a rate study generally categorizes (functionalizes) the costs (such as treatment, storage, and pumping), expenses, and assets of the water system among major operating functions to determine the cost of service.

After the assets and the costs of operating those assets are properly categorized by function, the rate study allocates those "functionalized costs" to the various customer classes (e.g., single-family residential, multi-family residential and commercial) by determining the characteristics of those classes and the contribution of each to incurred costs such as peaking factors or different delivery costs, service characteristics and demand patterns. Rate design is the final part of the M1 Manual's rate-making procedure and generally uses the revenue requirement and cost of service analysis to determine appropriate rates for each customer class.

The major objectives of the study include the following:

1. Develop financial plans for the water, recycled water and wastewater enterprises to ensure financial sufficiency, meet operation and maintenance (O&M) costs, ensure sufficient funding for capital replacement and refurbishment (R&R) needs, and improve the financial health of the enterprises;
2. Develop a cost-of-service analysis for the water, recycled water and wastewater enterprises;
3. Develop fair and equitable water, recycled water and wastewater rates to achieve the goals and objectives of the District, including rate stability, promoting water use efficiency and providing affordability for essential use while in compliance with Proposition 218 requirements; and
4. Develop a 5-year rate structure change proposal with a 3-year phase-in implementation strategy to smooth out rate transitions.

The Study was conducted in three phases:

(1) Development of rate-setting principles;
(2) Development of a financial plan, cost of service analyses and rate design;
(3) Rate implementation and adoption.

This Report provides an overview of the study and includes findings and recommendations for water, recycled water and wastewater financial plan and rates.

1.3 LEGAL REQUIREMENTS AND RATE SETTING METHODOLOGY

1.3.1 Legal Requirements

There are two Constitutional provisions that govern and impact water rates — Article X, Section 2 ("Article X) and Article XIII D, Section 6 ("Article XIII D"). Article X was added to the California Constitution in 1928 as former Article XIV, Section 3, and amended in 1976. Article provides that:

> *"It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable*

method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."

In November 1996, California voters approved Proposition 218, which amended the California Constitution by adding Article XIII C and Article XIII D. Article XIII D placed substantive limitations on the use of the revenue collected from property-related fees and on the amount of the fee that may be imposed on each parcel. Additionally, it established procedural requirements for imposing new, or increasing existing, property-related fees. Water and wastewater service fees are property-related fees.

In accordance with these provisions, a property-related fee must meet all of the following requirements: (1) revenues derived from the fee must not exceed the funds required to provide the property-related service; (2) revenues from the fee must not be used for any purpose other than that for which the fee is imposed; (3) the amount of a fee imposed upon any parcel or person as an incident of property ownership must not exceed the proportional cost of the service attributable to the parcel; (4) the fee may not be imposed for a service, unless the service is actually used by, or immediately available to, the owner of the property subject to the fee. A fee based on potential or future use of a service is not permitted, and stand-by charges must be classified as assessments subject to the ballot protest and proportionality requirements for assessments; (5) no fee may be imposed for general governmental services, such as police, fire, ambulance, or libraries, where the service is available to the public in substantially the same manner as it is to property owners. The five substantive requirements in Article XIII D are structured to place limitations on (1) the use of the revenue collected from property-related fees and (2) the allocation of costs recovered by such fees to ensure that they are proportionate the cost of providing the service attributable to each parcel.

For the District's water service fees, this Rate Study was prepared to comply with the requirements of Article X to maximize the beneficial use of water and the cost-of-service requirements of Article XIII D.

1.3.2 Rate Setting Process

Revenue Requirements. The Study used the revenue requirements method for allocating costs. This methodology is consistent with industry standards established by the American Water Works Association, Principles of Water Rates, Fees and Charges: Manual of Water Supply Practices M1 (the "M1 Manual"). The revenue requirements analysis "compares the revenues of the utility to its operating and capital costs to determine the adequacy of the existing rates to recover the utility's costs." American Water Works Association, Principles of Water Rates, Fees and Charges: Manual of Water Supply Practices M1 (6th ed. 2012). The revenue requirements are analyzed through the development of a long-term financial plan. Based on the best information currently available, the current financial plan incorporates projected operations and maintenance costs, capital expenditures, debt service, growth, and conservation assumptions to estimate annual revenues.

Cost of Service. After determining a utility's revenue requirements, the next step in the analysis is determining the cost of service. The Study arranged the costs, expenses, and assets of the water system

by major operating functions to determine the cost of service. After the assets and the costs of operating those assets were properly categorized by function, the Study classified them and allocated the revenue requirements to the various customer classes (e.g., single-family residential, irrigation, and commercial) by determining the characteristics of those classes and the customer class's contribution to the incurred costs such as peaking factors or different delivery costs, service characteristics and demand patterns. This analysis included a review of such matters as system operations and water usage data—e.g., capacity (peak demand),[1] commodity (average demand),[2] number of customers,[3] customer service and accounting,[4] equivalent meter size, and public fire protection services.[5] The impact that these matters have on system operations determined how the costs were allocated among the various customer classes.

Rate Design. The final part of the analysis was the rate design. The rate design involved developing a rate structure that proportionately recovers costs from customers. The final rate structure and rate recommendations were designed to fund the utility's long-term projected costs of providing service; proportionally allocate costs to all customers; provide a reasonable and prudent balance of revenue stability while encouraging conservation; and comply with the substantive requirements of Article XIII D.

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[1] System capacity is the system's ability to supply water to all delivery points at the time when demanded. It is measured by each customer's water demand at the time of greatest system demand. The time of greatest demand is known as peak demand. Peak demand costs recover the costs of facilities needed to meet the peak use, or demands, placed on the system by each customer class. Both the operating costs and the capital assets related costs incurred to accommodate the peak flows are allocated to each customer class based upon the class's contribution to the peak day event.

[2] Commodity refers to the amount of metered water usage over a specific time period, typically a twelve-month period.

[3] Some operating and administrative costs vary directly with the number of customers.

[4] Some customer classes may require more effort and time to provide accounting services.

[5] This refers to the need to increase the size of mainlines to provide public fire protection requirements.

2 GENERAL ASSUMPTIONS

2.1 INFLATION

The Study period is from Fiscal Year (FY) 2015 to 2019. Various types of assumptions and inputs[6] were incorporated into the Study based on discussions with and/or direction from District staff. These include the projected number of accounts and annual growth rates in consumption for different customer classes, and inflation factors and other assumptions. The inflation factor assumptions are presented in Table 2-1, below.

Table 2-1: Inflation Factor Assumptions

KEY FACTORS	FY 2016	FY 2017	FY 2018	FY 2019
General (CPI)	3.0%	3.0%	3.0%	3.0%
Salary	4.0%	4.0%	4.0%	4.0%
Health Insurance	8.0%	8.0%	8.0%	8.0%
Utilities	7.5%	7.5%	7.5%	7.5%
ENR CCI[7]	3.5%	3.5%	3.5%	3.5%

The general inflation rate of 3 percent is based on a historical Consumer Price Index (CPI) range of 3-3.5 percent. A salary inflation rate of 4 percent is based on District staff estimates. Insurance inflation rate of 8 percent is based on historical health insurance cost; 62 percent increase in these costs occurred from 2003 to 2011 (approximately 7-8 percent per year)[8]. A utilities inflation rate of 7.5 percent is based on District staff estimates using reports received from San Diego Gas and Electric (SDG&E), Southern California Edison (SCE) or local utilities information. A construction rate of 3.5 percent (applied to capital projects) is based on the estimated Engineering News Records Construction Cost Indices (ENR CCI) 10-year average.

2.2 PROJECTED DEMAND AND GROWTH

Table 2-2 shows an estimated account growth rate and account summary over the study period projected by the District based on Engineering's estimates of future development and construction by the Ranch and Table 2-3 shows projected water sales over the study period based on current and projected accounts. District staff provided RFC projections for the number of accounts that will likely be converted from potable to RW during the Study period. It is estimated that total of 1,255 acre feet (AF) of potable irrigation use from 403 (1,588 non-domestic accounts in FY 2018 compared to 1,185 in FY 2014) dedicated potable water irrigation meters will be gradually converted to recycled water by FY 2018 starting in FY 2015.

[6] As listed in the Financial Plan Model 2014 Final – Key Assumptions section (Key Inputs Tab)
[7] ENR CCI: Engineering News Record Construction Cost Indices
[8] Source: C. Schoen, J. Lippa, S. Collins and D. Radley. State Trends in Premiums and Deductibles, 2003–2011: Eroding Protection and Rising Costs Underscore Need for Action, The Commonwealth Fund, Dec 2012

Domestic (aka Potable) water usage is projected to slightly decrease (2.5%) in FY 2015 due to the current and projected drought and conservation, and will increase gradually from projected growth beyond FY 2016 (Table 2-2) before the RW conversion is completed. Non-Domestic (aka RW) water demand is projected to slightly decrease (5%) in FY 2015 (decrease from 7,541 AF in FY 2014 to 7,164 AF in FY 2015) and remain flat after FY 2015 before any RW conversion. The projected Domestic and Non-Domestic volumetric water sales (in acre feet) after the RW conversions are completed are summarized in Table 2-3.

Table 2-2: Projected Account Growth Rate and Meters Summary

	FY 2014 Estimated	FY 2015 Projected	FY 2016 Projected	FY 2017 Projected	FY 2018 Projected	FY 2019 Projected
Account Growth Rate						
Residential		0%	1.8%	1.2%	0.7%	0.7%
Non-Residential		0%	0%	0%	0%	0%
Non-Domestic		0%	0%	0%	0%	0%
Fire Services		0%	0%	0%	0%	0%
Number of Meters						
Residential	48,059	48,059	48,933	49,501	49,858	50,202
Non-Residential	2,436	2,336	2,153	2,153	2,033	2,033
Non-Domestic	1,185	1,285	1,468	1,468	1,588	1,588
Fire Services	1,239	1,239	1,239	1,239	1,239	1,239
Total Number of Meters	**52,919**	**52,919**	**53,793**	**54,361**	**54,718**	**55,062**

Table 2-3: Projected Volumetric Water Sales (in acre feet)

	FY 2014 Actual	FY 2015 Projected	FY 2016 Projected	FY 2017 Projected	FY 2018 Projected	FY 2019 Projected
Domestic before RW Conversion	27,216 AF	26,536 AF	26,881 AF	27,106 AF	27,247 AF	27,383 AF
RW Conversion (cumulative)	0 AF	-500 AF	-955 AF	-955 AF	-1,255 AF	-1,255 AF
Domestic after RW Conversion	**27,216 AF**	**26,036 AF**	**25,926 AF**	**26,151 AF**	**25,992 AF**	**26,128 AF**
Non-Domestic before RW Conversion	7,541 AF	7,164 AF	7,164 AF	7,164 AF	7,164 AF	7,164 AF
RW Conversion (cumulative)	0 AF	500 AF	955 AF	955 AF	1,255 AF	1,255 AF
Non-Domestic after RW Conversion	**7,541 AF**	**7,664 AF**	**8,119 AF**	**8,119 AF**	**8,419 AF**	**8,419 AF**
Total Water Sales	**34,757 AF**	**33,700 AF**	**34,045 AF**	**34,270 AF**	**34,411 AF**	**34,547 AF**

2.3 UTILITY OPERATING FUNDS

Beginning FY 2015, the District will establish separate operating funds for all revenues and expenses associated with each utility as follows:

- **Water Operating Fund**: Revenues from water rates and other operating and non-operating sources fund domestic or potable water operations and reserve fund obligations revenues (from water rates and other operating and non-operating revenues).
- **Recycled Water (RW) Operating Fund**: Revenues from RW rates and other operating and non-operating sources fund non-domestic or non-potable or recycled water operations and reserve fund obligations.
- **Wastewater (WW) Operating Fund**: Revenues from WW rates and other operating and non-operating sources fund wastewater operations and reserve fund obligations.

The current Capital Replacement Reserve (CRR) Fund will remain a separate fund dedicated to fund State Revolving Fund (SRF) loan obligations and other capital R&R expenditures from capital lease revenues, ad valorem property tax revenues and annual transfers from Water, RW and WW Operating Funds.

2.3.1 O&M Expenses

The District diligently identified, analyzed, and used three different methodologies for allocating operations and maintenance costs to water, wastewater and recycled water expense items. The three methodologies are listed below:

1. Determine the total number of service connections for water, wastewater and recycled water services
2. Review the actual timekeeping records for the operations department for individual project expenses related to each utility
3. Determine the percentage of total operating revenue attributable to each utility

The District not only reviewed shared expense line items that should have a cost allocation, but also identified costs that should be allocated that could be based on specific purpose usage. For example, the cost of purchasing water is 100% attributable to the water utility; solids and screening disposal costs at the wastewater treatment plant are 100% attributable to the wastewater utility. The District engineering department also reviewed maintenance and operations agreements to confirm the methodology being used fairly allocated costs to the appropriate utility. This allowed a detailed review of each expense item to make the most accurate cost allocations.

After reviewing actual District expenses for the last five years and reviewing the different methodologies listed above, the District recommended using all three methodologies in addition to the specific purpose usage method for the determining the cost allocations to be used for the rate model. See Appendix 4 Table 6-6 for Water; Appendix 5 Table 6-8 for Recycled Water; and Appendix 7 Table 6-11 for the cost

allocations used. This information is being used to establish separate operating funds for all revenues and expenses associated with each utility.

Table 2-4 below summarizes the allocation of the FY 2015 Operating Budget into Water, RW and WW Operating Funds by Departments based on the Allocation Methodology discussed above. Please see Appendix 1 Table 6-1 for actual allocation factors for each of the FY 2015 operating budget line items to Water, RW and WW Operating Funds.

Table 2-4: FY 2015 O&M Expenses by Operating Funds

FY 2015	Water Operating Fund	RW Operating Fund	WW Operating Fund	Total
1001 - Administration	$6,351,574	$4,603,334	$7,432,010	$18,386,918
2001 - Finance - Overhead	$478,534	$280,000	$552,723	$1,311,258
3001 - Engineering	$256,440	$307,620	$256,440	$820,500
4001 - Operations	$3,161,464	$860,737	$5,280,283	$9,302,484
Water Purchase	$27,557,756	$444,462		$28,002,218
Power	$2,025,641	$1,090,730		$3,116,370
Treatment Cost			$2,077,486	$2,077,486
Total O&M Expenses	**$39,831,410**	**$7,586,882**	**$15,598,942**	**$63,017,234**

2.3.2 Non-Operating Revenues

As directed by District staff, each of the non-operating revenues is allocated to each utility operating fund. For example, construction revenues, including plan check revenue, encroachment fees, other and meter sales, belong to the Water operating fund along with rebate revenues. Utility billing charges and rental income are split between Water (73.9%) and the WW Operating Funds (26.1%) based on FY 2013 actual rate revenues collected for each operating fund[9]. Refunds & other sales are associated with RW activities and waste discharge fees are to offset WW expenses. Each year, the District also receives approximately $5.96M from the 1% share of general ad valorem property tax revenues and $964K from capital lease revenues, which are used in the CRR Fund to fund obligated debt service and other capital expenditures. A portion of the $5.96M in property tax revenues designate for capital projects being used to promote affordability programs for the Water Operating Fund ($3.4M) and Water Operating Fund will use rate revenues to fund capital expenditures at a minimum of $3.4M per year.

[9] In FY 2013, $32.8M actual revenues from Water Operating Fund (or 73.9%) and $11.6M (or 26.1%) actual rate revenues from WW Operating Fund were collected.

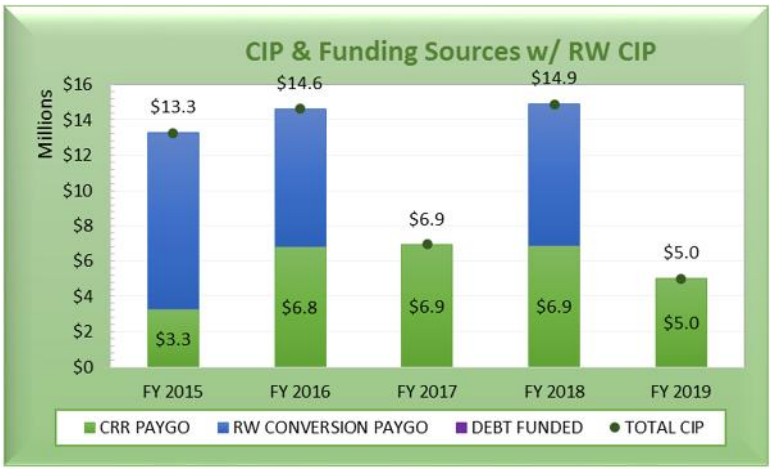
Table 2-5: FY 2015 Non-Operating Revenues by Funds

Non-Operating Revenues	CRR Fund	Water Operating Fund	RW Operating Fund	WW Operating Fund	Total
Utility Billing Charges		$539,527		$190,476	$730,003
Construction Revenues					
Plan Check Revenue		$250,000			$250,000
Encroachment Fees & Other		$2,000			$2,000
Meter sales		$400,000			$400,000
Other Income					
Refunds & Other Sales			$364,790		$364,790
Rebate		$206,536			$206,536
Rental Income		$867,427		$306,238	$1,173,665
Waste Discharge Fees				$10,000	$10,000
Capital Revenues					
Property Tax (Share of 1%)	$2,562,539	$3,400,000			$5,962,539
Capital Lease Revenues	$963,950				$963,950
Total Non-Operating Revenues	**$3,526,489**	**$5,665,491**	**$364,790**	**$506,713**	**$10,063,483**

2.3.3 Capital Funding

The District projected its future capital R&R expenditures for the next 5 years with estimated annual routine R&R funding of $5M in addition to the approved CRR projects (FY 2015 to FY 2019) (shown by the green bar in Figure 2-1 below). In addition, the District estimated that the conversion of 403 potable irrigation meters to recycled water will require the District to spend approximately $25.795M from FY 2015 to FY 2019 for the development and construction of the necessary distribution system. Figure 2-1 below summarizes the projected capital improvement projects (CIP) for the next 5 years, including the RW conversion capital costs (shown by the blue bar). The programmed CRR (updated by the District staff on June 21, 2013) and $5M routine funding are shown in the green bars below.

Figure 2-1: 5-Year Capital Improvement Project (CIP)



The CRR Fund is comprised of contributions from each of the operating funds based on annual need for the respective utility. Table 2-6 shows the annual funding requirements from each Operating Fund. The RW conversion project is funded by the CRR Reserve.

Once an annual need is determined, each operating fund contributes to the CRR Fund by a percentage factor based on the total asset value of the applicable utility (see Appendix 3, Table 6-2) as follows:

- Water – 57 percent
- Wastewater – 35 percent
- Recycled Water – 8 percent

The "Net Additional CRR Funding Needs from Utility Operating Funds" shown in Table 2-6 below is the amount of funds required from each of the three operating funds for capital replacement and refurbishment (R&R) in excess of ad valorem property tax revenues and capital lease revenue. For example, in FY 2016, the annual capital funding requirements for the District is projected to be $7.86M while the total funding sources (including 1% Ad Valorem property tax $2.68M, Capital Lease revenue $0.96M and capital funding from Water Operating Fund $3.4M) are totaled to be only $7.04M, thus $818K is the additional CRR funding needed to be funded from Water, RW and WW Operating Funds. Note that the Water Operating Fund has a baseline annual contribution of $3.4M toward CRR annually; this interfund transfer is to reimburse the CRR fund for the property tax revenues used for the water affordability programs (offsets revenue requirements for tier 1 and tier 2 consumption) that otherwise would have been used to fund the CRR program. The "Annual CRR Funding" portion of Table 2-6 shows the Water Operating Fund's contribution to CRR for FY 2016 is $3.86M, comprised of the baseline contribution ($3.4M) and the net additional contribution ($463K).

Table 2-6: Annual CRR Funding from Utility Operating Funds

		FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Annual Funding Requirements		**$4,304,390**	**$7,864,174**	**$7,977,117**	**$7,913,071**	**$6,041,890**
CRR CIP without RW conversion		$3,262,500	$6,822,283	$6,935,226	$6,871,180	$5,000,000
SRF Loan		$1,041,890	$1,041,890	$1,041,890	$1,041,890	$1,041,890
Funding Sources		**$6,926,489**	**$7,045,740**	**$7,167,376**	**$7,291,444**	**$7,417,994**
1% Ad Valorem Property Tax		$2,562,539	$2,681,790	$2,803,426	$2,927,494	$3,054,044
Capital Lease Rev		$963,950	$963,950	$963,950	$963,950	$963,950
Water (Property tax reimbursement)		$3,400,000	$3,400,000	$3,400,000	$3,400,000	$3,400,000
Net Additional CRR Funding Needs from Utility Operating Funds		**$0**	**$818,434**	**$809,741**	**$621,627**	**$0**
Water Operating Fund	57%	$0	$463,261	$458,340	$351,861	$0
RW Operating Fund	8%	$0	$67,426	$66,710	$51,212	$0
WW Operating Fund	35%	$0	$287,747	$284,691	$218,553	$0
Annual CRR Funding from Utility Operating Funds		**$3,400,000**	**$4,218,434**	**$4,209,741**	**$4,021,627**	**$3,400,000**
Water Operating Fund		$3,400,000	$3,863,261	$3,858,340	$3,751,861	$3,400,000
RW Operating Fund		$0	$67,426	$66,710	$51,212	$0
WW Operating Fund		$0	$287,747	$284,691	$218,553	$0

2.3.4 Pension Reserve Funding

As directed by the District, starting in FY 2016, the Water, RW and WW Operating Funds will start to fund a Pension Reserve at $1.5M annually based on salary and benefits cost allocation factors (Water 33%, RW 26% and WW 41%). See Section 2.3.1 for detailed explanation of the Allocating Methodology developed by District staff to Water, RW and WW Operating Funds. Table 2-7 below details the pension contributions for each Operating Fund for the study period.

Table 2-7: Pension Reserve Funding from Operating Funds

		FY 2015 Projected	FY 2016 Projected	FY 2017 Projected	FY 2018 Projected	FY 2019 Projected
From Water Operating Fund	33%	$0	$495,000	$495,000	$495,000	$495,000
From RW Operating Fund	26%	$0	$390,000	$390,000	$390,000	$390,000
From WW Operating Fund	41%	$0	$615,000	$615,000	$615,000	$615,000
Total Pension Reserve Funding	**100%**	**$0**	**$1,500,000**	**$1,500,000**	**$1,500,000**	**$1,500,000**

2.4 RESERVE POLICY

A reserve policy is a written document that provides a basis for the Agency to cope with unanticipated reductions in revenues, offset fluctuations in costs of providing services, fiscal emergencies such as revenue shortfalls, asset failure, natural disaster, etc. It also provides guidelines for sound financial management with an overall long-range perspective to maintain financial solvency and mitigate financial risks associated with revenue instability, volatile capital costs and emergencies. It also sets funds aside for replacement of capital assets as the age as well as for new innovative capital projects. Additionally, adopting and adhering to a sustainable reserve policy enhances financial management transparency and helps achieve or maintain a certain credit rating for future debt issues.

The appropriate amount of reserve and reserve types are determined by a variety of factors, such as the size of the operating budget, the amount of debt, the type of rate structure, frequency of customer billing, and risk of natural disaster. With this being said, most reserves tend to fall into the following categories: operations & maintenance (O&M) cash flow, rate stabilization, capital repair and replacement (R&R), and emergency.

O&M Cash Flow – The purpose of an O&M reserve is to provide working capital to support the operation, maintenance and administration of the utility. From a risk management perspective, the O&M reserve supports the District's cash flow needs during normal operations and ensures that operations can continue should there be significant events that impact cash flows. As it is unlikely for a utility to predict perfectly the revenues and revenue requirements for each billing period, a reserve set aside to hedge the risk of monthly negative cash positions is prudent in financial planning. Another factor to consider when creating a cash flow reserve is the frequency of billing. A utility that bills once a month would require less minimum reserves than a utility that bills semi-annually.

Rate Stabilization and Operating Emergency – While it is not typical for utilities to have substantial rate increases in a short period of time, factors such as declining water sales and rapidly increasing water supply costs may result in large rate increases. In order to minimize rate shocks, a rate stabilization reserve could be set up in order to smooth rate increases through gradual increases in rates as opposed to abrupt

and large rate increases. A rate stabilization reserve acts as a buffer to protect customers from experiencing large shifts in their bills.

Capital Emergency – The purpose of an emergency fund is to allow the utility to provide uninterrupted service in light of a fiscal emergency, natural disaster or facility failure. An emergency reserve decreases risk by recognizing the high capital cost of the utilities and setting aside adequate funds to restart the system after an event or replace an essential facility. Critical asset analysis completed by staff provides the basis for the target level of emergency reserve.

Capital R&R – Capital R&R reserves are used to fund future obligations that are necessary for maintaining a reliable infrastructure. Because water, recycled water and wastewater utilities are highly capital-intensive enterprises, it is important to accurately estimate long-term R&R costs and develop a reserve to fund the eventual replacement of the system and new capital projects. The District's utilities have two options in funding R&R projects: the issuance of debt or pay-as-you-go (PAYGO).

The District currently has an adopted reserve policy for its operating and CRR funds (see Appendix 2). As directed by District staff, the target reserve balances for each fund are established. Reserve Fund levels for FY 2015 are shown in Table 2-8 below.

Table 2-8: Reserve Funding Target Levels by Funding Source

	Operating (% of operating budget for cash flow)	Rate Stabilization & Operating Emergency	Capital Cash Flow (for planned R&R)	Capital Emergency (for critical asset failure)	Total for FY 2015
Water Operating Fund	$7.9M (20%)	$2.1M			$10.0M
RW Operating Fund	$1.5M (20%)	$1.2M			$2.7M
WW Operating Fund	$3.1M (20%)	$6.0M			$9.1M
CRR Fund			$13.5M	$10.0M	$23.5M
Total	**$12.5M**	**$9.3M**	**$13.5M**	**$10.0M**	**$45.4M**

2.5 KEY FINANCIAL INFORMATION

The Study utilized the following key financial documents and figures:

1. FY 2015 Budget provided by District staff in July 2014
2. Reserve Policy dated July 2, 2014 provided by District staff in August 2014
3. Allocation factors of operating costs provided by District staff in March 2014 with subsequent updates in August 2014

4. FY 2013 to FY 2018 CIP Updated by District staff in June 2013 (including only CRR in the Study) and annual routine CRR funding of $5M starting FY 2016 (in 2015 dollars)
5. Water supply cost projections from MWD and MWDOC, provided by District staff in January 2014 and subsequent updates
6. Beginning fund balances as of July 1, 2014 provided by District staff in August 2014

Table 2-9: Beginning FY 2014 Fund Balances

Fund	Beginning Balance (July 1, 2014)
CRR Fund	$53,500,000
Water Operating Fund	$10,378,031
RW Operating Fund	$2,835,278
WW Operating Fund	$9,106,992
Whole District	**$75,820,301**

7. Billing data extracts for all water, RW and WW accounts in FY 2013 (July 2012 to June 2013)

3 WATER OPERATING FUND – FINANCIAL PLAN AND RATES

3.1 WATER REVENUE REQUIREMENTS

A review of a utility'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 Water Operating Fund.

3.1.1 Revenues from Current Water Rates

The current rate structure, last updated on January 1, 2014, was originally developed in the 2009 Rate Study. Both single family residential (SFR) and multi-family residential (MFR) use inclining tier blocks for the quantity charge with different tier breaks per dwelling unit. All commercial customers (irrigation, Lakefill and commercial) pay a uniform rate of $2.51 per CCF for calendar year 2014.

Customers located in elevated areas are also charged a power surcharge per CCF to recover the incremental costs of delivering water to these areas. The surcharge varies by which of the three elevation zones a customer is located within for domestic customers.

In addition to volumetric charges and elevation surcharges, each customer also pays a monthly fixed charge that is determined by meter size, regardless of the customer class. The associated charges for each meter size are the same for both domestic (ie. Water) and non-domestic (ie. Recycled Water) services. Table 3-1 details the rates for monthly fixed charges, volumetric charges and power surcharges for each customer class for calendar years 2012 to 2014.

Table 3-1: Current Water Rates

Monthly Fixed Charge ($/month)			
Meter Size	1/1/2012	1/1/2013	1/1/2014
3/4"	$6.22	$6.32	$6.41
1"	$8.01	$8.14	$8.25
1 1/2"	$13.24	$13.45	$13.64
2"	$19.53	$19.84	$20.12
2 1/2"	$27.90	$28.35	$28.75
3"	$36.27	$36.85	$37.37
4"	$55.10	$55.98	$56.76
6"	$107.42	$109.14	$110.67
8"	$170.20	$172.92	$175.34
10"	$253.90	$257.96	$261.57

Table 3-1 (cont.)

Volumetric Charge ($/ccf) Effective Date		FY 2012 1/1/2012	FY 2013 1/1/2013	FY 2014 1/1/2014
Single Family				
Tier 1	0-6ccf	$2.05	$2.20	$2.33
Tier 2	7-20ccf	$2.17	$2.32	$2.46
Tier 3	21-35ccf	$2.64	$2.80	$2.94
Tier 4	36-70ccf	$3.14	$3.30	$3.45
Tier 5	71+	$3.99	$4.17	$4.33
Multi-Family				
Tier 1	0-3ccf	$2.05	$2.20	$2.33
Tier 2	4-6ccf	$2.17	$2.32	$2.46
Tier 3	7-12ccf	$2.64	$2.80	$2.94
Tier 4	13-24ccf	$3.14	$3.30	$3.45
Tier 5	25+ccf	$3.99	$4.17	$4.33
Irrigation		$2.22	$2.37	$2.51
Lakefill		$2.22	$2.37	$2.51
Commercial		$2.22	$2.37	$2.51

Power Surcharges ($/ccf) Effective Date	FY 2012 1/1/2012	FY 2013 1/1/2013	FY 2014 1/1/2014
Zone 3	$0.18	$0.18	$0.18
Zone 4	$0.26	$0.26	$0.26
Zone 5	$0.35	$0.36	$0.37

To determine the number of water customers in future years, District staff provided RFC the estimated number of accounts by customer class for each meter size in FY 2014. These accounts were then projected using a growth percentage factor (shown in Table 2-2). The growth percentage factor is an estimation of growth based on planned and potential development in the service area provided by the District staff. Table 3-2 shows the estimated number of accounts for each meter size, by fiscal year.

Table 3-2: Projected Water Accounts

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Domestic (Residential & Non-Residential, excluding Fire)						
3/4"	40,469	40,469	41,202	41,679	41,979	42,268
1"	7,141	7,141	7,267	7,349	7,400	7,450
1 1/2"	717	717	700	703	706	708
2"	2,067	1,967	1,816	1,821	1,705	1,708
2 1/2"	39	39	39	39	39	39
3"	40	40	40	40	40	40
4"	14	14	14	14	14	14
6"	2	2	2	2	2	2
8"	6	6	6	6	6	6
10"	0	0	0	0	0	0
Total	**50,495**	**50,395**	**51,086**	**51,654**	**51,891**	**52,235**
Fire Service						
3/4"	0	0	0	0	0	0
1"	152	152	152	152	152	152
1 1/2"	164	164	164	164	164	164
2"	507	507	507	507	507	507
2 1/2"	38	38	38	38	38	38
3"	1	1	1	1	1	1
4"	76	76	76	76	76	76
6"	108	108	108	108	108	108
8"	179	179	179	179	179	179
10"	14	14	14	14	14	14
Total	**1,239**	**1,239**	**1,239**	**1,239**	**1,239**	**1,239**
Total Water Meters	**51,734**	**51,634**	**52,325**	**52,893**	**53,130**	**53,474**

Employing a similar approach used to determine account growth, estimates for water usage are determined by using actual water usage data for FY 2014 and projecting those values based on account growth and a water demand factor[10]. Also factored into the projections is the conversion of potable water accounts to recycled water during the Study period. It is assumed that there is no further change in usage other than account growth and RW conversions.

Table 3-3 summarizes the projected water usage under the current rate structure for the Study period.

[10] The Water demand factor is a percentage based on the prior year water usage per customer account to account for changes in average water consumption per account resulting from weather, conservation or drought

Table 3-3: Projected Water Usage under Current Rate Structure

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Residential						
Tier 1	3,075,251	2,998,370	3,052,882	3,088,328	3,110,616	3,132,098
Tier 2	3,766,820	3,672,650	3,739,420	3,782,838	3,810,138	3,836,451
Tier 3	1,100,303	1,072,795	1,092,299	1,104,982	1,112,956	1,120,643
Tier 4	389,438	379,702	386,605	391,094	393,916	396,637
Tier 5	157,389	153,454	156,244	158,058	159,199	160,298
Irrigation	2,717,737	2,431,994	2,233,796	2,233,796	2,103,116	2,103,116
Lakefill	136,794	133,374	133,374	133,374	133,374	133,374
Commercial	511,699	498,907	498,907	498,907	498,907	498,907
Total Usage (ccf)	**11,855,431**	**11,341,245**	**11,293,527**	**11,391,376**	**11,322,222**	**11,381,524**

Again, using the actual FY 2014 values for water delivered to each elevation zone and projecting them by a proportional percentage factor (changes in usage from Table 3-3 above), future estimates can be determined. Water usage subject to power surcharges are summarized in Table 3-4.

Table 3-4: Projected Water Usage Subject to Power Surcharges

Usage subject to Power Surcharges	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Zone 3	2,491,842	2,383,768	2,373,738	2,394,304	2,379,769	2,392,234
Zone 4	4,100,503	3,922,659	3,906,154	3,939,998	3,916,079	3,936,590
Zone 5	758,404	725,511	722,458	728,718	724,294	728,088
Total Usage (AF)	**7,350,749**	**7,031,937**	**7,002,350**	**7,063,020**	**7,020,142**	**7,056,911**

By summing the projected revenue values from volumetric charges, monthly fixed charges, and power surcharges, the total revenue from current rates can be obtained as shown in Table 3-5. Per District staff instruction, the budgeted revenues for FY 2015 were calculated using current water rates to maintain consistency with the District's established budget document. For FY 2016 and beyond, the financial plan analysis uses projected revenues, as shown in Table 3-5.

Table 3-5: Projected Revenues from Current Water Rates

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Fixed Charges	$5,261,942	$5,291,524	$5,338,326	$5,338,782	$5,367,147
Volumetric Charges	$28,540,858	$28,422,436	$28,668,916	$28,495,892	$28,645,273
Power Surcharges	$1,717,408	$1,710,182	$1,725,000	$1,714,528	$1,723,508
Total Rev from Current Rates	**$35,520,209**	**$35,424,143**	**$35,732,242**	**$35,549,202**	**$35,735,929**
Budget	$35,644,963				
% of Budget	99.7%				

3.1.2 Miscellaneous Water Revenues

In addition to revenue from rates, the Water Operating Fund also receives miscellaneous revenues from different sources such as rental income, utility billing charges (such as turn on and turn off fees), etc. to offset the water operating costs. Total miscellaneous revenues range from $5.67M to $5.76M for the Study period, as shown in Table 3-6.

Table 3-6: Projected Miscellaneous Water Revenues

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Utility Billing Charges	$539,527	$544,923	$550,372	$555,876	$561,434
Plan Check Revenue	$250,000	$252,500	$255,025	$257,575	$260,151
Encroachment Fees & Other	$2,000	$2,020	$2,040	$2,061	$2,081
Meter sales	$400,000	$404,000	$408,040	$412,120	$416,242
Rebate	$206,536	$208,601	$210,687	$212,794	$214,922
Rental Income	$867,427	$876,102	$884,863	$893,711	$902,648
Ad Valorem Property Tax for Water	$3,400,000	$3,400,000	$3,400,000	$3,400,000	$3,400,000
Total Miscellaneous Revenues	**$5,665,491**	**$5,688,146**	**$5,711,027**	**$5,734,137**	**$5,757,479**

3.1.3 Water O&M Expenses

3.1.3.1 Water Supply Costs

Currently, the District relies entirely on imported water purchased from MWDOC, a member agency of MWD, to meet its current demand. To diversify its water supply portfolio and increase water supply reliability, three potential sources of supply have been identified:

- Baker Water Treatment Plant (WTP) – a partnership with other neighboring agencies to treat local groundwater. At the time of the Study (Fall 2014), the District projects to start buying 800 AF of water per year from the Baker WTP at $915/AF with a take-or pay contract beginning in FY 2016.
- Cadiz Groundwater project – The start date is uncertain and dependent on actual demand requirements.

- Poseidon Desalination Plant – The start date is uncertain and dependent on actual demand requirements and California Coastal Commission approval.

Based on projections and inputs from District staff, the respective sources of water, per unit price, and expected purchase quantities are shown in Table 3-7 below.

Table 3-7: Projected Purchased Water Supply Costs

MWDOC Water Costs	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Fixed Water Costs					
MWDOC Meter Charge Increase	$456,741	$485,287	$499,560	$513,834	$528,107
MWD Capacity Charge Increase	$379,265	$394,435	$409,606	$429,834	$450,061
MWD Readiness-to-Serve (RTS) Charge	$1,693,076	$1,834,165	$2,003,473	$2,172,781	$2,257,434
School Program	$13,854	$14,269	$14,697	$15,138	$15,592
WUE	$94,069	$96,891	$99,798	$102,792	$105,875
Huntington Desalter	$3,783	$3,897	$4,014	$4,134	$4,258
Variable Cost ($/AF)					
MWDOC Admin Surcharge	$1.63	$0.00	$0.00	$0.00	$0.00
MWD Fiscal Year Rates	$905.99	$951.68	$1,003.29	$1,058.02	$1,119.94
MWD/MWDOC Rate	**$907.61**	**$951.68**	**$1,003.29**	**$1,058.02**	**$1,119.94**
Non-MWD Variable Cost					
Baker WTP	$915.00	$915.00	$915.00	$915.00	$915.00
Cadiz	$1,127.00	$1,127.00	$1,127.00	$1,127.00	$1,127.00
Poseidon	$1,909.62	$1,909.62	$1,909.62	$1,909.62	$1,966.91
Projected Water Purchase (AF) from	5% loss	5% loss	5% loss	5% loss	5% loss
MWDOC/MWD	27,933 AF	27,496 AF	27,733 AF	27,881 AF	28,025 AF
Baker	0 AF	800 AF	800 AF	800 AF	800 AF
Cadiz	0 AF	0 AF	0 AF	0 AF	0 AF
Poseidon	0 AF	0 AF	0 AF	0 AF	0 AF
MWD & MWDOC Meter Charges	$2,957,303	$2,713,888	$2,912,639	$3,116,448	$3,235,602
Variable Water Costs	$24,735,453	$27,132,007	$28,792,544	$30,471,674	$32,362,835
Water Purchased – OSO	-$135,000	-$117,447	-$118,222	-$118,709	-$119,179
Total Purchased Water	**$27,557,756**	**$29,728,447**	**$31,586,961**	**$33,469,412**	**$35,479,257**

3.1.3.2 Water O&M Expenses

Using the District's FY 2015 budget values, allocation and inflation factors were assigned to each line item to determine future O&M costs for the Water Operating Fund. These allocations are further detailed in Section 6.1, Appendix 1. RFC worked closely with District staff to identify any non-recurring costs and

other anticipated expenses for the Study period. Table 3-8 summarizes budgeted and projected O&M expenses for the Water Operating Fund during the Study period.

Table 3-8: Budgeted and Projected Water O&M Expenses

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
	Budget	*Projected*	*Projected*	*Projected*	*Projected*
1001 - Administration	$6,351,574	$6,668,726	$7,003,879	$7,358,185	$7,732,879
2001 - Finance - Overhead	$478,534	$519,976	$563,744	$609,995	$658,896
3001 - Engineering	$256,440	$264,150	$272,091	$280,272	$288,698
4001 - Operations	$5,187,105	$5,440,552	$5,708,940	$5,993,267	$6,294,604
Water Purchase	$27,557,756	$29,728,447	$31,586,961	$33,469,412	$35,479,257
Total Water O&M Expenses	**$39,831,410**	**$42,621,851**	**$45,135,615**	**$47,711,131**	**$50,454,335**
% Change		**7.0%**	**5.9%**	**5.7%**	**5.7%**

3.1.4 Capital and Pension Reserve Funding Transfers

Table 3-9 summarizes the project transfers from the Water Operating Fund to the CRR Fund for required capital funding and the Water Operating Fund's share of the annual $1.5M Pension Reserve obligation set by the District. The methodology of allocating capital funding and pension obligations to the Water Operating Fund are discussed in Sections 2.3.3 and 2.3.4.

Table 3-9: Budgeted and Projected Water Transfers From/ (To) CRR Fund and Pension Reserve

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
	Budget	*Projected*	*Projected*	*Projected*	*Projected*
Capital R&R (CRR) Fund	-$3,400,000	-$3,863,261	-$3,858,340	-$3,751,861	-$3,400,000
Pension Reserve	$0	-$495,000	-$495,000	-$495,000	-$495,000
Total Transfers From / (To) Other Reserves/Funds	**-$3,400,000**	**-$4,358,261**	**-$4,353,340**	**-$4,246,861**	**-$3,895,000**

3.2 WATER FINANCIAL PLAN

3.2.1 Status Quo Water Financial Plan

Table 3-10 displays the pro forma of the District's Water Operating Fund under current rates over the Study period. All projections shown in the table are based upon the District's current rate structure and do not include any rate adjustments or pass-through increases on wholesale water or power costs.

Under the "status-quo" scenario, revenues generated from rates and other miscellaneous revenues are inadequate to sufficiently recover operating expenses of the utility beginning in FY 2016, with a shortfall of approximately $1.5M in 2015 and growing to $9M in FY 2019. Based on increasing water supply and power costs and other O&M expenses, the District is unable to maintain fiscal sustainability and solvency under the current rates.

Table 3-10: Status Quo Water Financial Plan (No Revenue Adjustment)

		FY 2015 Budgeted	FY 2016 Projected	FY 2017 Projected	FY 2018 Projected	FY 2019 Projected
WATER REVENUES						
Revenues from Current Water Rates		***$33,939,940***	***$33,713,960***	***$34,007,242***	***$33,834,674***	***$34,012,421***
Subtotal Revenues Adjustments		*$0*	*$0*	*$0*	*$0*	*$0*
Subtotal Revenues from Water Rates		***$33,939,940***	***$33,713,960***	***$34,007,242***	***$33,834,674***	***$34,012,421***
Power Surcharges (PS)		***$1,705,023***	***$1,710,182***	***$1,725,000***	***$1,714,528***	***$1,723,508***
Subtotal PS Revenues Adjustments		*$0*	*$0*	*$0*	*$0*	*$0*
Subtotal Revenues from Power Surcharges		***$1,705,023***	***$1,710,182***	***$1,725,000***	***$1,714,528***	***$1,723,508***
TOTAL REVENUES FROM WATER RATES		**$35,644,963**	**$35,424,143**	**$35,732,242**	**$35,549,202**	**$35,735,929**
Other Water Revenues						
Passthrough Water Supply Cost Revenue		$0	$0	$0	$0	$0
Utility Billing Charges		$539,527	$544,923	$550,372	$555,876	$561,434
Plan Check Revenue		$250,000	$252,500	$255,025	$257,575	$260,151
Encroachment Fees & Other		$2,000	$2,020	$2,040	$2,061	$2,081
Meter sales		$400,000	$404,000	$408,040	$412,120	$416,242
Rebate		$206,536	$208,601	$210,687	$212,794	$214,922
Rental Income		$867,427	$876,102	$884,863	$893,711	$902,648
Property Tax for Water		$3,400,000	$3,400,000	$3,400,000	$3,400,000	$3,400,000
Subtotal Other Revenues		***$5,665,491***	***$5,688,146***	***$5,711,027***	***$5,734,137***	***$5,757,479***
TOTAL WATER REVENUES		**$41,310,454**	**$41,112,288**	**$41,443,269**	**$41,283,339**	**$41,493,408**
WATER REVENUE REQUIREMENTS						
Water O&M Expenses						
1001 - Administration		$6,351,574	$6,668,726	$7,003,879	$7,358,185	$7,732,879
2001 - Finance - Overhead		$478,534	$519,976	$563,744	$609,995	$658,896
3001 - Engineering		$256,440	$264,150	$272,091	$280,272	$288,698
4001 - Operations		$5,187,105	$5,440,552	$5,708,940	$5,993,267	$6,294,604
Water Purchase		$27,557,756	$29,728,447	$31,586,961	$33,469,412	$35,479,257
TOTAL WATER O&M EXPENSES		**$39,831,410**	**$42,621,851**	**$45,135,615**	**$47,711,131**	**$50,454,335**
NET WATER INCOME		**$1,479,044**	**-$1,509,563**	**-$3,692,346**	**-$6,427,792**	**-$8,960,927**
TRANSFERS FROM / (TO) OTHER FUNDS						
CRR Fund		-$3,400,000	-$3,863,261	-$3,858,340	-$3,751,861	-$3,400,000
Pension Reserves		$0	-$495,000	-$495,000	-$495,000	-$495,000
TOTAL TRANSFERS FROM / (TO) OTHER FUNDS		**-$3,400,000**	**-$4,358,261**	**-$4,353,340**	**-$4,246,861**	**-$3,895,000**
Interest Income		$143,257	$56,949	-$12,396	-$106,592	-$225,908
NET WATER CASH CHANGES		**-$1,777,699**	**-$5,810,874**	**-$8,058,082**	**-$10,781,245**	**-$13,081,835**
Beginning Water Operating Fund Balances		$10,378,031	$8,600,332	$2,789,457	-$5,268,625	-$16,049,871
Ending Water Operating Fund Balances		**$8,600,332**	**$2,789,457**	**-$5,268,625**	**-$16,049,871**	**-$29,131,706**
TARGET BALANCES	100%	**$10,066,282**	**$10,624,370**	**$11,127,123**	**$11,642,226**	**$12,190,867**
O&M	20%	$7,966,282	$8,524,370	$9,027,123	$9,542,226	$10,090,867
Operating Emergency	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000

3.2.2 Proposed Water Financial Plan

The District previously adopted a resolution authorizing automatic adjustments to its rates to pass through for a five-year period projected increases in the rates for wholesale water. RFC recommends that the District continue its use of pass-through increases for wholesale water and power costs. It is assumed in the Model that the power costs are projected to be increased 7.5% per year, thus the rates for the power surcharges will also be increased 7.5% per year. Actual power surcharges will be determined annually to align with actual power cost increases imposed on the District, same as water supply pass-through costs.

In addition to the pass-through water supply and power costs, the Water Operating Fund needs additional revenue adjustments as shown in Table 3-11 to meet the target reserve requirement and maintain financial sufficiency for its expenses and other funding obligations.

Table 3-11: Proposed Water Revenue Adjustments

Fiscal Year	Effective Date	Proposed Water Revenue Adjustments
2015	March 1, 2015	4 percent
2016	January 1, 2016	4 percent
2017	January 1, 2017	4 percent
2018	January 1, 2018	4 percent
2019	January 1, 2019	4 percent

Table 3-12 shows the pro-forma for the Water Operating Fund with revenues from the automatic pass-through increases for both wholesale water and electricity and the proposed revenue adjustments shown above. In addition in the November 2014 Rate Design Workshop, the District Board instructed RFC and Staff to utilized $3.1M of MWD refund revenues to offset the customer impacts on increases of fixed charges for FY 2015 ($1.9M) and FY 2016 ($1.2M) as discussed in Section 3.6.2. Cumulatively, these three factors result in the following:

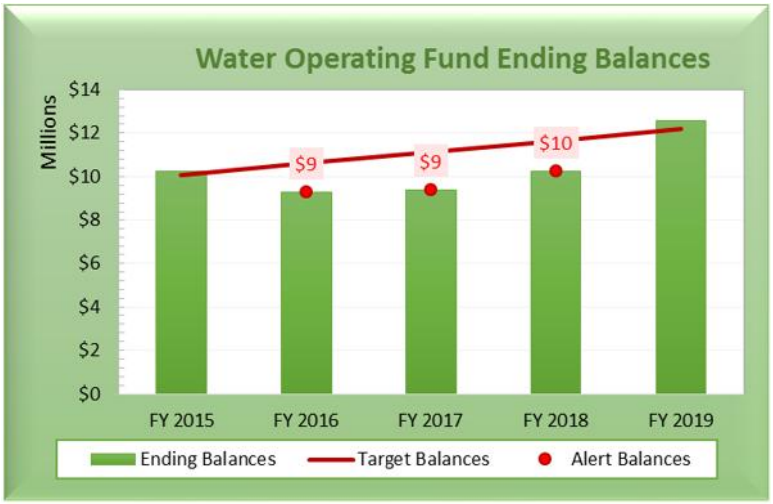
- Positive net water income and positive net water cash balances beginning in FY 2017. As shown in Figure 3-1, the proposed revenue (shown by green line) begins to meet all obligations (shown by stacked bars) in FY 2016 and subsequently contributes to reserves in future years.
- Water Operating Fund ending balances improve during the Study period. As shown in Figure 3-2, the ending balance (shown by green bar) gradually moves closer to the target reserve level (shown by red line), effectively meeting it starting FY 2017.

Table 3-12: Proposed Water Financial Plan

		FY 2015 Budgeted	FY 2016 Projected	FY 2017 Projected	FY 2018 Projected	FY 2019 Projected
WATER REVENUES						
Revenues from Current Water Rates		***$33,939,940***	***$33,713,960***	***$34,007,242***	***$33,834,674***	***$34,012,421***
Subtotal Revenues Adjustments		*$339,399*	*$1,932,934*	*$3,388,028*	*$4,859,056*	*$6,440,463*
Subtotal Revenues from Water Rates		***$34,279,339***	***$35,646,894***	***$37,395,270***	***$38,693,730***	***$40,452,884***
Power Surcharges (PS)		***$1,705,023***	***$1,710,182***	***$1,725,000***	***$1,714,528***	***$1,723,508***
Subtotal PS Revenues Adjustments		*$31,969*	*$185,715*	*$330,748*	*$481,986*	*$650,112*
Subtotal Revenues from Power Surcharges		***$1,736,992***	***$1,895,898***	***$2,055,748***	***$2,196,514***	***$2,373,620***
TOTAL REVENUES FROM WATER RATES		**$36,016,332**	**$37,542,791**	**$39,451,018**	**$40,890,244**	**$42,826,503**
Other Water Revenues						
Passthrough Water Supply Cost Revenue		$1,301,616	$2,683,387	$4,337,044	$6,090,683	$7,976,373
Utility Billing Charges		$539,527	$544,923	$550,372	$555,876	$561,434
Plan Check Revenue		$250,000	$252,500	$255,025	$257,575	$260,151
Encroachment Fees & Other		$2,000	$2,020	$2,040	$2,061	$2,081
Meter sales		$400,000	$404,000	$408,040	$412,120	$416,242
Rebate		$206,536	$208,601	$210,687	$212,794	$214,922
Rental Income		$867,427	$876,102	$884,863	$893,711	$902,648
Property Tax for Water		$3,400,000	$3,400,000	$3,400,000	$3,400,000	$3,400,000
Subtotal Other Revenues		***$6,967,107***	***$8,371,532***	***$10,048,071***	***$11,824,821***	***$13,733,852***
TOTAL WATER REVENUES		**$42,983,439**	**$45,914,324**	**$49,499,089**	**$52,715,065**	**$56,560,355**
WATER REVENUE REQUIREMENTS						
Water O&M Expenses						
1001 - Administration		$6,351,574	$6,668,726	$7,003,879	$7,358,185	$7,732,879
2001 - Finance - Overhead		$478,534	$519,976	$563,744	$609,995	$658,896
3001 - Engineering		$256,440	$264,150	$272,091	$280,272	$288,698
4001 - Operations		$5,187,105	$5,440,552	$5,708,940	$5,993,267	$6,294,604
Water Purchase		$27,557,756	$29,728,447	$31,586,961	$33,469,412	$35,479,257
TOTAL WATER O&M EXPENSES		**$39,831,410**	**$42,621,851**	**$45,135,615**	**$47,711,131**	**$50,454,335**
NET WATER INCOME		**$3,152,029**	**$3,292,473**	**$4,363,474**	**$5,003,934**	**$6,106,020**
TRANSFERS FROM / (TO) OTHER FUNDS						
CRR Fund		-$3,400,000	-$3,863,261	-$3,858,340	-$3,751,861	-$3,400,000
Pension Reserves		$0	-$495,000	-$495,000	-$495,000	-$495,000
TOTAL TRANSFERS FROM / (TO) OTHER FUNDS		**-$3,400,000**	**-$4,358,261**	**-$4,353,340**	**-$4,246,861**	**-$3,895,000**
Interest Income		$143,257	$97,894	$93,573	$98,368	$114,272
MWD Refunds Revenues		$1,900,000	$1,200,000			
Use of MWD Refunds for Phase-in Rates		-$1,900,000	-$1,200,000			
NET WATER CASH CHANGES		**-$104,714**	**-$967,894**	**$103,707**	**$855,441**	**$2,325,293**
Beginning Water Operating Fund Balances		$10,378,031	$10,273,317	$9,305,422	$9,409,129	$10,264,570
Ending Water Operating Fund Balances		**$10,273,317**	**$9,305,422**	**$9,409,129**	**$10,264,570**	**$12,589,862**
TARGET BALANCES	100%	**$10,066,282**	**$10,624,370**	**$11,127,123**	**$11,642,226**	**$12,190,867**
O&M	20%	$7,966,282	$8,524,370	$9,027,123	$9,542,226	$10,090,867
Operating Emergency	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000

Figure 3-1: Water Operating Financial Plan

Figure 3-2: Projected Water Operating Fund Ending Balances



3.3 PRICING OBJECTIVES EXERCISE AND RESULTS

Each rate structure has its own strengths and weaknesses, and there is no perfect "one-size-fits-all" rate structure that addresses all pricing objectives. The key pricing objectives which are considered most important by a utility will work as a fundamental framework for the design and development of the appropriate rate structure for that utility. Currently, there are four common types of conservation rate structures: uniform, seasonal, inclining tiered and water budget-based tiered rates.

1. A **uniform rate structure** charges customers a uniform rate per unit of water consumed. This rate remains constant regardless of usage, and such a structure was developed to better reflect the costs of providing water services, such as treatment costs or pumping costs to customers while maintaining revenue stability, ease of administration, implementation, and understanding.

However, uniform rates poorly address conservation needs and do not necessarily provide affordability for essential use.

2. **Seasonal rate structures** charge customers volumetric rates which differ based on the season. Normally, these rate structures provide a greater conservation incentive during the summer season when the demand for water is the greatest, while maintaining overall simplicity. However, because seasonal rates generally drive much of the utility's revenues during the peak season (which is often more volatile because of weather and economic conditions), revenues under seasonal rates tend to be more unstable. Also, seasonal rates may affect the affordability of water during the peak season for essential use. This type of rate structure is common in communities that are focused on reducing peak demand or summer water use.

3. **Inclining tiered rates** also charge volumetric rates, but the charge per unit of water increases as consumption increases. Inclining tiered rates may address conservation needs, while providing simplicity and ease of administration. Also, depending on the behavior of individual customers, inclining tiered rates may provide affordability for essential usage. However, inclining tiered rates can be disadvantageous to large water users which may have larger families or irrigation areas than the average customer.

4. **Water budget-based tiered rate structures** were developed as a tool for water resource management during the severe drought in the 1990s where each customer was given an allocation of water use based on an efficiency target for indoor and outdoor usage. The allocation target was then translated into an individualized tiered rate structure to promote water efficiency. Water budget rate structures can provide revenue stability, affordability for essential use, and equity in allocating different water supply sources. Challenges with this rate structure include high administrative and implementation costs. Many of these administrative and implementation costs are incurred to conduct a successful public outreach campaign to improve customer understanding and to encourage efficient use of water.

To determine which rate structures to evaluate, RFC collaborated with District staff and identified a list of water pricing objectives (Table 3-13) that relate to the District's unique characteristics and needs. During the October 2013 workshop, RFC discussed each pricing objective with the Board of Directors in detail prior to the exercise. RFC and District staff requested direction from the Board of Directors on the policy priorities that would drive the rate design process. In order to inform the Board of Directors, each policy objective included a policy statement, discussion notes and several rate-design principles.

Table 3-13: Policy Objectives and Associated Pricing Objectives for Water Rate Design

Conservation	Funding	Rate Stability	Equity	Administration
•Promote Efficiency •Promote Conservation •Target Outdoor Water Use •Consistent with Drought Management Action Plan	•Enhance Revenue Stability •Provide Funding Mechanism for Recycling/ Conservation Program	•Rate Stability •Mitigate Customer Impact •Affordability for Essential Use	•Equitable in Allocating Water Resource Cost •Equitable in Allocating CIP Cost •Fair to the Public •Consistent Residential Rates (SFR vs. MFR)	•Customer Understanding •Ease of Implementation •Ease of Administration

3.3.1 Policy Objective 1 – Conservation

Policy Statement: The value of water as a limited resource should be reflected in the rates, and the District's rate structure should discourage wasteful use and encourage efficient use of water resources.

Discussion: This principle is intended to recognize the limited resources of the District and the State, as well as the environmental impact of generating new water resources. The District's rates should encourage the efficient use of water. This principle is intended to encourage efficient use of limited resources by pricing water, as a commodity, roughly equal to its true cost.

Advantages of the Policy Objective: This principle recognizes the multiple uses of our natural resources and makes a positive statement to all customers and outside parties that the District encourages the efficient use of its limited resources.

Disadvantages of the Policy Objective: Some customers may believe this principle necessarily implies adoption of aggressive conservation-based rates such as multi-tiered rates.

Supporting Pricing Objectives:

Promotes Efficiency – The objective of water efficiency includes development of benchmark standards associated with the appropriate amount of water usage for indoor and outdoor needs based on local characteristics of the District. Standards are set on an individual customer basis and on indoor and outdoor use parameters.

Promotes Conservation – The objective of water conservation is to reduce water usage and achieve savings over the year.

Target Outdoor Water Use – This objective targets outdoor water customers and their use by determining the appropriate amount of water to allocate for outdoor reasonable needs.

Consistent with Drought Management Action Plan – This objective encourages the District to remain committed to a drought management plan that allows a mechanism to allocate both water and drought penalty rates during drought conditions.

3.3.2 Policy Objective 2 – Funding

Policy Statement: The elected officials (District's Board of Directors) recognize the advantages of increased revenue sufficiency and stability as enabled by incorporating additional funding mechanisms or cost components into the rate structure.

Discussion: This principle highlights the importance of the utility ensuring adequate revenue generation for achieving a self-sustaining utility. Revenues must be adequate to satisfy salaries, operations and maintenance, as well as, new and existing capital needs. Revenue generation should also be predictable to maintain favorable credit ratings (borrowing terms for future capital funding).

Advantages of the Policy Objective: The good financial practice of ensuring revenue sufficiency and stability begets additional gains in financial health and better credit ratings which result in lower interest expense associated with borrowing to cover capital infrastructure costs.

Disadvantages of the Policy Objective: While pursuing a rate structure that promotes revenue stability and allows special-project funding is advantageous, setting rates too high may impose too great of a financial burden on users and may encourage the utility to be less fiscally responsible with operating and capital programs. In addition, the public may perceive the need as unnecessary.

Supporting Pricing Objectives:

Enhance Revenue Stability – The ability of the rate structure to generate stable and predictable revenues from year to year can be an important consideration, particularly with regard to maintaining a good credit rating for borrowing money to address infrastructure needs when needed or desired. It should be recognized that certain types of rate structures are more effective at maintaining revenue stability than others.

Provide Funding Mechanism for Recycling / Conservation Programs – The rate structure should provide a funding mechanism to the recycling / conservation programs of the District, and in so doing, also determine the allocation of the programs' costs among customers and their associated rates.

3.3.3 Policy Objective 3 –Rate Stability

Policy Statement: The Board of Directors recognizes the importance of establishing rates that generate adequate revenues from year-to-year, regardless of weather or consumption characteristics. Large and unexpected year-to-year rate increases impose financial hardships on customers and may call into question the District's revenue management, fiscal responsibility, and rate equity.

Discussion: Rates are best when predictable over time, which requires a balance between generating sufficient revenue for utility operations, funding capital improvements, and maintaining customer support for required rate adjustments.

Advantages of the Policy Objective: The principle attempts to stabilize the cash flow of the District and improve customer support to rate adjustments through proper revenue management of the District.

Disadvantages of the Policy Objective: It is difficult to define "stable", as this term has different meanings for different people. Certain customers may construe stable to mean no increases from year-to-year.

Supporting Pricing Objectives:

Rate Stability – This objective aims to minimize rate increases. Careful capital and financial planning may help ensure rate stability and avoid erratic changes in rates and charges from one year to the next. Also, a steady or consistent program of smaller annual rate adjustments is generally recognized as preferable when compared to significantly larger increases every three or four years. *Note: This objective is not to be confused with Revenue Stability, detailed under Principle 2.*

Mitigate Customer Impact – Any new rate structure may result in different impacts to different customers. This objective recognizes these impacts and aim to minimize them.

Affordability for Essential Use – This objective addresses the importance of maintaining the price of water for essential use – i.e., that which is used for health and safety – at the lowest cost possible while considering the needs of the utility, industry practice, and regulatory conditions.

3.3.4 Policy Objective 4 – Equity

Policy Statement: In compliance with the State Constitution (Article XIII D, commonly referred to as Proposition 218) and governing State Law, rates should be cost-based, fairly apportioned among customers, and account for the substantive provisions of law through a sound, technically defensible methodology.

Discussion: This principle highlights the importance to the Board of Directors of customers' perceptions of fairness and equity, while also recognizing that equity is determined on the basis of water customer classes, rather than each individual customer. Rates should generally be perceived by the District's customers as fair, reasonable, and equitable for all customers.

Advantages of the Policy Objective: An advantage of this principle is that it reinforces the Board of Directors' priority of treating all customers fairly. It also underscores the importance of "District-wide" fairness and equity as opposed to appeasing one customer class or stakeholder group. Also, it acknowledges the practical reality that rates cannot be custom tailored to each individual customer.

Disadvantages of the Policy Objective: This principle ultimately does not clearly define the terms "fair and equitable" and will still require the Board of Directors to apply its discretion and judgment.

Supporting Pricing Objectives:

Equity in Allocating Water Resource Costs – This objective states that a rate structure achieves equity by reflecting the makeup of the demands on the District's water supply in terms of allocating costs of service to each customer class and the price each customer pays for it.

Equitable in Allocating CIP Costs – This objective states that a rate structure achieves equity by allocating the cost of capital (infrastructure) to each customer class based on each class' consumption patterns and peaking characteristics.

Fair to the Public – This objective recognizes the relevance of the public's perception of how equitable a rate structure is and that managing that perception sometimes calls for informing/educating the public and other stakeholders.

Consistent Residential Rates (SFR & MFR) – This objective strives to have similar rate structures for all residential customer types – both single-family residential (SFR) and multi-family residential (MFR), if administratively possible and justifiable.

3.3.5 Policy Objective 5 –Administration

Policy Statement: The Board of Directors recognizes the advantages of providing a rate structure that is easily understood by the District's customers and can easily be implemented and administered by staff with the current billing software, in order to maintain costs at current levels.

Discussion: This principle highlights the importance of keeping rate structures and the process of administering them as simple as practicable. Customer education and clarity of customer bills should be considered as part of this principle.

Advantages of the Policy Objective: Creating rates that are easy for customers to understand will minimize rate-related customer service issues. If customers understand the basis of their bills, they will have a greater ability to comprehend their billing, how usage will affect their bill, and conclude that it is fair.

Disadvantage of the Policy Objective: Simplifying the rate structure does not always provide a maximum degree of fairness and equity. However, from the customer perspective, rates that are simple to understand may be more important than creating a complicated rate structure that achieves a higher degree of equity.

Supporting Pricing Objectives:

Customer Understanding – The ability for the rate structure to be explained in a manner that can be understood by customers and other stakeholders can have important impacts on the ability to build acceptance of rate adjustments.

Ease-of-Implementation – Implementing a new rate structure merits careful consideration, as rate structure implementation may require upfront (one-time) costs for data gathering or billing system changes.

Ease-of-Administration – An easy-to-administer rate structure decreases the ongoing costs of administering the structure, made up predominantly of additional staffing costs.

During the Board Workshop in October 2013, each member of the Board of Directors was requested to rank each pricing objective with the following criteria:

1. Most Important
2. Very Important
3. Important
4. Least Important

Table 3-14 summarizes the Board of Directors' rankings of the pricing objectives to be used as rate design and rate-setting principles for the Study.

Table 3-14: Pricing Objectives Rankings

• Fair to the Public • Promoting Efficiency • Rate Stability	Most Important
• Customer Understanding • Equitable in Allocating Water Cost • Affordability for Essential use • Equitable in Allocating CIP Cost	Very Important
• Consistent With Drought Management Action Plan • Ease-Of-Implementation • Enhance Revenue Stability • Mitigate Customer Impacts • Targeting Outdoor Water Use	Important
• Consistent Residential Rates (SFR & MFR) • Provide Revenue Source for Recycling/Conservation • Ease-Of-Administration • Promoting Conservation	Least Important

RFC assessed the District's current inclining tiered rate structure and a potential water budget tiered rate structure for their respective ability to address the pricing objectives ranked by the Board of Directors. For example, a water budget rate structure is better for promoting efficiency, equitably allocating water and CIP costs, and affordability for essential use. However, an inclining tiered rate structure is easier for customers to understand and is perceived to be fair to the public. In addition, an inclining tiered rate structure is the District's current rate structure and, therefore, would require little implementation and administrative costs to enact. On the other hand, a water budget rate structure will require substantial implementation and administrative costs for billing system upgrades, data collection, extra short-term customer service staff to provide a smooth transition, and an extensive public outreach effort to enhance customer understanding of the new rate structure. The results of the rankings along with the evaluation of the two conservation rate structures of interest (Inclining tiered and Water budget) as shown in Table 3-15 were presented to the Board of Directors during the follow up Workshop on November 12, 2013.

Table 3-15: Water Conservation Rate Structure Rankings

Pricing Objectives	Inclining Blocks	Water Budget
Fair to the Public	★★★	★
Promoting Efficiency	★★	★★★
Rate Stability	★★★	★★★
Customer Understanding	★★★	★
Equitable in Allocating Water Cost	★★	★★★
Affordability for Essential use	★★	★★★
Equitable in Allocating CIP Cost	★★★	★★★
Consistent With Drought Management Action Plan	★★★	★★★
Ease-Of-Implementation	★★★	★
Enhance Revenue Stability	★★	★★★
Mitigate Customer Impacts	★★★	★
Targeting Outdoor Water Use	★★	★★★
Consistent Residential Rates (SF & MF)	★★★	★★★
Provide Revenue Source for Recycling/Conservation	★★★	★★★
Ease-Of-Administration	★★★	★
Promoting Conservation	★★★	★★

The Board instructed RFC and staff to continue to develop and evaluate water budget tiered rate structures for Single Family and Irrigation meters while retaining the current inclining tiered rate for Multi Family and uniform volumetric rate structure for all other customer classes.

There is a wide spectrum of water budget rate structures, with varying amounts of complexity. Typically, water budget rate structures fall into one of the two categories – full water budgets or simplified water budgets. Characteristics of each are detailed in Table 3-16.

Table 3-16: Types of Water Budget Structure

Simplified Water Budgets	Full Water Budgets
•Group level lot size: lots are grouped into ranges by size •Historical weather trends are used to calculate water budgets •No variances/customizations to water budgets •**=> Lower cost to implement**	•Measured / Individualized parcel data used •Actual daily weather influences tier breaks •Variances allowed (horses, >4 people etc.) •**=>Higher cost to implement**

The cost of establishing a water budget rate structure includes implementation costs – e.g. gathering appropriate data, billing system purchase or upgrade, public outreach effort – and administrative costs to cover the costs of additional staff for billing and customer service. Surveys were conducted to derive cost estimates for each cost component. RFC conducted survey for other agencies and made an estimate for the District on the customer service costs based number of connections within the District service area. Billing system upgrades were based on estimates from billing system provider and acct data cleaning are estimates provided by District staff. Table 3-17 shows estimated implementation costs related to customer service, based on number of accounts/meters, billing system upgrades and account data cleaning as estimated by District staff. Implementation includes the addition of temporary staff for customer service purposes for both the simplified water budget and full water budget.

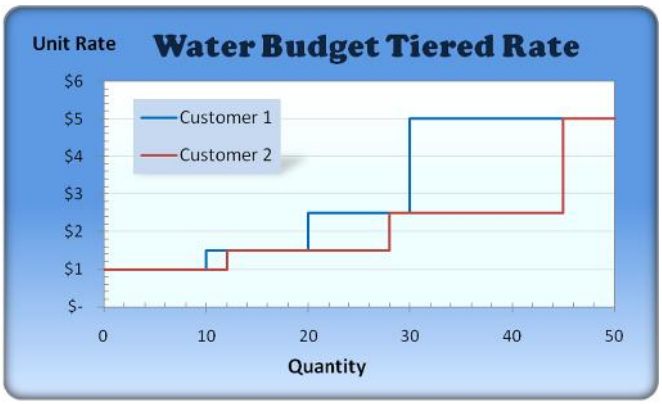
Table 3-17: Water Budget Implementation Costs

	Simplified Budget	Full Budget
Customer Service	$50K (2 Part-time, temporary employees for 6 months)	$150K (2 Full-time, temporary employees for 9 months)
Billing System Upgrades	$50K	$50K
Account data cleaning	$25K	$100K
Total Estimated Costs	**$125K**	**$300K**

3.4 WATER BUDGET TIERED RATE STRUCTURE DEVELOPMENT

During the severe drought in the 1990s, the City of San Juan Capistrano and Irvine Ranch Water District were pioneers in implementing a water budget rate structures to incentivize conservation and efficient use of water as a tool for water resource management. The American Water Works Association Journal defines a water budget as "the quantity of water required for an efficient level of water use by that customer" *(Source: American Water Works Association Journal, May 2008, Volume 100, Number 5).* Theoretically, each customer may have his or her own allocation or water budget as illustrated generically in Figure 3-3.

Figure 3-3: Water Budget Tiered Rate Illustration



To determine an efficient amount of water use, a water budget allocation must be calculated. The budget calculation has to account for the indoor and outdoor needs of the individual customer.

3.4.1 Residential Indoor Water Budget Allocation

The indoor water budget (IWB) is determined by a customer's household size and a standard consumption of water per person. The general IWB formula is as follows:

$$IWB = \frac{GPCD * Household\ Size * Dwelling\ Units * Days\ of\ Service * DF_{indoor}}{748} + V_{indoor}$$

Where:

- GPCD – Gallons per capita per day. The standard consumption per person per day will be set at 55 gallons. The Water Conservation Act of 2010 (SBx7-7) sets the efficient level of indoor residential water use at 55 gallons per person per day.
- Household Size – Number of residents. The default values for household size will be set at 4 people per household.
- Dwelling Units – Number of dwelling units served by the meter / account.
- Days of Service. The number of days of service varies with each billing cycle for each customer. The actual number of days of service will be applied to calculate the indoor water budget for each billing cycle.
- DF_{indoor} – Indoor drought factor. This part of the budget equation will be used in extreme water shortage conditions only if needed because of local supply conditions or if required by regional and State agencies. A lower percentage of the typical or usual indoor water budget could be allocated during extreme water shortages, supply shortage or emergency conditions. Changing the drought factor will be subject to the approval of the District's Board of Directors. The indoor drought factor will be set at 100 percent, representing a 100 percent water budget allotment, in times where no water shortage exist in the District's service area.
- V_{indoor} – Indoor variance. A water allotment can be adjusted to fit the unique circumstances of any customer. If the District chooses to allow variance program, customers need to contact the

District and/or fill-out an adjustment form and return to the District with necessary documentation. However, the District will make that decision when the full water budget rates with individualized lots are implemented.

- 748 is the conversion unit from gallons to billing unit of hundred cubic feet (ccf).

For illustrative purposes, the following indoor water budget calculations for two different customers are provided.

Customer #1: Household Size = 4 persons, 1 Dwelling Unit, Days of Service in January bill = 30 days

$$IWB = \frac{55\ \text{gallons/person/day} * 1\ \text{Unit} * 4\ \text{persons} * 30\ \text{Days} * 100\%}{748\ \text{gallons / ccf}} = 9\ \text{ccf}$$

Customer #2: Household Size = 6 persons, 1 Dwelling Unit, Days of Service in January bill = 28 days

$$IWB = \frac{55\ \text{gallons/person/day} * 1\ \text{Unit} * 6\ \text{persons} * 28\ \text{Days} * 100\%}{748\ \text{gallons / ccf}} = 13\ \text{ccf}$$

3.4.2 Outdoor Water Budget Allocation for Both Residential and Irrigation Meters

The outdoor water budget (OWB) is determined based on three main variables: irrigable landscape area, weather data, and an ET Adjustment Factor. The irrigable landscape area is measured or estimated as the square footage of landscape surface on a customer's property. The weather data is based on the Reference EvapoTranspiration (ET_0), which is the amount of water loss to the atmosphere over a given time period at specific atmospheric conditions. ET_0 is the amount of water (in inches of water) needed for 4"-7" tall well-watered cool season turfgrass to maintain its health and appearance. The ET Adjustment Factor (ETAF) is a coefficient that adjusts ET_0 values based on a plant factor (PF) and irrigation efficiency (IE). The following is the formula for the OWB:

The formula to calculate an outdoor water budget is as follows:

$$OWB = \left(\frac{\text{Landscape Area} * ET_0 * ETAF}{1200} + V_{outdoor} \right) * DF_{outdoor}$$

Where:

- ET_0 is measured in inches of water required during the billing period based on 10-year historical daily data, acquired from the California Irrigation Management Information System (CIMIS) Station 75, which is the closest CIMIS station to the District's service area. When the District is ready to implement a full water budget rate structure, live weather data may be selected for better accuracy.

- ETAF is a State-legislated efficiency standard in the form of a coefficient that adjusts the outdoor water budget value based on the crop types and irrigation efficiency:
    - ETAF = 80% for single family and irrigation accounts[11]
- $DF_{outdoor}$ – Outdoor drought factor. This part of the budget equation will be used in extreme water shortage conditions only if needed because of local supply conditions or if required by regional and State agencies. A lower percentage of the typical or usual outdoor water budget could be allocated during extreme drought, supply shortage or emergency conditions. Changing the drought factor will be subject to the approval of the District's Board of Directors. The outdoor drought factor will be set at 100 percent, representing a 100 percent water budget allotment, in times where no water shortage exists in the District's service area.
- $V_{outdoor}$ – Outdoor variance. A water budget may be adjusted to fit the circumstances of any customer. If the District chooses to allow variance program, customers need to contact the District and/or fill-out an adjustment form and return to the District with necessary documentation. However, the District will make that decision when the full water budget rates with individualized lots are implemented.
- 1200 is the factor used to convert to billing units in hundred cubic feet (ccf).
- Landscape Area, also referred to as Irrigated Landscape Area (in square feet, sq. ft.), is the measured irrigable landscape area served by a specific water meter. Landscape data for each meter or account is not currently, readily available for the District's Single Family and Irrigation meters/ accounts. As the starting point, for residential customer classes, the default estimated landscape area by lot size bins are developed using an empirical analysis of 750 random parcel area data within the District's service area and are proposed to be used for each parcel as shown in Table 3-18.

After the November 2014 Board Workshop, the District decided to pursue a full WB rate structure starting in January 2017. As part of the implementation, the District will measure irrigable area data for each parcel/lot in phases (refer to Section 3.6.1 for phase-in schedule) to develop a customized water budget for each residential and irrigation meter within the service area. In the interim, generalized lot sizes will be used to approximate the irrigable landscape area for each parcel until the irrigable landscape area is measured starting in January 2016. For the purpose of the Study, the allotted irrigable landscape areas by generalized lot sizes detailed in Table 3-18 were used for the analysis and rate development[12].

[11] Consistent with Model Water Efficient Landscape Ordinance (aka AB 1881) or California Code of Regulation Title 23 Chapter 2.7

[12] This data set was given to RFC at the beginning of the rate study by District Staff. The data was compiled using SMWD database and another vendor matching the locations to County parcel data. Approximately 95% of the single family homes are in the data set.

Table 3-18: Generalized Landscape Areas by Lot Size

Lot Size Range	# of Parcels	Empirical Average	Allotted Irrigable Landscape Area
0 -4,000 sq ft	6,554	1,057 sq ft	**1,100 sq ft**
4,001 - 8,000	22,936	2,217 sq ft	**2,400 sq ft**
8,001 - 15,000	5,123	5,393 sq ft	**5,500 sq ft**
15,001 - 50,000	822	12,370 sq ft	**12,500 sq ft**
above 50,000 sq ft	222	> 47,670 sq ft	**30,000 sq ft**

3.4.3 Tier Definitions

Based on discussions with and direction from District staff, the water budget tier definitions for single family residential and irrigation meters are proposed in Table 3-19. Tier 1 is dedicated for essential use, which is 100% of the indoor water use budget for residential customers and 50% of outdoor water use budget for irrigation customers. Tier 1 for irrigation customers is set at the absolute minimum amount to maintain the lowest water use plants. Tier 2 is dedicated to 100% of efficient outdoor water use budget for residential, or an additional 50% of water usage for irrigation. As selected policy, Tier 3 and Tier 4 are considered as inefficient use and excessive use respectively, which is benchmarked as 50% of total water budget allocation inclusive of Tier 1 and Tier 2 allocation for indoor and outdoor use. Any use above Tier 4 is deemed wasteful or unsustainable. The inclining tiered rate structure reflects the proportionate increase in costs associated with additional demand placed on the system.

Table 3-19: Tier Definitions for Water Budget Rate Structure

Tiers	Single Family Residential			Irrigation (Both Domestic & Non-Domestic)		
	From	To	Tier Widths	From	To	Tier Widths
Tier 1	0%	100%	100% Indoor Budget	0%	50%	50% Outdoor Budget
Tier 2	0%	100%	100% Outdoor Budget	50%	100%	50% Outdoor Budget
Tier 3	100%	150%	50% Total Budget	100%	150%	50% Outdoor Budget
Tier 4	150%	200%	50% Total Budget	150%	200%	50% Outdoor Budget
Tier 5	above	Tier 4		above	Tier 4	

3.4.4 Usage Analysis

The following figures have been developed using customer account data from FY 2013 (July 2012 to June 2013) for SFR and Irrigation meters. All active SFR accounts were included in the analysis along with 254 out of 1,377 domestic irrigation accounts (18%) which had confirmed lot size areas.

Switching to a water budget tiered rate structure, tier widths vary for each customer between billing periods, as compared to constant tier widths throughout the year for all SFR customers as set by current

inclining tiered rates. For example, the Tier 1 width for SFR increases from the current structure at 6 ccf/month to an average of 9 ccf/month. A typical SFR customer with a small lot of 4,000 sq ft or less will have a Tier 2 water budget width vary from 2 ccf/month for a winter month to as high as 6 ccf/month for the hottest summer month. The Tier 2 for another SFR customer with a medium large lot of 15,000 sq ft or less will vary from 8 ccf/month for the wettest, coldest winter month to as high as 26 ccf/month for the hottest summer month.

Figure 3-4 compares the usage distribution of SFR customers under the current inclining tiered structure and proposed water budget tiered rate structure. For example, 51% of SFR usage will be charged at Tier 1 water budget rate as compared to 34% of usage charged at current Tier 1 rate. Approximately 2% of usage is deemed wasteful or unsustainable and will be charged at Tier 5 under both rate structures.

Figure 3-4: SFR Usage Distribution in Current Tiers and Water Budget Tiers

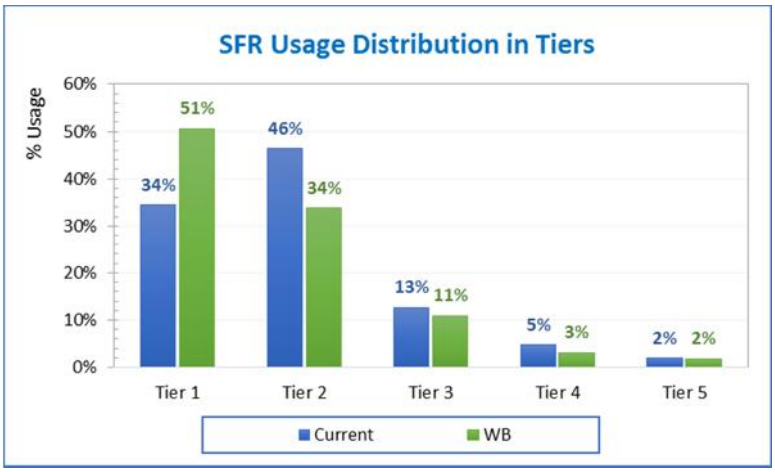


Figure 3-5 shows the bill frequency for SFR customers under a water budget structure. 71% (25%+23%+23%) of SFR customers would remain within their water budget allotment. Approximately, 21% (13% + 8%) of customer bills have usage falling between 100% and 150% of their total water budget (TWB) and 2% of customer bills will have usage assessed at Tier 5 rate (above 200% of TWB).

Figure 3-5: SFR Water Budget Bill Frequency

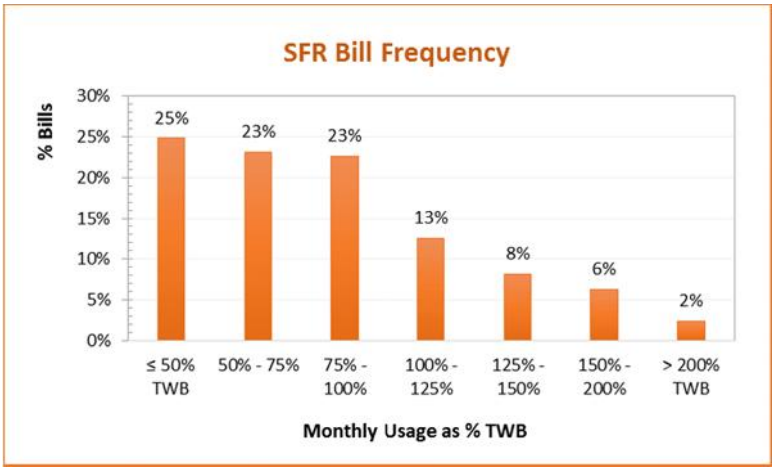
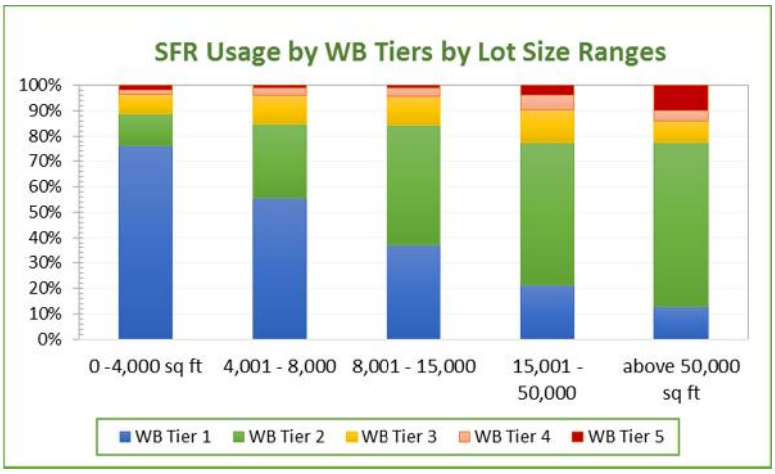


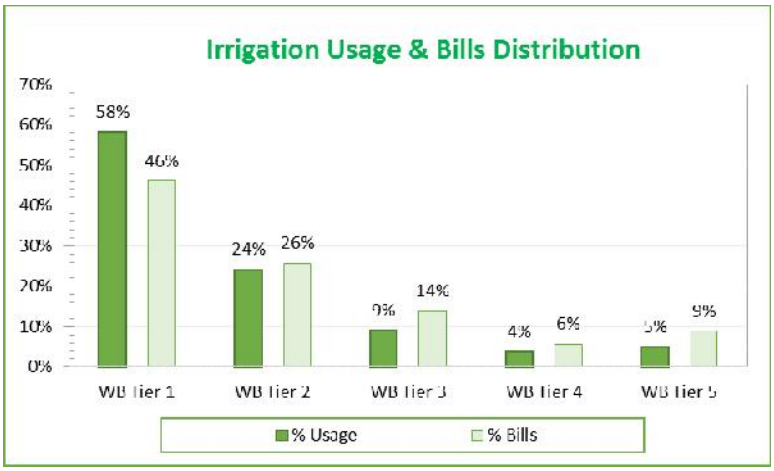
Figure 3-6 shows the usage distribution in the water budget tiered rate structure by lot size. As illustrated, large lot sizes with 15,000 sq ft or more fall more frequently into Tier 3, 4 and 5 (shown by orange and red bars) under the simplified water budget structure using the allocated landscape areas (as shown in Table 3-18). This result suggests that the District might need to measure individual landscape areas for each meter to enhance accuracy and equity of the water budget rate structure.

Figure 3-6: SFR Usage Distribution by WB Tiers by Lot Size Ranges



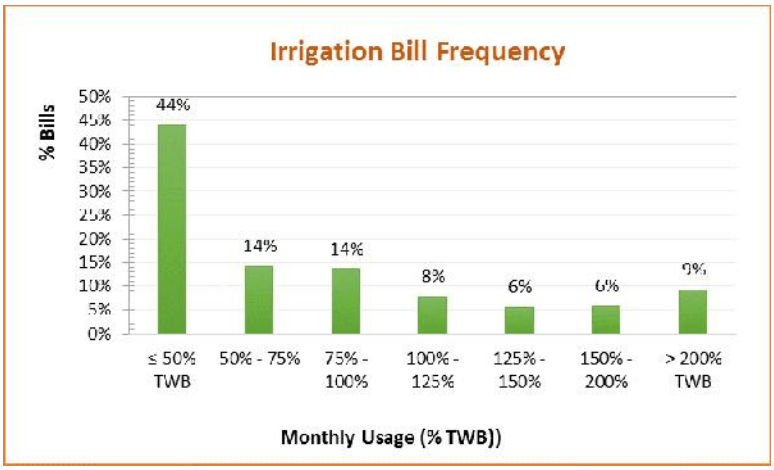
Looking exclusively at irrigation customers, Figure 3-7 shows that 72% (46%+26%) of irrigation customer bills (dark green bars) have usage within efficient levels (Tier 1 + Tier 2) and 82% (58%+24%) of the usage (light green bars) consumed by irrigation customers is considered efficient and 5% of usage is wasteful (Tier 5) caused by 9% of the irrigation customers.

Figure 3-7: Irrigation Usage & Bills Distribution in Water Budget Tiers



Similar to SFR customers, Figure 3-8 shows that 72% (44%+14%+14%) of irrigation bills have usage within their allocated water budgets (Tier 1 and 2) and 9% of the bills have usage exceeding 200% of their TWB, which is considered wasteful and will be assessed at the Tier 5 rate under the proposed water budget tiered rate structure.

Figure 3-8: Irrigation Water Budget Bill Frequency



3.5 COST OF SERVICE ANALYSIS AND WATER RATE DESIGN

3.5.1 Water Cost of Service Analysis

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 revenues by determining the annual revenues needed from rates. Revenues from sources other than water rates and charges (e.g. revenues from miscellaneous services) are deducted. The financial plan shows the required revenue adjustment for FY 2015 effective in March 2015, or 3 months of revenues under new rates, however, the calculated revenue requirement shown in Table 3-20 is annualized.

Table 3-20: Annualized Water Revenue Requirement for FY 2015

ANNUALIZED REVENUE REQUIREMENTS	FY 2015
Power Cost	$1,832,900
Variable Water Supply Cost[13]	$24,735,453
Fixed Water Supply Cost	$2,822,303
Other O&M	$10,568,630
Capital Reserve Funding	$3,400,000
Reserve Funding before Revenue Adjustment[14]	-$476,083
Adjustment from Annualized Rate Rev Adjustment	$1,357,598
Total Revenue Requirements	***$44,240,793***
LESS: OTHER REVENUES	
Other Operating Revenues	$1,541,313
Non-Operating Revenues for Revenue Offsets	
Rental Income	$867,427
Property Tax	$3,400,000
Total Other Revenues	***$5,808,740***
NET REVENUE REQUIREMENTS FROM RATES	**$38,432,054**

According AWWA M1 Manual, the costs incurred in a water utility are generally responsive to the specific service requirements or cost drivers imposed on the system by its customers. Each of the various water utility facilities are designed and sized to meet one or more of these cost drivers, and the capital costs incurred in the construction/installation of these facilities as well as the O&M expenses incurred in running the system are, in turn, linked to these service requirements. The principal service requirements that drive costs include the annual volume of water consumed, the peak water demands incurred, the number of customers in the system, and the number of fire services required to maintain adequate fire protection. Accordingly, these service requirements are the basis for the selection of the cost categories or cost components used in the second step in the cost-of-service allocation process.

The AWWA recommends two methods for classifying costs among various customers: (1) the Base-Extra Capacity method in which costs are allocated to the different customer categories proportionate to their

[13] Includes the pass-through water supply cost increase for FY 2015

[14] Net Water Cash Change in FY 2015 in Status Quo Proforma (-$1,777,699) (Table 3-10) + Projected Passthrough Water Supply Revenue ($1,301,616) in FY 2015 in Proposed Proforma (Table 3-12) = -$476K

use of the water system; and (2) the Commodity-Demand method in which costs are proportionately allocated to each customer category based on their peak demand. Although the two methods vary in the way in which costs are allocated, both result in rates designed to recover the reasonable cost of service during periods of both average and peak demands. This Study uses the Base-Extra Capacity method, which is widely used in the water industry to serve retail customers.

The second step in the cost of service analysis is to functionalize the revenue requirements into cost components. This analysis employs the "Base-Extra Capacity" method, under which water utility costs of service are assigned to basic functional cost components including: water supply costs; base costs (fixed costs incurred to meet average demand); extra capacity or peaking costs (fixed water system costs to meet maximum day and maximum hour, or peaking, demand); and conservation, meter service and customer-service related costs as described in the M1 Manual. Base costs include fixed water supply costs and operations and maintenance costs, capital costs under average (base) demand conditions, a portion of operations and maintenance costs associated with storage, treatment, pumping and distributions facilities, and certain water capital cost investments. Extra capacity costs are costs associated with meeting water demands that exceed average (base) levels of use by system customers. These costs are incurred because of water use variations and peak demands of customers. Both base and peaking costs are considered fixed costs along with billing and customer service costs, fire protection and meter service costs. Customer costs are costs associated with serving customers, such as meter reading, billing, customer service, etc. Direct fire protection costs are related to the costs that apply solely to the fire protection function of the water system, both public and private, such as fire hydrants and related branch mains and valves, and the additional capacity required in the system to accommodate fire flow in case of an emergency.

The revenue to be recovered from rates of $38,432,054 is allocated according to the categories in Table 3-21. For further detail please see Appendix 4 in Section 6.4, which shows the step-by-step allocations.

Table 3-21: Allocated Water System Cost

	FY 2015
Power	$1,832,900
Water Supply	$24,735,453
Base	$5,352,280
Peaking	$2,979,250
Conservation	$343,661
Rev Offsets	-$4,267,427
Meters	$417,469
Billing & Customer Service	$5,589,507
Fire	$1,448,961
Total	**$38,432,054**

In this Study, RFC evaluated three monthly fixed charges options (Table 3-22) that meet the District's pricing objectives and presented the results for all three rate options to the Board of Directors during the October 2014 workshop. The Board of Directors expressed their interest in achieving 100% fixed costs recovered through fixed charges as well as concerns for impacts on small users and affordability for essential use. Presented in this Report are rates calculated for the 100%, monthly fixed charge option.

Table 3-22: Evaluated Monthly Fixed Charges Options

	Status Quo Update	Middle-ground	100% Fixed
Total % Revenues from Fixed Charges	**20%** (47% of the Fixed Costs)	**30%** (74% of the Fixed Costs)	**40%** (100% of the Fixed Costs)
+ Pros	• Minimizing customer impacts	• Enhanced revenue stability	• 100% Fixed cost recovery – Stable Revenues
– Cons	• Subject to revenue volatility during drought and conservation	• Less impact on small users than 100% Fixed Scenario	• Heavily impacting small users • Little affordability

3.5.2 Monthly Fixed Service Charges

According to AWWA M1 Manual, cost-of-service approach to setting water rates results in the distribution of costs to each customer or customer class based on the costs that each causes. A dual set of fees—fixed and variable—is an extension of this cost causation theory. For example, a utility incurs some costs associated with serving customers irrespective of the amount or rate of water they use such as billing and customer service costs. These types of costs are referred to as customer-related costs and typically are costs that would be recovered through a fixed charge. These costs are usually recovered on a per-customer basis or some other non-consumptive basis. Regardless of the level of a customer's consumption, a customer will be charged this minimum amount in each bill. Utilities invest in and continue to maintain facilities to provide capacity to meet all levels of desired consumption including the peak demand plus fire protection, and these costs must be recovered regardless of the amount of water used during a given period. Thus, capacity or peaking costs are generally considered as fixed water system costs.

The most common method for levying fixed charges is by meter size. Meter size is a proxy for the estimated demand that each customer places on the water system. The base meter is most commonly a ¾-inch meter for the District. The ratio at which the meter charge increases is typically a function of either meter investment (estimated cost) or the meter's safe operating capacity. For example, based on the AWWA meter capacity ratios, a customer that has a 20-inch meter has the capacity equivalency of 5.33 ¾-inch meters. (A 2-inch meter has a safe operating capacity of 160 gallons per minute (gpm) compared to a ¾-inch meter which has a safe operating capacity of 30 gpm as listed in Table B-1 in AWWA M1

Manual). Larger meters also cost more to maintain and replace, thus meter service costs are allocated proportionally based on the equivalent meters using meter cost ratios (shown in Chapter III-2 of AWWA M1 Manual). For example, total costs to install a meter and establish service connection for a 1 ½-in meter is estimated to be 1.64 times more than for a ¾-in meter.

Billing and customer service costs related to meter reading, billing and collections are distributed among customers based on the total number of bills rendered in a test year, which is FY 2015 for this Study. Meter service costs, costs related to maintenance costs related to customer meters and services, are distributed to customers in proportion to estimated costs for meters and services installed. Capacity costs, costs related to capital costs related to customer meters and services, are distributed in proportion to meter demand capacity as provided by AWWA M1. According to the AWWA M1 Manual, distribution of meter service costs and capacity costs by equivalent meter and service ratios recognizes that meter and service costs vary, depending on considerations such as the size of service pipe, materials used, locations of meters and other local characteristics for various size meters as compared to ¾-inch meters and services.

Monthly fixed charge cost components include: customer service – uniform for all accounts; meter service – maintenance and capital costs related to meters and inclusive of delivery-related fixed costs, proportionate to meter cost ratios; and capacity – peaking and fire protection related costs increase by meter capacity ratios. The unit rate for each component for FY 2015, is shown in Table 3-23.

Table 3-23: Components for Monthly Fixed Charges for FY 2015 (100% Fixed Option)

	FY 2015	Unit of Service	Unit Rate ($/Equiv ¾-inch Meter)
Customer Service	$5,589,507	619,608 Bills	**$9.03**
Meter Service (Meter service + 100% base cost)	$5,769,749	806,927 Equiv cost meters	**$7.16**
Capacity (100% peaking cost)	$4,428,212	1,121,818 Equiv capacity meters	**$3.95**
Total	**$15,787,467**		**$20.14**

The monthly fixed charges proposed for FY 2015 in Table 3-24 are built from adding up the monthly service charge components – customer service, meter service, and capacity – in Table 3-23 above, and considering their corresponding meter ratios.

Table 3-24: Monthly Fixed Charge for FY 2015

Meter Size	Meter Service	Customer Service	Capacity	FY 2015 100% Fixed Option
3/4"	$7.16	$9.03	$3.95	**$20.14**
1"	$9.12	$9.03	$6.59	**$24.74**
1 1/2"	$11.72	$9.03	$13.17	**$33.92**
2"	$18.88	$9.03	$21.07	**$48.98**
2 1/2"	$45.24	$9.03	$33.58	**$87.85**
3"	$71.60	$9.03	$46.09	**$126.72**
4"	$91.13	$9.03	$82.95	**$183.11**
6"	$136.70	$9.03	$184.34	**$330.07**
8"	$188.77	$9.03	$316.00	**$513.80**
10"	$260.68	$9.03	$500.34	**$770.05**

The monthly fixed charges for FY 2015 to FY 2019, shown in Table 3-25, are calculated to meet annual revenue requirements from rates (excluding power surcharges and pass-through of water supply costs) as depicted by the proposed financial plan discussed in Section 3.2. For example, annualized revenue requirements for FY 2018 is $39.6M for both monthly fixed charges and volumetric rates before pass-through of water supply costs and power surcharges revenues (a 117% cumulative increase of 4 percent per year for FY 2015 to FY 2018). Of the total revenue requirement of $39.6M, $21.2M is projected to come from unrestricted volumetric water rate revenues[15] and $18.4M should be recovered from monthly fixed charges; the $18.4M will be recovered from 53,130 total meters projected for FY 2018 (or 57,138 equivalent ¾-in meters[16]), resulting in 5.75 percent increase across the board over the FY 2017 rates.

[15] marginal water supply rates are collected in restricted reserves and should not be used to meet normal revenue requirements

[16] For example: 2-in meter ($48.98) is equivalent to 2.43 of ¾-in meters ($20.14) and 6-in meter ($330.07) is equivalent to 16.38 ¾-in meters ($20.14)

Table 3-25: 5-year Monthly Fixed Charges

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Meter Size					
3/4"	$20.14	$20.95	$21.79	$23.05	$25.01
1"	$24.74	$25.73	$26.76	$28.30	$30.71
1 1/2"	$33.92	$35.28	$36.70	$38.82	$42.12
2"	$48.98	$50.94	$52.98	$56.03	$60.80
2 1/2"	$87.85	$91.37	$95.03	$100.50	$109.05
3"	$126.72	$131.79	$137.07	$144.96	$157.29
4"	$183.11	$190.44	$198.06	$209.45	$227.26
6"	$330.07	$343.28	$357.02	$377.55	$409.65
8"	$513.80	$534.36	$555.74	$587.70	$637.66
10"	$770.05	$800.86	$832.90	$880.80	$955.67

3.5.3 Water Volumetric Rate Components

3.5.3.1 Water Volumetric Rates

In meeting Proposition 218 requirements, RFC conducted a cost of service analysis and identified three different rate components for the water volumetric rates, including Water Supply, Conservation and Revenue Offsets. Each of the rate components is described in Table 3-26, below.

Table 3-26: Descriptions of Proposed Water Volumetric Rate Components

Rate Components	Description
Water Supply	To recover water supply costs using the following supply allocation: 1. Essential (Tier 1) and Efficient (Tier 2) demand are supplied with imported water from MWD / MWDOC [17] 2. Inefficient (Tier 3) demand is supplied by the Baker Water Treatment Plant (Baker WTP) 3. The Unit rate for Excessive (Tier 4) use reflects the next incremental water supply cost from the Cadiz Groundwater Project 4. The Unit rate for Wasteful (Tier 5) use reflects the highest water supply costs from Poseidon Desalination Plant
Conservation	To recover the District's conservation program costs from inefficient, excessive and wasteful usage (Tiers 3, 4 and 5)
Revenue Offsets	To provide affordability for essential usage, ad valorem property tax revenues and rental incomes are dedicated to offset essential use (Tier 1 & efficient commercial use) revenue requirements.

[17] MWD: Metropolitan Municipal Water District of Southern California
MWDOC: Municipal Water District of Orange County

Water purchased from MWDOC is the cheapest water supply source and is therefore dedicated for essential, efficient and commercial use (Tiers 1 and 2). As discussed and agreed with District staff, inefficient, excessive and wasteful use (Tiers 3, 4 & 5) should pay for the next available marginal water supply costs to signal the true value of water supplies. Tier 3 water supply rate reflects the unit cost of the water supply from the Baker WTP. Tier 4 water supply rate reflects the next incremental water supply cost from the Cadiz Groundwater Project (Cadiz). If all users use water excessively, the District will need to acquire more expensive water from Cadiz. Ultimately, the last and most expensive source of water is from Poseidon Desalination Plant, which is reflected in Tier 5 to signal the true value of water for wasteful use. The rate differential between Tiers 3, 4 & 5 with respect to Tier 2 should be collected in a restricted reserve to fund future water supply programs or to pay for any fines of penalties incurred to the District.

The water supply cost components in Table 3-27 are based on FY 2015 water supply costs from the respective sources (see Table 3-7). The actual water supply rates for FY 2016 and FY 2017 will be calculated annually to reflect the actual water supply costs for that particular year. Calculating actual supply costs annually will allow the District to accurately pass-through wholesale water supply cost increases to retail customers.

Table 3-27: FY 2015 Water Supply Component of Volumetric Charges

FY 2015 Water Supply Rate	Supply Sources	Unit Cost	Unit Rate (with 5% water loss)
Tier 1 Essential, Tier 2 Efficient and Commercial Use	MET / MWDOC	$907.61 / AF	$2.20 / ccf
Tier 3 Inefficient Use	Baker WTP	$915.00 /AF	$2.22 / ccf
Tier 4 Excessive Use	Cadiz	$1,127.00 /AF	$2.73 / ccf
Tier 5 Wasteful Use	Poseidon	$1,909.62 /AF	$4.62 / ccf

The District identified $344K as conservation program related costs in FY 2015 (Table 3-28). The conservation program costs are allocated to customer classes based on inefficient usage (Tiers 3, 4 & 5) for Single Family, Multi-Family and Irrigation customers and estimated inefficient usage of commercial customers at 10% (aligned with the conservation goal of a 10% reduction for commercial usage). The conservation rates are then escalated to FY 2017 by the 4 percent revenue adjustments as proposed by the Financial Plan in Section 3.2.2, Table 3-11.

Table 3-28: Conservation Component of Volumetric Charges

	Inefficient Usage[18]	Allocation %	Rev Requirements	Units of Service	Unit Rates
Residential	1,276,963 ccf	72.1%	$247,791	1,276,963 ccf	**$0.20 /ccf**
Irrigation	430,822 ccf	24.3%	$83,600	430,822 ccf	**$0.20 /ccf**
Commercial & Others	63,228 ccf	3.6%	$12,269	632,281 ccf	**$0.02 /ccf**
Total	**1,771,013 ccf**	**100%**	**$343,661**		

Tiers	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Tier 1	$0.00 / ccf	$0.00 / ccf	$0.00 / ccf	$0.00 / ccf	$0.00 / ccf
Tier 2	$0.00 / ccf	$0.00 / ccf	$0.00 / ccf	$0.00 / ccf	$0.00 / ccf
Tier 3	$0.20 / ccf	$0.21 / ccf	$0.22 / ccf	$0.23 / ccf	$0.24 / ccf
Tier 4	$0.20 / ccf	$0.21 / ccf	$0.22 / ccf	$0.23 / ccf	$0.24 / ccf
Tier 5	$0.20 / ccf	$0.21 / ccf	$0.22 / ccf	$0.23 / ccf	$0.24 / ccf
Commercial	$0.02 / ccf	$0.02 / ccf	$0.02 / ccf	$0.03 / ccf	$0.04 / ccf

To provide affordability for essential usage, property tax revenues ($3.4M shared for Water Operating Fund) and rental incomes ($867K) are dedicated as revenue offsets ($4.27M). The revenue offsets are allocated to customer classes based on essential usage (Tier 1 + 50% Tier 2 for Residential and Irrigation customers and remaining 90% of commercial usage). Revenue offset rates are calculated and shown in Table 3-29.

Given the annual fluctuations of rental income and property tax revenue, the District desires to have the ability to adjust the revenue offset component of volumetric charge rates annually based on the estimated property tax and rental income received. For the purposes of the Study, the revenue offset component of volumetric charge for FY 2015 will also be used for FY 2016 through FY 2019.

[18] Inefficient Usage: 100% Tier 3 + 100% Tier 4 + 100% Tier 5 (for Residential and Irrigation meters) and 10% Commercial Usage

Table 3-29: Revenue Offset Component of Volumetric Rates

	Essential Usage[19]	Allocation %	Rev Requirements	Units of Service	Unit Rates
Residential	5,626,826 ccf	71.2%	-$3,037,960	5,626,826 ccf	**-$0.53 /ccf**
Irrigation	1,708,132 ccf	21.6%	-$922,232	1,708,132 ccf	**-$0.53 /ccf**
Commercial & Others	569,053 ccf	7.2%	-$307,235	632,281 ccf	**-$0.48 /ccf**
Total	**7,904,011 ccf**	**100%**	**-$4,267,427**		

Revenue Offset Rates	Unit Rate
Tier 1	$0.53 / ccf
Tier 2	$0.26 / ccf
Tier 3	$0 / ccf
Tier 4	$0 / ccf
Tier 5	$0 / ccf
Commercial & Others	$0.48 / ccf

Table 3-30 shows the 100% Monthly Fixed Charge Option water volumetric rates for FY 2015 – FY 2019 without the projected increases due to wholesale water supply cost pass-through adjustments.

Table 3-30: 100% Fixed Option Water Volumetric Rates from FY 2015 to FY 2019 Excluding Pass-through for Water Supply Costs

	Water Supply	Conser-vation	Revenue Offset	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Residential & Irrigation								
Tier 1	$2.20	$0.00	-$0.53	**$1.67**	**$1.67**	**$1.67**	**$1.67**	**$1.67**
Tier 2	$2.20	$0.00	-$0.26	**$1.94**	**$1.94**	**$1.94**	**$1.94**	**$1.94**
Tier 3	$2.22	$0.20	$0.00	**$2.42**	**$2.43**	**$2.44**	**$2.45**	**$2.46**
Tier 4	$2.73	$0.20	$0.00	**$2.93**	**$2.94**	**$2.95**	**$2.96**	**$2.97**
Tier 5	$4.62	$0.20	$0.00	**$4.82**	**$4.83**	**$4.84**	**$4.85**	**$4.86**
Commercial & Others	$2.20	$0.02	-$0.48	**$1.74**	**$1.74**	**$1.74**	**$1.75**	**$1.76**

[19] Essential Usage: 100% Tier 1, 50% Tier 2 and 90% Commercial Usage

3.5.3.2 Water Power Surcharges

Power costs are budgeted and projected to increase by 7.5 percent per year, thus the water power surcharges are projected to increase at 7.5 percent per year as shown in Table 3-31. The District reserves the right to adjust the power surcharges annually based on the actual increases for power costs imposed on the District.

Table 3-31: Projected Water Power Surcharges

Domestic Power Surcharges	Current	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Zone 3	$0.18	$0.20	$0.22	$0.24	$0.26	$0.28
Zone 4	$0.26	$0.28	$0.31	$0.34	$0.37	$0.40
Zone 5	$0.37	$0.40	$0.43	$0.47	$0.51	$0.55

3.6 3-YEAR PHASE-IN WATER RATES STRATEGY

3.6.1 Multi-Year Phase-In: Individualized Tiered Water Budget Based Rate Structure

Given the administrative tasks associated with implementing a water budget based rate structure, the District will not be ready to move to individualized water budgets by March 2015. Based on staff estimates, the District can start implementing water budgets by ranges for lot sizes beginning in January 2016. As shown in Table 3-32 below, individualized water budget would first be introduced in January 2016 only for those customers with lot sizes greater than 15,000 square feet. Customers with smaller lot sizes would use an assumed square footage of landscaped area congruent with their overall lot size and until an individualized budget is developed.

Table 3-32: Individualized Water Budget Implementation Schedule

Single Family Lot Size Range	# of Parcels	Allotted / Measured Landscape Area (sq. ft)			
		Jan 2016	Jan 2017	Jan 2018	Jan 2019
0 -4,000 sq ft	6,554	1,100 sq ft	1,100 sq ft	1,100 sq ft	Individualized
4,001 - 8,000	22,936	2,400 sq ft	2,400 sq ft	Individualized	Individualized
8,001 - 15,000	5,123	5,500 sq ft	Individualized	Individualized	Individualized
15,001 - 50,000	822	Individualized	Individualized	Individualized	Individualized
above 50,000 sq ft	222	Individualized	Individualized	Individualized	Individualized

Based on discussion with the District Board on November, for interim rates effective March 2015, the District will retain its current inclining tiered rate structure for single family and multi-family customers and uniform rates for all other non-residential (irrigation, commercial, Lakefill) customers (shown in Table

3-33). Commercial customers have a uniform rate structure. Uniform rates for commercial customers are common in the industry because it is difficult to design tiers or water budgets that will accommodate a variety of uses. For example, a commercial customer who uses a lot of water does not necessarily mean that that customer is using water inefficiently. Inclining tiered rates are more practical to implement for residential customers because the overall consumption patterns for this customer class is fairly homogeneous. From 2016 onwards, single family customers will utilize a water budget rate structure based on the implementation schedule shown in Table 3-32.

Table 3-33: Multi-Year Water Rate Structure

Customer Classes	Mar 2015	Jan 2016	Jan 2017	Jan 2018	Jan 2019
Single Family	Inclining[20]	Water Budget Tiers	Water Budget Tiers	Water Budget Tiers	Individualized WB Tiered
Multi-Family	Inclining	Inclining	Inclining	Inclining	Inclining
Irrigation	Uniform	Individualized WB Tiers	Individualized WB Tiers	Individualized WB Tiers	Individualized WB Tiers
Commercial	Uniform	Uniform	Uniform	Uniform	Uniform
Others	Uniform	Uniform	Uniform	Uniform	Uniform

3.6.2 5-Year Water Rates with 3-Year Phase-in

To reduce customer impacts as the District transitions to 100% monthly fixed charge rates with fixed costs being recovered by the monthly fixed charge and the conservation component of the volumetric charges rate by FY 2017, the Board of Directors instructed District staff to develop a three-year phase-in rate schedule for both fixed and variable rates shown in Table 3-34. Note that the volumetric rates shown for FY 2016 to FY 2019 do not include projected increases in wholesale water supply costs to be passed through by the District pursuant to authority approved by a resolution by the Board of Directors. The minimal increase in wholesale volumetric rates is driven by the increases in the revenue requirements for the conservation components of the volumetric charges as discussed in Section 3.5.3.1. Pass-through increases in the rates will be calculated annually to better reflect the actual increase in the water supply costs for the District.

[20] As shown in Table 3-1: Current Water Rates

Table 3-34: Water Rates with 3-year Phase-in before MWD Refunds Offsets

Fixed Charges	FY 2014 Jan 1, 2014	FY 2015 Mar 10, 2015	FY 2016 Jan 1, 2016	FY 2017 Jan 1, 2017	FY 2018 Jan 1, 2018	FY 2019 Jan 1, 2019
Meter Size						
3/4"	$6.41	$11.54	$16.66	$21.79	$23.05	$25.01
1"	$8.25	$14.42	$20.59	$26.76	$28.30	$30.71
1 1/2"	$13.64	$21.33	$29.01	$36.70	$38.82	$42.12
2"	$20.12	$31.07	$42.03	$52.98	$56.03	$60.80
2 1/2"	$28.75	$50.84	$72.94	$95.03	$100.50	$109.05
3"	$37.37	$70.60	$103.84	$137.07	$144.96	$157.29
4"	$56.76	$103.86	$150.96	$198.06	$209.45	$227.26
6"	$110.67	$192.79	$274.90	$357.02	$377.55	$409.65
8"	$175.34	$302.14	$428.94	$555.74	$587.70	$637.66
10"	$261.57	$452.01	$642.46	$832.90	$880.80	$955.67

Volumetric Rates	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Single Family						
Tier 1	$2.33	$2.04	$1.86	$1.67	$1.67	$1.67
Tier 2	$2.46	$2.29	$2.11	$1.94	$1.94	$1.94
Tier 3	$2.94	$2.77	$2.61	$2.44	$2.45	$2.46
Tier 4	$3.45	$3.28	$3.12	$2.95	$2.96	$2.97
Tier 5	$4.33	$4.50	$4.67	$4.84	$4.85	$4.86
Multi-Family						
Tier 1	$2.33	$2.04	$1.86	$1.67	$1.67	$1.67
Tier 2	$2.46	$2.29	$2.11	$1.94	$1.94	$1.94
Tier 3	$2.94	$2.77	$2.61	$2.44	$2.45	$2.46
Tier 4	$3.45	$3.28	$3.12	$2.95	$2.96	$2.97
Tier 5	$4.33	$4.50	$4.67	$4.84	$4.85	$4.86
Irrigation						
Tier 1	$2.51	$2.51	$2.23	$1.67	$1.67	$1.67
Tier 2	$2.51	$2.51	$2.32	$1.94	$1.94	$1.94
Tier 3	$2.51	$2.51	$2.49	$2.44	$2.45	$2.46
Tier 4	$2.51	$2.51	$2.66	$2.95	$2.96	$2.97
Tier 5	$2.51	$2.51	$3.29	$4.84	$4.85	$4.86
Lakefill	$2.51	$2.25	$2.00	$1.74	$1.75	$1.76
Commercial	$2.51	$2.25	$2.00	$1.74	$1.75	$1.76
Other	$2.51	$2.25	$2.00	$1.74	$1.75	$1.76

Domestic Power Surcharges	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Zone 3	$0.18	$0.20	$0.22	$0.24	$0.26	$0.28
Zone 4	$0.26	$0.28	$0.31	$0.34	$0.37	$0.40
Zone 5	$0.37	$0.40	$0.43	$0.47	$0.51	$0.55

In addition, the Board of Directors also authorized to use the MWD Refund revenues (total of $3.1M for FY 2015 and FY 2016) to soften any potential hardship from the significant increase in fixed charges.

- FY 2015: $1.9M was used to provide $2.82 per equivalent meter per month offset for fixed charges[21].
- FY 2016[22]: $1.2M was used to provide $1.77 per equivalent meter per month offset for fixed charges.

The proposed 5-year rates with 3-year phase-in to be adopted with the use of Rate Stabilization Offsets are shown in Table 3-35 below. 100% Monthly Fixed Charge Option rates will eventually be achieved in FY 2017.

Table 3-35: Water Rates with 3-year Phase-in using MWD Refunds Offsets for FY 2015 & 2016

Fixed Charges	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
	Jan 1, 2014	Mar 10, 2015	Jan 1, 2016	Jan 1, 2017	Jan 1, 2018	Jan 1, 2019
Meter Size						
3/4"	$6.41	$8.72	$14.89	$21.79	$23.05	$25.01
1"	$8.25	$10.96	$20.59	$26.76	$28.30	$30.71
1 1/2"	$13.64	$16.58	$29.01	$36.70	$38.82	$42.12
2"	$20.12	$24.22	$42.03	$52.98	$56.03	$60.80
2 1/2"	$28.75	$38.54	$72.94	$95.03	$100.50	$109.05
3"	$37.37	$52.86	$103.84	$137.07	$144.96	$157.29
4"	$56.76	$78.23	$150.96	$198.06	$209.45	$227.26
6"	$110.67	$146.58	$274.90	$357.02	$377.55	$409.65
8"	$175.34	$230.22	$428.94	$555.74	$587.70	$637.66
10"	$261.57	$344.22	$642.46	$832.90	$880.80	$955.67

[21] FY 2015: 55,964 equivalent ¾-in meters based on proposed monthly fixed charges ratios and number of meters projected for FY 2015

[22] FY 2016: 56,456 equivalent ¾-in meters based on proposed monthly fixed charges ratios and number of meters projected for FY 2016

Table 3-35 (cont.)

Volumetric Rates ($/ccf)	FY 2014 Jan 1, 2014	FY 2015 Mar 10, 2015	FY 2016 Jan 1, 2016	FY 2017 Jan 1, 2017	FY 2018 Jan 1, 2018	FY 2019 Jan 1, 2019
Single Family						
Tier 1	$2.33	$2.04	$1.86	$1.67	$1.67	$1.67
Tier 2	$2.46	$2.29	$2.11	$1.94	$1.94	$1.94
Tier 3	$2.94	$2.77	$2.61	$2.44	$2.45	$2.46
Tier 4	$3.45	$3.28	$3.12	$2.95	$2.96	$2.97
Tier 5	$4.33	$4.50	$4.67	$4.84	$4.85	$4.86
Multi-Family						
Tier 1	$2.33	$2.04	$1.86	$1.67	$1.67	$1.67
Tier 2	$2.46	$2.29	$2.11	$1.94	$1.94	$1.94
Tier 3	$2.94	$2.77	$2.61	$2.44	$2.45	$2.46
Tier 4	$3.45	$3.28	$3.12	$2.95	$2.96	$2.97
Tier 5	$4.33	$4.50	$4.67	$4.84	$4.85	$4.86
Irrigation						
Tier 1	$2.51	$2.51	$2.23	$1.67	$1.67	$1.67
Tier 2	$2.51	$2.51	$2.32	$1.94	$1.94	$1.94
Tier 3	$2.51	$2.51	$2.49	$2.44	$2.45	$2.46
Tier 4	$2.51	$2.51	$2.66	$2.95	$2.96	$2.97
Tier 5	$2.51	$2.51	$3.29	$4.84	$4.85	$4.86
Lakefill	$2.51	$2.25	$2.00	$1.74	$1.75	$1.76
Commercial	$2.51	$2.25	$2.00	$1.74	$1.75	$1.76
Other	$2.51	$2.25	$2.00	$1.74	$1.75	$1.76
Power Surcharges ($/ccf)	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**
Zone 3	$0.18	$0.20	$0.22	$0.24	$0.26	$0.28
Zone 4	$0.26	$0.28	$0.31	$0.34	$0.37	$0.40
Zone 5	$0.37	$0.40	$0.43	$0.47	$0.51	$0.55

4 RECYCLED WATER (RW) OPERATING FUND – FINANCIAL PLAN AND RATES

4.1 RECYCLED WATER REVENUE REQUIREMENTS

A review of a utility'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 Recycled Water Operating Fund.

4.1.1 Revenues from Current RW Rates

Similar to the water enterprise, recycled water rates were developed as part of the initial study in 2009 and were most recently updated in January 2014. Furthermore, the monthly fixed charges for RW are identical to potable water for each meter size.

Volumetric charges are divided into two uniform rates – blended non-domestic and non-domestic (100% RW). To recover additional costs to deliver to elevated areas, customers in the six elevation zones are charged power surcharges by zone. Table 4-1 below outlines the monthly fixed charges, volumetric charges, and power surcharges.

4.1.1.1 Current RW Rates

Table 4-1: Current Recycled Water Rates

Monthly Fixed Charge ($/month)			
Effective Date	FY 2012	FY 2013	FY 2014
Meter Size	1/1/2012	1/1/2013	1/1/2014
3/4"	$6.22	$6.32	$6.41
1"	$8.01	$8.14	$8.25
1 1/2"	$13.24	$13.45	$13.64
2"	$19.53	$19.84	$20.12
2 1/2"	$27.90	$28.35	$28.75
3"	$36.27	$36.85	$37.37
4"	$55.10	$55.98	$56.76
6"	$107.42	$109.14	$110.67
8"	$170.20	$172.92	$175.34
10"	$253.90	$257.96	$261.57

Table 4-1 (cont.)

Volumetric Rates ($ /ccf) Effective Date	FY 2012 1/1/2012	FY 2013 1/1/2013	FY 2014 1/1/2014
Non-Domestic / Blended	$2.18	$2.33	$2.47
Non-Domestic	$1.79	$1.82	$1.85
Power Surcharges ($/ccf)	**1/1/2012**	**1/1/2013**	**1/1/2014**
Zone C	$0.12	$0.12	$0.12
Zone D	$0.24	$0.24	$0.24
Zone E	$0.34	$0.35	$0.35
Zone B4	$0.26	$0.26	$0.26
Zone C4	$0.26	$0.26	$0.26
Zone C5	$0.35	$0.36	$0.37

4.1.1.2 RW Account and Usage

District staff provided RFC with the estimated number of accounts for FY 2014 for each meter size. These figures were then inflated by the annual growth percentage factor as set forth in Section 2.1. Also taken into consideration are the number of accounts that are projected to convert from potable to recycled water in the future. This is evidenced by the increase in 1 ½" and 2" meter customers beginning in FY 2016 seen below in Table 4-2.

Table 4-2: Projected Recycled Water Accounts

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Meter Size						
3/4"	1	1	1	1	1	1
1"	29	29	29	29	29	29
1 1/2"	44	44	67	67	67	67
2"	1,095	1,195	1,355	1,355	1,475	1,475
2 1/2"	0	0	0	0	0	0
3"	4	4	4	4	4	4
4"	7	7	7	7	7	7
6"	2	2	2	2	2	2
8"	3	3	3	3	3	3
10"	0	0	0	0	0	0
Total	**1,185**	**1,285**	**1,468**	**1,468**	**1,588**	**1,588**

Since there is a zero (0) growth percentage factor for non-domestic usage, the increases in non-domestic usage in Table 4-3 are due to the conversion of potable irrigation users to RW as discussed in Section 2.2.

Table 4-3: Projected Recycled Water Usage under Current Rate Structure

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Non-Domestic (ND)	2,715,953	2,797,955	2,996,153	2,996,153	3,126,833	3,126,833
ND/Blended	568,774	540,335	540,335	540,335	540,335	540,335
Total Usage (ccf)	**3,284,727**	**3,338,291**	**3,536,489**	**3,536,489**	**3,667,169**	**3,667,169**

Similar to potable water, future estimates for both RW usage and the associated power surcharges can be determined by using the estimated FY 2014 values for usage delivered to each elevation zone and projecting them proportionally with the change in the total RW usage. RW usage projections are summarized above in Table 4-3 and the units subject to power surcharges are summarized in Table 4-4 below.

Table 4-4: Projected RW Usage Subject to Power Surcharges

Usage subject to Power Surcharges	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Zone C	358,817	364,668	368,406	370,837	372,366	373,839
Zone D	632,684	643,001	649,592	653,879	656,574	659,171
Zone E	129,416	131,526	132,875	133,751	134,303	134,834
Zone B4	514,647	523,039	554,093	554,093	574,567	574,567
Zone C4	50,813	51,642	54,708	54,708	56,729	56,729
Zone C5	34,188	34,745	36,808	36,808	38,169	38,169
Total Usage (ccf)	**1,720,565**	**1,748,622**	**1,796,482**	**1,804,076**	**1,832,707**	**1,837,309**

4.1.1.3 Revenues from Current RW Rates

By summing the projected revenue values from volumetric charges, monthly fixed charges, and power surcharges, the total revenue from current rates can be obtained as shown in Table 4-5. Per District staff instruction, the budget revenues for FY 2015 were calculated using current water rates to maintain consistency with the District's established budget document. The calculated value for FY 2015 is slightly higher than the District's budgeted revenue for FY 2015, likely caused by different assumptions for the number of customers projected to convert to RW; at the time of the District's budget preparation it was assumed fewer number of accounts would be converted to RW during FY 2015; The RFC Study was performed after budget preparation and included updated estimates on the number of accounts that would likely be converted to RW during FY 2015 and corresponding RW volumetric sales.

Table 4-5: Projected Revenues from Current RW Rates

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Fixed Charges	$314,201	$356,596	$356,596	$385,568	$385,568
Volumetric Charges	$6,510,846	$6,877,512	$6,877,512	$7,119,270	$7,119,270
Power Surcharges	$406,387	$418,524	$420,151	$427,527	$428,513
Total Rev from Current Rates	**$7,231,433**	**$7,652,632**	**$7,654,259**	**$7,932,365**	**$7,933,351**
Budget	**$6,907,903**				
% of Budget	105%				

4.1.2 Miscellaneous Revenues

In addition to revenue from rates, the RW Operating Fund also collects miscellaneous revenues from refunds & other sales, which are used to offset the RW operating costs. The expected annual revenues are shown in Table 4-6, which are projected to increase approximately one percent per year.

Table 4-6: Projected Miscellaneous RW Revenues

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Refunds & Other Sales	$364,790	$368,438	$372,122	$375,844	$379,602
Total Miscellaneous Revenues	**$364,790**	**$368,438**	**$372,122**	**$375,844**	**$379,602**

4.1.3 RW O&M Expenses

4.1.3.1 Recycled Water Supply Costs

Currently, the District purchases potable water from MWDOC to meet RW demand in certain service areas due to distribution restrictions and peaking demand. That potable water is blended with recycled water. The District plans to reduce, and eventually eliminate the potable water purchase for RW use after FY 2016, as evidenced by the significant reduction in variable costs beginning FY 2017. Based on the water supply costs provided by the District for the next five years, Table 4-7 summarizes the projected total RW purchased water supply costs for FY 2015 to FY 2019.

Table 4-7: Purchased Water Supply Costs

Recycled Water Costs	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Fixed Costs	$124,000	$124,000	$124,000	$124,000	$124,000
Variable Cost	$320,462	$169,559	$22,000	$22,000	$22,000
Total Purchased Water	**$444,462**	**$293,559**	**$146,000**	**$146,000**	**$146,000**

4.1.3.2 Recycled Water O&M Expenses

Using the District's FY 2015 budget values, allocation and inflation factors were assigned to each line item to determine future O&M costs for the RW Operating Fund (see Section 2.3.1 and Appendix 1 for detailed allocation of O&M to RW Operating Fund). The inflation factors are further detailed in Section 2.1. RFC worked closely with District staff to identify any non-recurring costs and other anticipated expenses for the Study period. Table 4-8 summarizes budgeted and projected O&M expenses for the RW Operating Fund.

Table 4-8: Projected RW O&M Expenses

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
	Budget	*Projected*	*Projected*	*Projected*	*Projected*
1001 - Administration	$4,603,334	$4,838,248	$5,086,694	$5,349,547	$5,627,742
2001 - Finance - Overhead	$280,000	$294,419	$309,512	$325,317	$341,877
3001 - Engineering	$307,620	$316,852	$326,362	$336,156	$346,245
4001 - Operations	$1,951,467	$2,068,663	$2,193,774	$2,327,367	$2,470,052
Water Purchase	$444,462	$293,559	$146,000	$146,000	$146,000
Total RW O&M Expenses	**$7,586,882**	**$7,811,742**	**$8,062,342**	**$8,484,388**	**$8,931,916**
% Change		***3.0%***	***3.2%***	***5.2%***	***5.3%***

4.1.4 Capital and Pension Reserve Funding Transfers

Table 4-9 summarizes the projected transfers from RW Operating Fund to CRR Fund for required capital funding and the Pension Reserve based on the Board's policy of funding $1.5M per year from the three Operating Funds. The RW Operating Fund's share of the annual Pension Reserve contribution is $390,000. The methodology of allocating capital and pension obligations to the RW Operating Fund are further detailed in the Section 2.3.3 and Section 2.3.4.

Table 4-9: Projected RW Operating Fund Transfers From /(To) CRR Fund and Pension Reserve

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
	Budget	*Projected*	*Projected*	*Projected*	*Projected*
Capital R&R (CRR) Fund	$0	-$67,426	-$66,710	-$51,212	$0
Pension Reserve	$0	-$390,000	-$390,000	-$390,000	-$390,000
Total Transfers	**$0**	**-$457,426**	**-$456,710**	**-$441,212**	**-$390,000**

4.2 RECYCLED WATER FINANCIAL PLAN

4.2.1 Status Quo RW Financial Plan

Table 4-10 displays the pro forma of the District's RW Operating 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 or pass-through power costs.

Under the "status-quo" scenario, the RW Operating Fund will face negative net income – revenues generated from rates and other miscellaneous revenues are inadequate to sufficiently recover operating expenses of the RW Fund beginning in FY 2017. Based on increasing power costs and other O&M expenses, the District is unable to maintain fiscal sustainability and solvency under the current rates.

Table 4-10: Status Quo RW Financial Plan (No Revenue Adjustment)

		FY 2015 *Budgeted*	FY 2016 *Projected*	FY 2017 *Projected*	FY 2018 *Projected*	FY 2019 *Projected*
RW REVENUES						
Revenues from Current RW Rates		***$6,503,455***	***$7,234,107***	***$7,234,107***	***$7,504,838***	***$7,504,838***
Subtotal Revenues Adjustments		*$0*	*$0*	*$0*	*$0*	*$0*
Subtotal Revenues from Rates		***$6,503,455***	***$7,234,107***	***$7,234,107***	***$7,504,838***	***$7,504,838***
RW Power Surcharges		***$404,448***	***$418,524***	***$420,151***	***$427,527***	***$428,513***
Subtotal RWPS Revenues Adjustments		*$0*	*$0*	*$0*	*$0*	*$0*
Subtotal Revenues from Power Surcharges		***$404,448***	***$418,524***	***$420,151***	***$427,527***	***$428,513***
TOTAL REVENUES FROM RW RATES		**$6,907,903**	**$7,652,632**	**$7,654,259**	**$7,932,365**	**$7,933,351**
Other RW Revenues						
Refunds & Other Sales		$364,790	$368,438	$372,122	$375,844	$379,602
Subtotal Other Revenues		***$364,790***	***$368,438***	***$372,122***	***$375,844***	***$379,602***
TOTAL RW REVENUES		**$7,272,693**	**$8,021,069**	**$8,026,381**	**$8,308,208**	**$8,312,953**
RW REVENUE REQUIREMENTS						
RW O&M Expenses						
1001 - Administration		$4,603,334	$4,838,248	$5,086,694	$5,349,547	$5,627,742
2001 - Finance - Overhead		$280,000	$294,419	$309,512	$325,317	$341,877
3001 - Engineering		$307,620	$316,852	$326,362	$336,156	$346,245
4001 - Operations		$1,951,467	$2,068,663	$2,193,774	$2,327,367	$2,470,052
Water Purchase		$444,462	$293,559	$146,000	$146,000	$146,000
RW O&M Increases due to RW Conversion		$0	$0	$0	$0	$0
TOTAL RW O&M EXPENSES		**$7,586,882**	**$7,811,742**	**$8,062,342**	**$8,484,388**	**$8,931,916**
NET RW INCOME		**-$314,189**	**$209,327**	**-$35,961**	**-$176,179**	**-$618,963**
TRANSFERS FROM / (TO) OTHER FUNDS						
CRR Fund		$0	-$67,426	-$66,710	-$51,212	$0
Pension Reserves		$0	-$390,000	-$390,000	-$390,000	-$390,000
TOTAL TRANSFERS FROM / (TO) OTHER FUNDS		**$0**	**-$457,426**	**-$456,710**	**-$441,212**	**-$390,000**
Interest Income		$27,200	$24,364	$20,887	$15,518	$7,502
NET RW CASH CHANGES		**-$286,990**	**-$223,735**	**-$471,784**	**-$601,873**	**-$1,001,461**
Beginning RW Operating Fund Balances		$2,835,278	$2,548,289	$2,324,554	$1,852,770	$1,250,897
Ending RW Operating Fund Balances		**$2,548,289**	**$2,324,554**	**$1,852,770**	**$1,250,897**	**$249,436**
TARGET BALANCES	100%	**$2,717,376**	**$2,762,348**	**$2,812,468**	**$2,896,878**	**$2,986,383**
O&M	20%	$1,517,376	$1,562,348	$1,612,468	$1,696,878	$1,786,383
Operating Emergency	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000

4.2.2 Proposed RW Financial Plan

The RW Operating Fund experiences the same volatility of power costs associated with delivering water to elevated areas. To that end, RFC recommends that the District also establish pass-through increases for power surcharges with regards to increases in electricity costs. It is assumed in the Rate Model that the power costs are projected to be increased at 7.5% per year, thus power surcharges will be increased at 7.5% per year as well. Actual power surcharges will be determined annually to align with actual power cost increases imposed on the District.

In addition to the pass-through power costs, the RW Operating Fund needs additional revenue adjustments as shown in Table 4-11 to meet the target reserve requirement and maintain financial sufficiency for its expenses and other funding obligations.

Table 4-11: Proposed Water Revenue Adjustments

Fiscal Year	Effective Date	Proposed Water Revenue Adjustments
2015	March 1, 2015	3 percent
2016	January 1, 2016	3 percent
2017	January 1, 2017	3 percent
2018	January 1, 2018	3 percent
2019	January 1, 2019	3 percent

Table 4-12 shows the pro-forma for the RW Operating Fund with revenues from the pass-through increases for electricity and the proposed revenue adjustments shown above. Cumulatively, these factors result in the following:

- Positive net RW income and positive net water cash balances beginning in FY 2016. As shown in Figure 4-1, the proposed revenue (shown by green line) begins to meet all obligations (shown by stacked bars) in FY 2016 and subsequently contributes to reserves in future years.
- RW Operating Fund ending balances (shown by green bars) are maintained at an adequate level. As shown in Figure 4-2, the ending balance approaches the reserve target levels (shown by red line) and surpasses it in FY 2017.

Table 4-12: Proposed RW Financial Plan

		FY 2015 *Budgeted*	FY 2016 *Projected*	FY 2017 *Projected*	FY 2018 *Projected*	FY 2019 *Projected*
RW REVENUES						
Revenues from Current RW Rates		***$6,503,455***	***$7,234,107***	***$7,234,107***	***$7,504,838***	***$7,504,838***
Subtotal Revenues Adjustments		*$48,776*	*$310,162*	*$536,490*	*$798,410*	*$1,047,508*
Subtotal Revenues from Rates		***$6,552,231***	***$7,544,270***	***$7,770,598***	***$8,303,249***	***$8,552,346***
RW Power Surcharges		***$404,448***	***$418,524***	***$420,151***	***$427,527***	***$428,513***
Subtotal RWPS Revenues Adjustments		*$7,583*	*$45,449*	*$80,559*	*$120,186*	*$161,636*
Subtotal Revenues from Power Surcharges		***$412,031***	***$463,973***	***$500,710***	***$547,712***	***$590,149***
TOTAL REVENUES FROM RW RATES		**$6,964,262**	**$8,008,243**	**$8,271,308**	**$8,850,961**	**$9,142,495**
Other RW Revenues						
Refunds & Other Sales		$364,790	$368,438	$372,122	$375,844	$379,602
Subtotal Other Revenues		***$364,790***	***$368,438***	***$372,122***	***$375,844***	***$379,602***
TOTAL RW REVENUES		**$7,329,052**	**$8,376,681**	**$8,643,431**	**$9,226,805**	**$9,522,097**
RW REVENUE REQUIREMENTS						
RW O&M Expenses						
1001 - Administration		$4,603,334	$4,838,248	$5,086,694	$5,349,547	$5,627,742
2001 - Finance - Overhead		$280,000	$294,419	$309,512	$325,317	$341,877
3001 - Engineering		$307,620	$316,852	$326,362	$336,156	$346,245
4001 - Operations		$1,951,467	$2,068,663	$2,193,774	$2,327,367	$2,470,052
Water Purchase		$444,462	$293,559	$146,000	$146,000	$146,000
RW O&M Increases due to RW Conversion		$0	$0	$0	$0	$0
TOTAL RW O&M EXPENSES		**$7,586,882**	**$7,811,742**	**$8,062,342**	**$8,484,388**	**$8,931,916**
NET RW INCOME		**-$257,830**	**$564,939**	**$581,089**	**$742,417**	**$590,181**
TRANSFERS FROM / (TO) OTHER FUNDS						
CRR Fund		$0	-$67,426	-$66,710	-$51,212	$0
Pension Reserves		$0	-$390,000	-$390,000	-$390,000	-$390,000
TOTAL TRANSFERS FROM / (TO) OTHER FUNDS		**$0**	**-$457,426**	**-$456,710**	**-$441,212**	**-$390,000**
Interest Income		$27,200	$26,718	$28,151	$30,573	$33,400
NET RW CASH CHANGES		**-$230,630**	**$134,230**	**$152,530**	**$331,778**	**$233,581**
Beginning RW Operating Fund Balances		$2,835,278	$2,604,648	$2,738,878	$2,891,408	$3,223,186
Ending RW Operating Fund Balances		**$2,604,648**	**$2,738,878**	**$2,891,408**	**$3,223,186**	**$3,456,767**
TARGET BALANCES	100%	**$2,717,376**	**$2,762,348**	**$2,812,468**	**$2,896,878**	**$2,986,383**
O&M	20%	$1,517,376	$1,562,348	$1,612,468	$1,696,878	$1,786,383
Operating Emergency	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000

Figure 4-1: RW Operating Financial Plan

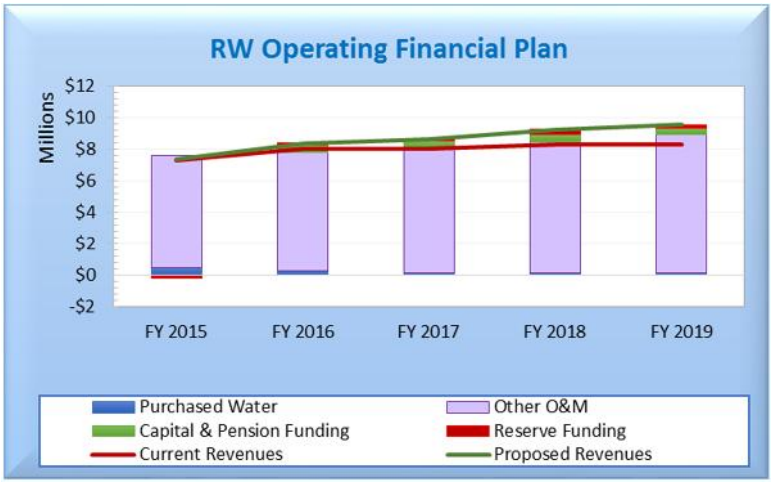
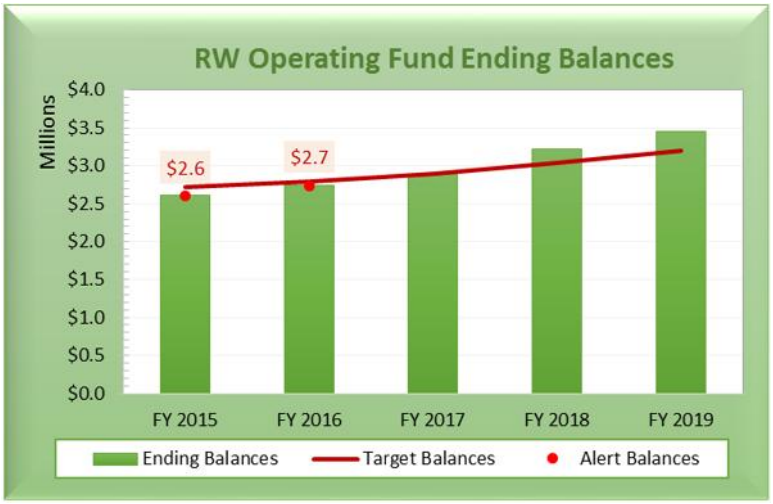


Figure 4-2: Projected RW Operating Fund Ending Balances



4.3 DEVELOPMENT OF RECYCLED WATER RATES

Proposition 218 requires a nexus between the rates charged and the costs of providing the 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 annual 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 as shown in Table 4-13. The financial plan shows the required revenue adjustment for FY 2015 effective in March 2015, or 3 months of revenues

under new rates (April through June), however, the calculated revenue requirement shown in Table 4-13 is annualized.

Table 4-13: RW Revenue Requirement for FY 2015

ANNUALIZED REVENUE REQUIREMENTS	FY 2015
Power Costs	$434,782
Variable Water Supply Costs	$320,462
Fixed Water Supply Cost	$124,000
Other O&M Costs	$6,737,973
Capital Reserve Funding	$0
Reserve Funding (before Rev Adjustment)	-$286,990
Adjustment from Annualized Rev Adjustment	$195,104
Total Revenue Requirements	***$7,525,330***
LESS: OTHER REVENUES	
Refunds & Other Sales	$364,790
Interest Income	$27,200
Total Other Revenues	***$391,990***
NET REVENUE REQUIREMENTS FROM RW RATES	**$7,133,340**

Similar to cost of service for water services, the second step in the cost of service analysis for RW services is to functionalize the revenue requirement into cost components. This analysis employs the "Base-Extra Capacity" method, under which utility costs of service are assigned to basic functional cost components including: supply costs; base costs (fixed costs incurred to meet average demand); extra capacity or peaking costs (fixed water system costs to meet maximum day and maximum hour, or peaking, demand); and conservation, meter service and customer-service related costs as described in the M1 Manual. The Base-Extra Capacity method is widely used in the water industry to serve retail customers. The revenue to be recovered from rates of $7.13M is allocated according to the categories in Table 4-14. The monthly fixed charges are the same as water meters based on Board's policy and current practice. Allocated RW costs include the projected RW revenues from monthly fixed charges of $777K for FY 2015 under proposed monthly water fixed charges for FY 2015 (the 100% Fixed Option FY 2015 rates).

Table 4-14: Allocated Recycled Water System Cost

	FY 2015
Power	$434,782
Water Supply	$320,462
Base	$4,270,431
Peaking	$1,330,649
Monthly Fixed Charges	$777,016
Total RW System Cost	**$7,133,340**

4.3.1 Monthly Fixed Service Charges

Currently, the non-domestic (aka RW) meters are assessed at the same monthly service charges as domestic meters. RFC recommends that the District maintain its current practice of establishing meter charges for all RW meters to those for potable water meters. Table 4-15 shows the 100% Fixed Option monthly service charges for all water meter sizes from FY 2015 to FY 2019 (same as Table 3-25).

Table 4-15: 100% Fixed Option Monthly Service Charges

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Meter Size					
¾"	$20.14	$20.95	$21.79	$23.05	$25.01
1"	$24.74	$25.73	$26.76	$28.30	$30.71
1 ½"	$33.92	$35.28	$36.70	$38.82	$42.12
2"	$48.98	$50.94	$52.98	$56.03	$60.80
2 ½"	$87.85	$91.37	$95.03	$100.50	$109.05
3"	$126.72	$131.79	$137.07	$144.96	$157.29
4"	$183.11	$190.44	$198.06	$209.45	$227.26
6"	$330.07	$343.28	$357.02	$377.55	$409.65
8"	$513.80	$534.36	$555.74	$587.70	$637.66
10"	$770.05	$800.86	$832.90	$880.80	$955.67

4.3.2 RW Volumetric Rates

4.3.2.1 RW Volumetric Rates

Similar to Water, volumetric charges for RW usage will also utilize a Water Budget Tiered Rate Structure. The methodology for determining the tier structure for Irrigation accounts is discussed in Section 3.4. The entire water budget for irrigation accounts is assigned for outdoor use, with each of the first two tiers each representing 50% of the total water budget. In other words, customers who stay within tier 2 are using equal to or less than 100% of their total water budget. Out of 1,285 non-domestic accounts, 526 (41%) have lot size areas confirmed and are included in the analysis.

Figure 4-3 above shows that based on FY 2013 usage, 88% (60%+28%) of non-domestic (aka RW) customers (light blue bars) would remain within their total water budget (Tiers 1 and 2) and very few would reach Tiers 4 and 5. Approximately 90% (69%+22%) of non-domestic usage (dark blue bars) are considered efficient (within Tier 1 and Tier 2) and less than 10% of the usage is considered inefficient (5% for Tier 3), excessive (1% for Tier 4) and wasteful (2% for Tier 5).

Figure 4-3: Non-Domestic Water Budget Usage and Bills Distribution

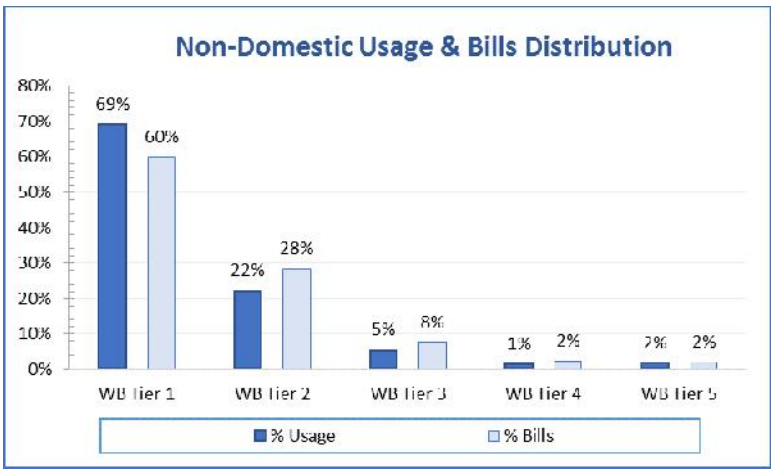
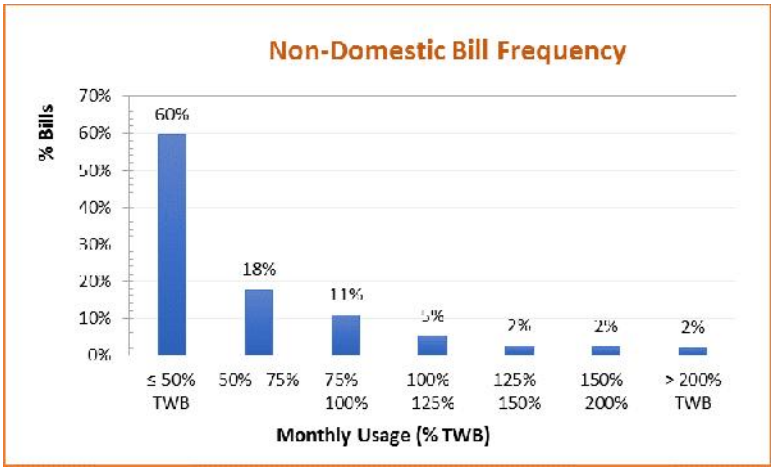


Figure 4-4 provides a more detailed view of non-domestic customers' usage relative to their water budget. 60% of the customer bills are using 50% or less of their water budget and approximately 2% of the customer bills are exceeding 200% of the total water budget and be assessed at Tier 5 water budget rates.

Figure 4-4: Non-Domestic Water Budget Bill Frequency



Non-domestic volumetric rates are comprised of three rate components as follows:

- **Water supply cost:** The blended RW rates calculated for FY 2015 is $0.08 per ccf. This rate is applied to all usage except Tier 5. To discourage wasteful RW use, tier 5 users are charged a rate reflective of the next incremental water supply cost, imported from MWDOC at $2.20 per ccf.

- **Delivery:** Recovers costs associated with delivering RW to customers and is applied uniformly to all tiers. The projected base costs for delivery (exclusive of power surcharges) is $4.27M for FY 2015 with projected usage of 3,338,291 ccf. Thus, delivery costs are $1.28 per ccf.

- **Peaking costs:** Recovers costs associated with having to meet high demand periods ("peak periods") and is applied to tiers based on the peaking characteristics of usage in each tier. Utilities invest in and continue to maintain facilities to provide capacity to meet all levels of desired consumption including the peak demand, and these costs must be recovered regardless of the amount of water used during a given period. Users with higher peak usage should pay proportionally more of the peaking cost. Based on usage analysis for the District's FY 2012-13 consumption, usage in upper tiers has higher peaking ratios than lower tiers. Higher costs are incurred to meet the peaking demands of high tier customers, resulting in proportionally higher peaking costs for upper tiers.

Table 4-16 details the RW Operating Fund's projected revenues and revenue requirement components for the Study period. FY 2016 to FY 2019 rates are projected based on the proposed RW financial plan (Section 4.2.2) after adjusted for revenues from monthly fixed charges, which is the same as the fixed charges for all water meters. Dividing the revenue required from volumetric rates by the projected RW usage produces the weighted average unit cost, with a percentage change in unit cost between each fiscal year. The year-to-year percentage change in unit cost is then used in Table 4-17 to calculate the annual adjustments for each tier. For example, the Tier 1 unit price in FY 2015 of $1.60 increases by 7.8% (as seen in Table 4-17) to $1.73 in FY 2016. The Tier 1 unit charge increases again by 2.9% to $1.78 in FY 2017.

Table 4-16: RW Revenues & Revenue Requirement Components FY 2015 to FY 2019

RW Rev Requirements	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Current Rev from RW Rates	$6,503,455	$7,234,107	$7,234,107	$7,504,838	$7,504,838
Proposed Rev Adjustment from Financial Plan (from Table 4-11)	3%	3%	3%	3%	3%
Proposed Annualized Rev from RW Rates	$6,698,559	$7,674,665	$7,904,905	$8,446,762	$8,700,164
Rev from Fixed Charges (based on Water Fixed Charges shown in Table 3-5)	$777,016	$915,654	$952,327	$1,087,838	$1,180,439
Rev Req from RW Volumetric Rates	$5,921,542	$6,759,011	$6,952,577	$7,358,924	$7,519,726
Projected Equiv Usage	3,768,483	3,990,075	3,990,075	4,136,179	4,136,179
Weighted Average Unit Cost	$1.5713	$1.6940	$1.7425	$1.7792	$1.8180
% change in Unit Cost		**7.8%**	**2.9%**	**2.1%**	**2.2%**

Table 4-17: 100% Fixed Option - RW Volumetric Rates from FY 2015 to FY 2019

	Water Supply	Delivery	Peaking	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Tier 1	$0.08	$1.28	$0.24	**$1.60**	**$1.73**	**$1.78**	**$1.82**	**$1.86**
Tier 2	$0.08	$1.28	$0.74	**$2.10**	**$2.27**	**$2.34**	**$2.39**	**$2.45**
Tier 3	$0.08	$1.28	$0.78	**$2.14**	**$2.31**	**$2.38**	**$2.44**	**$2.50**
Tier 4	$0.08	$1.28	$0.97	**$2.33**	**$2.52**	**$2.60**	**$2.66**	**$2.72**
Tier 5	$2.20	$1.28	$1.21	**$4.69**	**$5.06**	**$5.21**	**$5.32**	**$5.44**

4.3.2.2 RW Power Surcharges

Power costs are budgeted and projected to increase at 7.5 percent per year, thus the RW power surcharges are projected to increase by 7.5 percent per year as shown in Table 4-18 below. The District reserves the right to adjust the power surcharges annually based on the actual increases for power costs imposed on the District.

Table 4-18: Projected RW Power Surcharges

Non-Domestic Power Surcharges	Current	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Zone C	$0.12	$0.13	$0.14	$0.16	$0.18	$0.20
Zone D	$0.24	$0.26	$0.28	$0.31	$0.34	$0.37
Zone E	$0.35	$0.38	$0.41	$0.45	$0.49	$0.53
Zone B4	$0.26	$0.28	$0.31	$0.34	$0.37	$0.40
Zone C4	$0.26	$0.28	$0.31	$0.34	$0.37	$0.40
Zone C5	$0.37	$0.40	$0.43	$0.47	$0.51	$0.55

4.4 3-YEAR PHASE-IN RECYCLED WATER RATES STRATEGY

Similar to Water Rates, a 3-year Phase-in for Recycled Water Rates was developed in response to the Board of Directors' instructions. The same fixed charges are assessed for both Water and RW meters. Volumetric rates are also phased-in to FY 2017 100% monthly fixed charge option rates as shown in Table 4-19

Table 4-19: 3-year Phase-in RW Water Rates

Fixed Charges	FY 2014 Jan 1, 2014	FY 2015 Mar 10, 2015	FY 2016 Jan 1, 2016	FY 2017 Jan 1, 2017	FY 2018 Jan 1, 2018	FY 2019 Jan 1, 2019
Meter Size						
3/4"	$6.41	$8.72	$14.89	$21.79	$23.05	$25.01
1"	$8.25	$10.96	$20.59	$26.76	$28.30	$30.71
1 1/2"	$13.64	$16.58	$29.01	$36.70	$38.82	$42.12
2"	$20.12	$24.22	$42.03	$52.98	$56.03	$60.80
2 1/2"	$28.75	$38.54	$72.94	$95.03	$100.50	$109.05
3"	$37.37	$52.86	$103.84	$137.07	$144.96	$157.29
4"	$56.76	$78.23	$150.96	$198.06	$209.45	$227.26
6"	$110.67	$146.58	$274.90	$357.02	$377.55	$409.65
8"	$175.34	$230.22	$428.94	$555.74	$587.70	$637.66
10"	$261.57	$344.22	$642.46	$832.90	$880.80	$955.67

Volumetric Rates	FY 2014 Jan 1, 2014	FY 2015 Mar 10, 2015	FY 2016 Jan 1, 2016	FY 2017 Jan 1, 2017	FY 2018 Jan 1, 2018	FY 2019 Jan 1, 2019
Non Domestic / Blended						
Tier 1	$2.47	$2.47	$2.24	$1.78	$1.82	$1.86
Tier 2	$2.47	$2.47	$2.43	$2.34	$2.39	$2.45
Tier 3	$2.47	$2.47	$2.44	$2.38	$2.44	$2.50
Tier 4	$2.47	$2.47	$2.51	$2.60	$2.66	$2.72
Tier 5	$2.47	$2.47	$3.38	$5.21	$5.32	$5.44
Non-Domestic						
Tier 1	$1.85	$1.85	$1.83	$1.78	$1.82	$1.86
Tier 2	$1.85	$1.85	$2.01	$2.34	$2.39	$2.45
Tier 3	$1.85	$1.85	$2.03	$2.38	$2.44	$2.50
Tier 4	$1.85	$1.85	$2.10	$2.60	$2.66	$2.72
Tier 5	$1.85	$1.85	$2.97	$5.21	$5.32	$5.44
Non-Domestic Power Surcharges						
Zone C	$0.12	$0.13	$0.14	$0.16	$0.18	$0.20
Zone D	$0.24	$0.26	$0.28	$0.31	$0.34	$0.37
Zone E	$0.35	$0.38	$0.41	$0.45	$0.49	$0.53
Zone B4	$0.26	$0.28	$0.31	$0.34	$0.37	$0.40
Zone C4	$0.26	$0.28	$0.31	$0.34	$0.37	$0.40
Zone C5	$0.37	$0.40	$0.43	$0.47	$0.51	$0.55

5 WASTEWATER (WW) OPERATING FUND – FINANCIAL PLAN AND RATES

5.1 WASTEWATER REVENUE REQUIREMENTS

A review of a utility'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 Operating Fund.

5.1.1 Revenues from Current WW Rates

The current rate structure, last updated on January 1, 2014, was originally developed in the 2009 Rate Study. WW rates have both a fixed charge and a volumetric charge component. Fixed charges vary by meter size, much like water and recycled water rates. For volumetric charges, WW customers are billed a uniform rate per unit based on their potable water consumption up to a maximum number of units. For SFR customers, the volumetric WW charges are capped at 11 ccf with the assumption that 11 ccf returns to sewer systems from indoor use, with a per unit rate of $1.06. Both the volumetric rate and caps vary by customer type.

For commercial customers, the volumetric rate is also reflective of the type of wastewater being discharged, and thus varies by different classes of users. It costs more to treat high strength WW flows, thus WW volumetric rates are assessed in proportion to the WW strengths and flows. See Appendix 6 for current WW customer classifications.

Table 5-1: Current Wastewater Rates

	FY 2012	FY 2013	FY 2014
Effective Date	1/1/2012	1/1/2013	1/1/2014
Monthly Fixed Charge by Meter Size			
3/4"	$8.99	$9.13	$9.26
1"	$14.46	$14.69	$14.90
1 1/2"	$28.02	$28.47	$28.87
2"	$44.33	$45.04	$45.67
2 1/2"	$66.12	$67.18	$68.12
3"	$89.74	$91.18	$92.46
4"	$136.93	$139.12	$141.07
6"	$273.09	$277.46	$281.34
8"	$436.32	$443.30	$449.51
10"	$653.71	$664.17	$673.47

Table 5-1 (cont.)

		FY 2012	FY 2013	FY 2014
	Effective Date	1/1/2012	1/1/2013	1/1/2014
Volumetric Charge ($/ccf)	Max Units			
Single Family	11 ccf	$1.03	$1.05	$1.06
Multi-Family/Single Meter	9 ccf	$1.03	$1.05	$1.06
Multi-Family/Common Meter	7 ccf	$1.03	$1.05	$1.06
C1- Med-Low Strength	No Max	$1.23	$1.25	$1.27
C2- Med-Low Strength	No Max	$1.51	$1.53	$1.55
C3-Med-High Strength	No Max	$2.02	$2.05	$2.08
C4- High Strength	No Max	$3.62	$3.68	$3.73
CR-Recreational	No Max	$1.23	$1.25	$1.27

District staff provided RFC with the estimated number of accounts for FY 2014 for each meter size. These figures were then inflated by the annual growth percentage factor as set in Section 2.1. Table 5-2 provides a summary of the projected number of WW accounts by customer type.

Table 5-2: Projected WW Account Summary

# of Accounts by Meter Size	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
3/4"	38,793	38,793	39,498	39,956	40,244	40,522
1"	6,890	6,890	7,015	7,096	7,147	7,196
1 1/2"	486	486	491	495	497	499
2"	926	926	934	940	943	947
2 1/2"	0	0	0	0	0	0
3"	24	24	24	24	24	24
4"	7	7	7	7	7	7
6"	0	0	0	0	0	0
8"	3	3	3	3	3	3
10"	0	0	0	0	0	0
Total	**47,129**	**47,129**	**47,972**	**48,520**	**48,865**	**49,198**
# of accounts by Customer Class	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**
Single Family	34,039	34,039	34,658	35,060	35,313	35,557
Multi-Family/Single Meter	11,786	11,786	12,000	12,140	12,227	12,312
Multi-Family/Common Meter	554	554	564	571	575	579
C1- Med-Low Strength	608	608	608	608	608	608
C2- Med-Low Strength	75	75	75	75	75	75
C3-Med-High Strength	2	2	2	2	2	2
C4- High Strength	45	45	45	45	45	45
CR-Recreational	20	20	20	20	20	20
Total	**47,129**	**47,129**	**47,972**	**48,520**	**48,865**	**49,198**

Table 5-3: Projected WW Billed Flows (ccf) under Current Rate Structure

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Single Family	4,138,147	4,005,726	4,078,552	4,125,907	4,155,684	4,184,384
Multi-Family/Single Meter	741,830	718,091	731,147	739,636	744,974	750,119
Multi-Family/Common Meter	298,805	289,243	294,502	297,921	300,071	302,144
C1- Med-Low Strength	253,415	245,306	245,306	245,306	245,306	245,306
C2- Med-Low Strength	54,157	52,424	52,424	52,424	52,424	52,424
C3-Med-High Strength	171	166	166	166	166	166
C4- High Strength	62,909	60,896	60,896	60,896	60,896	60,896
CR-Recreational	19,226	18,611	18,611	18,611	18,611	18,611
Total	**5,568,660**	**5,390,463**	**5,481,603**	**5,540,866**	**5,578,131**	**5,614,048**

By summing the projected revenue values from volumetric charges and monthly fixed charges, the total revenue from current rates can be obtained as shown in Table 5-4 below. The calculated revenue for FY 2015 is validated by the District's budgeted revenue for FY 2015. Since estimated revenues in the established budget were developed using current rates, District staff directed RFC to also use current WW rates for the analysis to maintain consistency with the budget document.

Table 5-4: Projected WW Revenues from Current Rates

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Fixed Charge	$6,273,126	$6,380,374	$6,450,113	$6,493,963	$6,536,228
Volumetric Charge	$5,957,762	$6,054,370	$6,117,189	$6,156,690	$6,194,762
WW Revenues from Current Rates	**$12,230,888**	**$12,434,745**	**$12,567,302**	**$12,650,652**	**$12,730,990**
Single Family	$8,548,923	$8,704,347	$8,805,411	$8,868,958	$8,930,209
Multi-Family/Single Meter	$2,100,955	$2,139,151	$2,163,988	$2,179,606	$2,194,658
Multi-Family/Common Meter	$563,067	$573,304	$579,961	$584,146	$588,180
C1- Med-Low Strength	$612,323	$612,323	$612,323	$612,323	$612,323
C2- Med-Low Strength	$120,618	$120,618	$120,618	$120,618	$120,618
C3-Med-High Strength	$1,440	$1,440	$1,440	$1,440	$1,440
C4- High Strength	$249,835	$249,835	$249,835	$249,835	$249,835
CR-Recreational	$33,726	$33,726	$33,726	$33,726	$33,726
From Budget					
Sanitation Sales Service Charge	**$12,231,946**				
	100.0%				

5.1.2 Miscellaneous WW Revenues

In addition to revenue from rates, WW Operating Fund also receives miscellaneous revenues from different sources such as rental income, utility billing charges, etc., to offset the operating costs (see Section 2.3.2 for details). Total miscellaneous revenues are projected to increase at 1 percent per year during the Study period as shown in Table 5-5.

Table 5-5: Projected Miscellaneous WW Revenues

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Utility Billing Charges	$190,476	$192,380	$194,304	$196,247	$198,210
Rental Income	$306,238	$309,300	$312,393	$315,517	$318,672
Waste Discharge Fees	$10,000	$10,100	$10,201	$10,303	$10,406
WW Miscellaneous Revenues	**$316,238**	**$319,400**	**$322,594**	**$325,820**	**$329,078**

5.1.3 WW O&M Expenses

The District's FY 2015 budget values, allocating factors to WW Operating Fund (see Sections 2.3.1 and 6.1 Appendix 1) 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. RFC worked closely with District staff to identify any non-recurring costs and other anticipated expenses for the Study period. Table 5-6 summarizes budgeted and projected O&M expenses for the WW Operating Fund.

Table 5-6: Projected WW O&M Expenses

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
1001 - Administration	$7,432,010	$7,810,648	$8,211,089	$8,634,743	$9,083,117
2001 - Finance - Overhead	$552,723	$596,391	$642,451	$691,063	$742,396
3001 - Engineering	$256,440	$264,150	$272,091	$280,272	$288,698
4001 - Operations	$5,280,283	$5,567,192	$5,872,347	$6,197,016	$6,542,563
Treatment Cost	$2,077,486	$2,139,811	$2,204,005	$2,270,125	$2,338,229
Total	**$15,598,942**	**$16,378,191**	**$17,201,983**	**$18,073,219**	**$18,995,003**
% Change		**5.0%**	**5.0%**	**5.1%**	**5.1%**

5.1.4 Capital and Pension Reserve Funding Transfers

Table 5-7 summarizes the projected transfers from the WW Operating Fund to CRR Fund for required capital funding and the Pension Reserve based on the Board's policy of funding $1.5M per year from the three Operating Funds. The WW Operating Fund's portion of the Pension Reserve contribution is 41%, or $615,000. The methodology of allocating capital and pension obligations to the WW Operating Fund are further detailed in the Sections 2.3.3 and 2.3.4.

Table 5-7: Projected WW Transfers From /(To) CRR Fund and Pension Reserve

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
	Budget	*Projected*	*Projected*	*Projected*	*Projected*
Capital R&R (CRR) Fund	$0	-$287,747	-$284,691	-$218,553	$0
Pension Reserve	$0	-$615,000	-$615,000	-$615,000	-$615,000
Total Transfers	**$0**	**-$902,747**	**-$899,691**	**-$833,553**	**-$615,000**

5.2 WASTEWATER FINANCIAL PLAN

5.2.1 Status Quo WW Financial Plan

Table 5-8 displays the pro forma of the District's WW Operating 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.

Under the "status-quo" scenario, the WW Operating Fund is currently operating at a deficit – revenues generated from rates and other miscellaneous revenues are inadequate to sufficiently recover operating expenses of the WW Operating Fund. The District is unable to maintain fiscal sustainability and solvency under current WW rates.

Table 5-8: Status Quo WW Financial Plan (No Revenue Adjustment)

		FY 2015 *Budgeted*	FY 2016 *Projected*	FY 2017 *Projected*	FY 2018 *Projected*	FY 2019 *Projected*
WW REVENUES						
Revenues from Current WW Rates		***$12,231,946***	***$12,434,745***	***$12,567,302***	***$12,650,652***	***$12,730,990***
Subtotal Revenues Adjustments		*$0*	*$0*	*$0*	*$0*	*$0*
Subtotal Revenues from Rates		***$12,231,946***	***$12,434,745***	***$12,567,302***	***$12,650,652***	***$12,730,990***
TOTAL REVENUES FROM WW RATES		**$12,231,946**	**$12,434,745**	**$12,567,302**	**$12,650,652**	**$12,730,990**
Other WW Revenues						
Utility Billing Charges		$190,476	$192,380	$194,304	$196,247	$198,210
Rental Income		$306,238	$309,300	$312,393	$315,517	$318,672
Waste Discharge Fees		$10,000	$10,100	$10,201	$10,303	$10,406
Subtotal Other Revenues		***$506,713***	***$511,780***	***$516,898***	***$522,067***	***$527,288***
TOTAL WW REVENUES		**$12,738,659**	**$12,946,525**	**$13,084,200**	**$13,172,720**	**$13,258,278**
WW REVENUE REQUIREMENTS						
WW O&M Expenses						
1001 - Administration		$7,432,010	$7,810,648	$8,211,089	$8,634,743	$9,083,117
2001 - Finance - Overhead		$552,723	$596,391	$642,451	$691,063	$742,396
3001 - Engineering		$256,440	$264,150	$272,091	$280,272	$288,698
4001 - Operations		$5,280,283	$5,567,192	$5,872,347	$6,197,016	$6,542,563
Treatment Cost		$2,077,486	$2,139,811	$2,204,005	$2,270,125	$2,338,229
TOTAL WW O&M EXPENSES		**$15,598,942**	**$16,378,191**	**$17,201,983**	**$18,073,219**	**$18,995,003**
NET WW INCOME		**-$2,860,283**	**-$3,431,666**	**-$4,117,783**	**-$4,900,499**	**-$5,736,725**
TRANSFERS FROM / (TO) OTHER FUNDS						
CRR Fund		$0	-$287,747	-$284,691	-$218,553	$0
Pension Reserves		$0	-$615,000	-$615,000	-$615,000	-$615,000
TOTAL TRANSFERS FROM / (TO) OTHER FUNDS		**$0**	**-$902,747**	**-$899,691**	**-$833,553**	**-$615,000**
Interest Income		$39,105	$41,393	-$5,185	-$59,265	-$120,593
Use of Rate Stabilization for Phase-in Rates						
NET WW CASH CHANGES		**-$2,821,178**	**-$4,293,020**	**-$5,022,659**	**-$5,793,317**	**-$6,472,318**
Beginning WW Operating Fund Balances		$9,106,992	$6,285,814	$1,992,794	-$3,029,865	-$8,823,183
Ending WW Operating Fund Balances		**$6,285,814**	**$1,992,794**	**-$3,029,865**	**-$8,823,183**	**-$15,295,501**
TARGET BALANCES	100%	**$9,119,788**	**$9,275,638**	**$9,440,397**	**$9,614,644**	**$9,799,001**
O&M	20%	$3,119,788	$3,275,638	$3,440,397	$3,614,644	$3,799,001
Rate Stabilization	$6,000,000	$6,000,000	$6,000,000	$6,000,000	$6,000,000	$6,000,000

5.2.2 Proposed WW Financial Plan

As shown in the pro forma above in Table 5-8, the WW Operating Fund will experience a negative net income in FY 2015, with growing deficits each year. To meet the target reserve requirement and maintain financial sufficiency for its expenses and other funding obligations, the WW Operating Fund will require additional revenues.

Table 5-9 below outlines the proposed revenue adjustments through FY 2019 which will allow the WW Operating Fund to meet its obligations. It includes significant adjustments in 2015 and 2016 and no increases during the study period thereafter.

Table 5-9: Proposed WW Revenue Adjustments

Fiscal Year	Effective Date	Proposed WW Revenue Adjustments
2015	March 1, 2015	14 percent
2016	January 1, 2016	40 percent
2017	January 1, 2017	0 percent
2018	January 1, 2018	0 percent
2019	January 1, 2019	0 percent

Table 5-10 shows the pro-forma for the WW Operating Fund under proposed revenue adjustments. In addition, in the November 2014 Rate Design Workshop, the District Board instructed RFC and Staff to utilized $6M of Rate Stabilization Reserve to offset the customer impacts on increases of fixed charges for FY 2015 ($3M) and FY 2016 ($3M) as discussed in Section 5.4. Cumulatively, these factors result in the following:

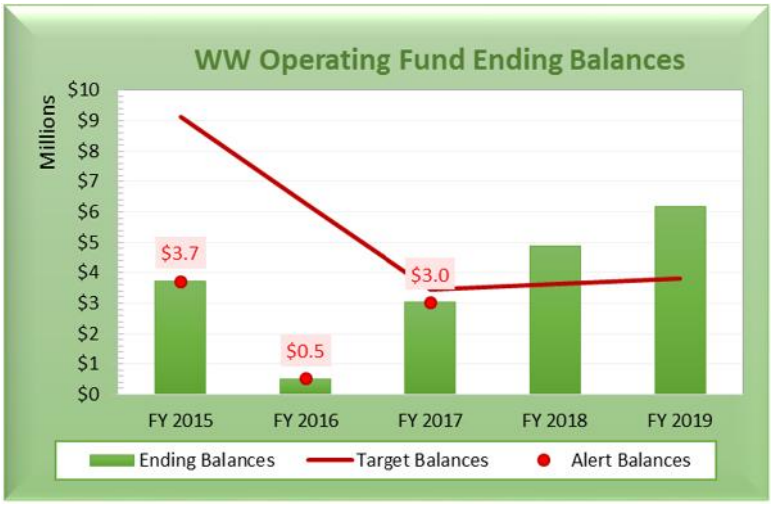
- Positive net income and positive net cash balances beginning in FY 2016. As shown in Figure 5-1, the WW Operating Fund will need to utilize a considerable amount of reserves to meet its obligations in FY 2015 (shown by red bar below the x-axis). The reliance on reserves is minimal for FY 2016 and then revenues (shown by green line) are sufficient to meet obligations (shown by stack bars), including a surplus to replenish reserves in subsequent years.
- While WW Operating Fund ending balances (shown by green bar in Figure 5-2) are well below reserve target levels (shown by red line) in FY 2015 and FY 2016, they approach target levels in FY 2017, and surpass targets in FY 2018 as seen in Figure 5-2. However, note that the rate stabilization target has reduced to $0 in FY 2017 as it has been used to offset customer impacts of increasing fixed charges as discussed in Section 5.4.

Table 5-10: Proposed WW Financial Plan

		FY 2015 *Budgeted*	FY 2016 *Projected*	FY 2017 *Projected*	FY 2018 *Projected*	FY 2019 *Projected*
WW REVENUES						
Revenues from Current WW Rates		***$12,231,946***	***$12,434,745***	***$12,567,302***	***$12,650,652***	***$12,730,990***
Subtotal Revenues Adjustments		*$428,118*	*$4,103,466*	*$7,490,112*	*$7,539,789*	*$7,587,670*
TOTAL REVENUES FROM WW RATES		**$12,660,064**	**$16,538,210**	**$20,057,414**	**$20,190,441**	**$20,318,660**
Other WW Revenues						
Utility Billing Charges		$190,476	$192,380	$194,304	$196,247	$198,210
Rental Income		$306,238	$309,300	$312,393	$315,517	$318,672
Waste Discharge Fees		$10,000	$10,100	$10,201	$10,303	$10,406
Subtotal Other Revenues		***$506,713***	***$511,780***	***$516,898***	***$522,067***	***$527,288***
TOTAL WW REVENUES		**$13,166,777**	**$17,049,991**	**$20,574,312**	**$20,712,509**	**$20,845,948**
WW REVENUE REQUIREMENTS						
WW O&M Expenses						
1001 - Administration		$7,432,010	$7,810,648	$8,211,089	$8,634,743	$9,083,117
2001 - Finance - Overhead		$552,723	$596,391	$642,451	$691,063	$742,396
3001 - Engineering		$256,440	$264,150	$272,091	$280,272	$288,698
4001 - Operations		$5,280,283	$5,567,192	$5,872,347	$6,197,016	$6,542,563
Treatment Cost		$2,077,486	$2,139,811	$2,204,005	$2,270,125	$2,338,229
TOTAL WW O&M EXPENSES		**$15,598,942**	**$16,378,191**	**$17,201,983**	**$18,073,219**	**$18,995,003**
NET WW INCOME		**-$2,432,165**	**$671,800**	**$3,372,329**	**$2,639,290**	**$1,850,945**
TRANSFERS FROM / (TO) OTHER FUNDS						
CRR Fund		$0	-$287,747	-$284,691	-$218,553	$0
Pension Reserves		$0	-$615,000	-$615,000	-$615,000	-$615,000
TOTAL TRANSFERS FROM / (TO) OTHER FUNDS		**$0**	**-$902,747**	**-$899,691**	**-$833,553**	**-$615,000**
Interest Income		$39,105	$36,165	$17,643	$39,320	$55,000
Use of Rate Stabilization for Phase-in Rates		-$3,000,000	-$3,000,000			
NET WW CASH CHANGES		**-$5,393,060**	**-$3,194,782**	**$2,490,281**	**$1,845,056**	**$1,290,945**
Beginning WW Operating Fund Balances		$9,106,992	$3,713,932	$519,150	$3,009,431	$4,854,488
Ending WW Operating Fund Balances		**$3,713,932**	**$519,150**	**$3,009,431**	**$4,854,488**	**$6,145,433**
TARGET BALANCES	100%	**$9,119,788**	**$6,275,638**	**$3,440,397**	**$3,614,644**	**$3,799,001**
O&M	20%	$3,119,788	$3,275,638	$3,440,397	$3,614,644	$3,799,001
Rate Stabilization	$6,000,000	$6,000,000	$3,000,000	$0	$0	$0

Figure 5-1: WW Operating Financial Plan

Figure 5-2: Projected WW Operating Fund Ending Balances



5.3 COST OF SERVICE ANALYSIS AND WASTEWATER RATE DEVELOPMENT

Government Code Section 54999 requires agencies to perform a cost of service analysis at least once every ten years. A cost of service analysis ensures that rates properly reflect the cost of providing service to the customer, and are thus fair to customers.

The District had completed a cost of service analysis for its WW services in 2009. As part of this study, RFC performed a cost of service analysis for the WW services. The WW cost of service analysis was based on loading factors as well as the revenue requirements developed through the operating and cash flow

analysis. The following section describes the methodology used to allocate WW system costs to WW Flow, Total Suspended Solids (TSS) and Biochemical Oxygen Demand (BOD) parameters and the calculation of resulting rates.

The net cost of providing service is determined by the total revenue requirement of the utility. In a cost of service analysis, the total cost of service is proportionally allocated to customer classes based on services rendered, which takes into account the flow (Flow parameter) and strength of such sewer discharge (BOD and TSS parameters).

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 2015 as the test year.

5.3.1 Recommendation

After reviewing the current WW rate structure and mass balance analysis, RFC recommends the following:

1. Maximum billed flows for residential customer classes:
    1. Single Family Residential = 10 ccf / 30 days billing period (equivalent for indoor usage of family of four people using 60 gallons per capita per day standard)
    2. Multi-Family / Single Meters = 9 ccf / 30 days billing period (equivalent for indoor usage of family of 3.3 people)
    3. Multi-Family / Common Meters = 7 ccf / 30 days billing period (equivalent for indoor usage of family of 2.6 people)
2. Fixed charges to be assessed uniformly for all accounts to reflect the fixed and overhead costs of the WW system, which are not supposed to vary with meter sizes or WW flows or strength.

5.3.2 Mass Balance Analysis

The mass balance analysis is used to estimate and validate the wastewater loadings (flow and strength) generated by each customer group. While for most customers discharged wastewater is not metered when it enters the wastewater system, the total amount of flow and strength entering the treatment plant and treated every day is a known quantity (provided by the District for FY 2013 as the most recent year with the most complete flow data for all three treatment plants). Additionally, non-residential and industrial customer flows can be estimated based on their water usage as most outdoor usage is metered through dedicated irrigation meters for non-residential users. Non-residential and industrial customer strengths are estimated according to the District's customer classifications (see Appendix 6 in Section 6.6, Table 6-10 for details). The remaining loadings, net of the total less infiltration and inflow, and non-residential and industrial, are assigned to residential users.

Table 5-11 shows the total flow and loadings of each customer class in the system, calculated using estimated strength factors for each customer class.

Table 5-11: Mass Balance Analysis

Data for FY 2013	Flow (MGD)	BOD (lbs/day)	TSS (lbs/day)	Flow (ccf)	BOD (mg/L)	TSS (mg/L)
Treatment Plants						
SOCWA	2.17	4,600	5,433	1,058,890	254	300
Chiquita WRP	6.12	12,156	21,809	2,986,364	238	427
OSO WRP	1.82	3,849	4,547	886,150	254	300
Total Plant	**10.11**	**20,605**	**31,788**	**4,931,404**	**244**	**377**
Less I&I	0.00	0	0	0	100	100
Net Plant	**10.11**	**20,605**	**31,788**	**4,931,404**	**244**	**377**
Non-Residential[23]						
C1- Med-Low Strength	0.20	417	250	97,634	250	150
C2- Med-Low Strength	0.04	111	100	20,947	310	280
C3-Med-High Strength	0.00	1	1	69	500	600
C4- High Strength	0.05	395	316	23,102	1,000	800
CR-Recreational	0.02	26	26	7,490	200	200
Total Non-Residential	**0.31**	**950**	**693**	**149,242**	**372**	**272**
Residential	**9.80**	**19,655**	**31,095**	**4,782,162**	**240**	**380**
Single Family	7.44	14,913	23,593	3,628,437	240	380
Multi-Family/Single Meter	1.50	3,007	4,757	731,585	240	380
Multi-Family/Common Meter	0.63	1,262	1,996	306,963	240	380

5.3.3 Cost of Service Analysis & WW Rates Development

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 as shown in

[23] Non-Residential Strengths: RFC used the max BOD and TSS within the customer classifications (See Appendix 6) for the purpose of the mass balance analysis.

Table 5-12. The financial plan shows the required revenue adjustment for FY 2015 effective in March 2015, or 3 months of revenues under new rates, however, the calculated revenue requirement shown in Table 5-12 is annualized.

Table 5-12: WW Revenue Requirement for FY 2015

ANNUALIZED REVENUE REQUIREMENTS	FY 2015
O&M	$15,598,942
Transfers to Other Reserves (CRR & Pension)	$0
Reserve Funding (before Rev Adjustment)	-$2,821,178
Adjustment from Annualized Rev Adjustment	$1,712,472
Total Revenue Requirements	***$14,490,236***
LESS: OTHER REVENUES	
Miscellaneous Revenues	*$506,713*
Interest Income	$39,105
Total Other Revenues	***$545,818***
NET REVENUE REQUIREMENTS FROM RATES	**$13,944,418**

Based on the recommendations listed in Section 5.3.1, the revised units of service including revised flows, BOD, and TSS are re-calculated for FY 2015 for each customer class and summarized in Table 5-13 below. Noted that single family has reduced approximately 10 percent as the estimated WW generation for a single family unit reduced from 11 ccf/ month to 10 ccf/ month (the max billing units for volumetric rates) based on the recommendations from the results of the mass balance discussed in section 5.3.1 and 5.3.2.

Table 5-13: Units of WW Service for FY 2015

	Current Billed Flow ccf / yr	Revised Billed Flow ccf / yr	BOD lbs/day	TSS lbs/day	# of accts
Single Family	4,005,726	3,605,154	14,817	23,442	34,039
Multi-Family/Single Meter	718,091	718,091	2,951	4,669	11,786
Multi-Family/Common Meter	289,243	289,243	1,189	1,881	554
C1- Med-Low Strength	245,306	245,306	1,049	629	608
C2- Med-Low Strength	52,424	52,424	278	251	75
C3-Med-High Strength	166	166	1	2	2
C4- High Strength	60,896	60,896	1,041	833	45
CR-Recreational	18,611	18,611	64	64	20
TOTAL	**5,390,463 ccf**	**4,989,890 ccf**	**21,391**	**31,770**	**47,129**

RFC worked closely with District staff to allocate individual line items of the O&M expenses, WW asset list, and each revenue requirement line item for FY 2015 to functional cost components: Flow, BOD, TSS and Administration (see Appendix 7, Section 6.7, Table 6-11). Table 5-14 shows the unit costs for each of the cost components for wastewater.

Table 5-14: Unit Cost of Service Development

FY 2015	COS	Units of Service		Unit Rate
Flow	$1,653,477	4,989,890	ccf	**$0.331**
BOD	$994,963	21,391	lbs/day	**$46.513**
TSS	$994,963	31,770	lbs/day	**$31.317**
Admin	$10,301,015	47,129	Acct	**$18.22**
Total	**$13,944,418**			

These various cost components for wastewater service are then allocated to each customer class based on its projected wastewater flows. Table 5-15 shows the same costs components from Table 5-14 above with the allocations to each customer class.

Table 5-15: WW COS Allocation to Customer Classes

	FY 2015	Flow	BOD	TSS	Admin
Single Family	**$10,057,884**	$1,194,623	$689,207	$734,128	$7,439,925
Multi-Family/Single Meter	**$3,097,531**	$237,951	$137,280	$146,227	$2,576,073
Multi-Family/Common Meter	**$331,128**	$95,845	$55,295	$58,899	$121,088
C1- Med-Low Strength	**$282,669**	$81,286	$48,784	$19,708	$132,891
C2- Med-Low Strength	**$54,554**	$17,371	$12,928	$7,862	$16,393
C3-Med-High Strength	**$611**	$55	$66	$53	$437
C4- High Strength	**$104,549**	$20,179	$48,442	$26,093	$9,836
CR-Recreational	**$15,493**	$6,167	$2,961	$1,994	$4,371
TOTAL	**$13,944,418**	**$1,653,477**	**$994,963**	**$994,963**	**$10,301,015**

Combining the data from Table 5-14 and Table 5-15 above, the fixed and variable components for each account in each customer class can be determined. The fixed and variable components are described below:

- Fixed - Administrative costs of service are assessed uniformly to each WW account to recover the fixed costs and overhead costs of operating WW systems. These costs do not vary with WW system use. Flows, strengths, and varying meter sizes are best captured on the volumetric (variable charge). To that end, the fixed monthly charge is the same for each customer class. Dividing the administrative costs by the number of accounts for each customer class provides the fixed charge amount.
- Variable - Flow and Strength costs of service for each customer class is divided by the projected WW flows generated by each customer class. The variances in flow and strength are captured in the volumetric charge for each customer class. The variable rate is comprised of the costs to treat the flow and strength, divided by the total flow.

Table 5-16 below shows the 100% Monthly Fixed Charge Option WW Rates for FY 2015. Table 5-17 shows the 5-year 100% Fixed Option WW Rates using the proposed revenue adjustments listed in Table 5-9 of

the proposed WW Financial Plan in Section 5.2.2. Both fixed and variable charges are detailed in the table below.

Table 5-16: 100% Monthly Fixed Charge Option WW Rates for FY 2015

	Admin	Flows + Strengths	Acct	ccf	Fixed ($/Acct)	Variable ($/ccf)
Single Family	$7,439,925	$2,617,958	34,039	3,605,154	**$18.22**	**$0.73**
Multi-Family/Single Meter	$2,576,073	$521,457	11,786	718,091	**$18.22**	**$0.73**
Multi-Family/Common Meter	$121,088	$210,040	554	289,243	**$18.22**	**$0.73**
C1- Med-Low Strength	$132,891	$149,778	608	245,306	**$18.22**	**$0.62**
C2- Med-Low Strength	$16,393	$38,161	75	52,424	**$18.22**	**$0.73**
C3-Med-High Strength	$437	$174	2	166	**$18.22**	**$1.06**
C4- High Strength	$9,836	$94,713	45	60,896	**$18.22**	**$1.56**
CR-Recreational	$4,371	$11,121	20	18,611	**$18.22**	**$0.60**
TOTAL	**$10,301,015**	**$3,643,403**	**47,129**	**4,989,890**		

Table 5-17: 5-year 100% Monthly Fixed Charge Option WW Rates

Fixed ($/Acct)		FY 2014[24]	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Single Family		$9.26	$18.22	$25.51	$25.51	$25.51	$25.51
Multi-Family/Single Meter		$9.26	$18.22	$25.51	$25.51	$25.51	$25.51
Multi-Family/Common Meter		$45.67	$18.22	$25.51	$25.51	$25.51	$25.51
C1- Med-Low Strength		$45.67	$18.22	$25.51	$25.51	$25.51	$25.51
C2- Med-Low Strength		$45.67	$18.22	$25.51	$25.51	$25.51	$25.51
C3-Med-High Strength		$45.67	$18.22	$25.51	$25.51	$25.51	$25.51
C4- High Strength		$45.67	$18.22	$25.51	$25.51	$25.51	$25.51
CR-Recreational		$45.67	$18.22	$25.51	$25.51	$25.51	$25.51
Variable Charges ($ / ccf)	**Max Units[25]**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**
Single Family	10 ccf	$1.06	$0.73	$1.03	$1.03	$1.03	$1.03
Multi-Family/Single Meter	9 ccf	$1.06	$0.73	$1.03	$1.03	$1.03	$1.03
Multi-Family/Common Meter	7 ccf	$1.06	$0.73	$1.03	$1.03	$1.03	$1.03
C1- Med-Low Strength	No max	$1.27	$0.62	$0.87	$0.87	$0.87	$0.87
C2- Med-Low Strength	No max	$1.55	$0.73	$1.03	$1.03	$1.03	$1.03
C3-Med-High Strength	No max	$2.08	$1.06	$1.49	$1.49	$1.49	$1.49
C4- High Strength	No max	$3.73	$1.56	$2.19	$2.19	$2.19	$2.19
CR-Recreational	No max	$1.27	$0.60	$0.84	$0.84	$0.84	$0.84

[24] Current fixed charges are assessed by meter size. Listed in the table are the fixed charges using ¾ inch meters for Single Family & Multi-Family/Single Meter and 2-inch meters for Multi-Family/Common Meter & Commercial

[25] The current max units for Single Family is 11ccf, MF/SM 9ccf and MF/CM 7ccf

5.4 5-YEAR RATES WITH 3-YEAR PHASE-IN WASTEWATER RATES STRATEGY

Similar to Water & RW Rates, a 3-year Phase-in for WW Rates was developed in response to the Board of Directors' instructions. In addition, the District Board also instructed staff to use money in the rate stabilization reserve of $3M each year for both FY 2015 and FY 2016. The use of the rate stabilization reserves will soften the transition from the significant increase in fixed charges from $9.26 to $18.22 for SFR accounts with a ¾ inch meter.

- FY 2015: $3M was used to provide a $5.30 per account per month offset for fixed charges (47,129 accounts as projected in Section 5.1.1)
- FY 2016: $3M was used to provide a $5.21 per account per month offset for fixed charges (47,972 accounts as projected in Section 5.1.1).

The proposed 3-year phase-in for rates to be adopted with the use of Rate Stabilization offsets are shown in Table 5-18 below. Rates with 100% fixed cost recovery will be achieved in FY 2017.

Table 5-18: 3-year Phase-in WW Water Rates

Fixed ($/Acct)		Current	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Single Family		$9.26	$12.92	$20.30	$25.51	$25.51	$25.51
Multi-Family/Single Meter		$9.26	$12.92	$20.30	$25.51	$25.51	$25.51
Multi-Family/Common Meter		$45.67	$12.92	$20.30	$25.51	$25.51	$25.51
C1- Med-Low Strength		$45.67	$12.92	$20.30	$25.51	$25.51	$25.51
C2- Med-Low Strength		$45.67	$12.92	$20.30	$25.51	$25.51	$25.51
C3-Med-High Strength		$45.67	$12.92	$20.30	$25.51	$25.51	$25.51
C4- High Strength		$45.67	$12.92	$20.30	$25.51	$25.51	$25.51
CR-Recreational		$45.67	$12.92	$20.30	$25.51	$25.51	$25.51
Variable Charges ($ / ccf)	**Max**	**Current**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**
Single Family	10 ccf	$1.06	$1.03	$1.03	$1.03	$1.03	$1.03
Multi-Family/Single Meter	9 ccf	$1.06	$1.03	$1.03	$1.03	$1.03	$1.03
Multi-Family/Common Meter	7 ccf	$1.06	$1.03	$1.03	$1.03	$1.03	$1.03
C1- Med-Low Strength	No max	$1.27	$0.87	$0.87	$0.87	$0.87	$0.87
C2- Med-Low Strength	No max	$1.55	$1.03	$1.03	$1.03	$1.03	$1.03
C3-Med-High Strength	No max	$2.08	$1.49	$1.49	$1.49	$1.49	$1.49
C4- High Strength	No max	$3.73	$2.19	$2.19	$2.19	$2.19	$2.19
CR-Recreational	No max	$1.27	$0.84	$0.84	$0.84	$0.84	$0.84

6 APPENDICES

6.1 APPENDIX 1: O&M ALLOCATION FACTORS

Table 6-1: Operations & Maintenance (O&M) Expenses Allocation Factors

O&M Allocation		FY 2015	Water	RW	WW
1001 - Administration					
REGIONAL PARTICIPATION	10-4113722	$24,269	50%	25%	25%
POWER-ELECTRIC/GAS	10-4314800	$215,000	45%	10%	45%
R & M- MISC.	10-4612103	$167,200	62%	10%	28%
R & M-LANDSCAPING	10-4612135	$38,900	70%	0%	30%
OPERATING SUPPLY-GENERAL	10-4612302	$71,000	45%	10%	45%
AWARDS	10-4612605	$9,200	33%	26%	41%
EMPLOYEE RELATIONS	10-4612626	$6,000	33%	26%	41%
MEMBERSHIP DUES & SUBS	10-4612627	$104,167	40%	20%	40%
TRAINING	10-4612629	$0	70%	0%	30%
POSTAGE	10-4612301	$12,250	33%	26%	41%
PUBLIC INFO AND RELATIONS	10-4612603	$226,440	80%	15%	5%
ADVERTISE-PUBLIC NOTICE	10-4612802	$131,800	50%	25%	25%
PROF. SERVICES-LEGAL	10-4516103	$310,000	45%	10%	45%
ADMINISTRATION	10-4516113	$306,000	33%	26%	41%
LEASES/RENTS	10-4612230	$16,500	45%	10%	45%
BUS. MTG. EXP.	10-4612501	$60,000	45%	10%	45%
MISC. OFFICE FURNITURE	10-4612607	$0	33%	26%	41%
MISC. OFFICE EQUIPMENT	10-4612608	$0	40%	20%	40%
TELEPHONE	10-4612609	$0	33%	26%	41%
INS.-EXCESS LIABILITY	10-4612701	$500	45%	10%	45%
PURCHASED ASSETS	10-5150199	$0	45%	10%	45%
LEASEHOLD IMPROVEMENT	10-5150801	$0	45%	10%	45%
Burden Rate Applied	10-4611099	$0	33%	26%	41%
Salaries - Regular Earnings	10-4611101	$11,728,971	33%	26%	41%
Benefits & Related Expenses	10-4611280	$4,958,721	33%	26%	41%
Subtotal 1001 - Administration		**$18,386,918**	**$6,351,574**	**$4,603,334**	**$7,432,010**
2001 - Finance - Overhead					
REGIONAL PARTICIPATION	20-4113722	$0	50%	25%	25%
REGIONAL PART.-AMP	20-4113723	$0	50%	25%	25%
PROF SERV-FINANCE	20-4516101	$574,300	45%	10%	45%
CERT. EXPENSE	20-4611282	$120	45%	10%	45%
R & M- MISC.	20-4612103	$180,150	33%	26%	41%
LEASES/RENTS	20-4612230	$13,000	45%	10%	45%
POSTAGE	20-4612301	$215,000	33%	26%	41%
OPERATING SUPPLY-GENERAL	20-4612302	$142,785	33%	26%	41%
BUS. MTG. EXP.	20-4612501	$1,000	45%	10%	45%
UNCOLLECTABLE ACCOUNTS	20-4612602	$65,000	33%	26%	41%
TELEPHONE	20-4612609	$190,005	45%	10%	45%
COUNTY TAX COLLECTION FEE	20-4612617	$2,500	45%	10%	45%
BANK CHARGES	20-4612619	$281,800	33%	26%	41%
EMPLOYEE RELATIONS	20-4612626	$20,000	33%	26%	41%
MEMBERSHIP DUES & SUBS	20-4612627	$4,970	40%	20%	40%
RECRUITING	20-4612628	$11,150	33%	26%	41%
TRAINING	20-4612629	$11,475	33%	26%	41%
INS.-EXCESS LIABILITY	20-4612701	$601,633	45%	10%	45%
INS.-CLAIMS & PREM ADJMTS	20-4612702	$0	45%	10%	45%
PURCHASED ASSETS	20-5150199	$0	33%	26%	41%
JOF COST REIMBURSEMENT	20-6500101	-$1,003,630	45%	10%	45%
Subtotal 2001 - Finance - Overhead		**$1,311,258**	**$478,534**	**$280,000**	**$552,723**

Table 6-1 (cont.)

O&M Allocation		FY 2015	Water	RW	WW
3001 - Engineering					
REGIONAL PARTICIPATION	30-4113722	$250,000	0%	100%	0%
ENG.-GENERAL PROF SERVICES	30-4516001	$537,000	45%	10%	45%
ENG-MISC. PROF SERVICES - MAPS & GRAPHS	30-4516008	$10,000	45%	10%	45%
CERT. EXPENSE	30-4611282	$1,000	45%	10%	45%
R & M- MISC.	30-4612103	$6,800	45%	10%	45%
OPERATING SUPPLY-GENERAL	30-4612302	$5,000	45%	10%	45%
BUS. MTG. EXP.	30-4612501	$5,000	45%	10%	45%
MEMBERSHIP DUES & SUBS	30-4612627	$5,700	40%	20%	40%
PURCHASED ASSETS	30-5150199	$0	0%	0%	0%
Subtotal 3001 - Engineering		**$820,500**	**$256,440**	**$307,620**	**$256,440**
4001 - Operations					
WATER PURCHASE (MWDOC)	40-4113501	$25,179,915	Actual	Actual	0%
MET	40-4113502	$2,957,303	Actual	Actual	0%
WATER PURCHASE-OSO	40-4113503	-$135,000	Actual	Actual	0%
M&O-AGREEMENTS	40-4113623	$655,363	100%	0%	0%
REGIONAL PART.SERRA	40-4113728	$2,077,486	0%	0%	100%
POWER-ELECTRIC/GAS	40-4314800	$5,193,950	39%	21%	40%
OPS PROF.SERVICES-MISC	40-4516202	$368,600	45%	10%	45%
CERT. EXPENSE	40-4611282	$21,863	62%	2%	36%
R & M- MISC.	40-4612103	$161,000	33%	26%	41%
R & M-VEHICLES	40-4612133	$184,000	35%	20%	45%
R & M-LANDSCAPING	40-4612135	$491,430	55%	24%	21%
MAINS, SERVICES, & APPURT	40-4612136	$472,000	33%	26%	41%
R & M FACILITY	40-4612138	$1,639,150	40%	10%	50%
POSTAGE	40-4612301	$8,800	33%	26%	41%
OPERATING SUPPLY-GENERAL	40-4612302	$482,450	45%	10%	45%
SUPPLIES-SMALL TOOLS	40-4612303	$59,200	70%	0%	30%
SUPPLIES-GAS AND OIL	40-4612304	$304,900	35%	20%	45%
METERS	40-4612305	$450,000	95%	5%	0%
EQUIPMENT OIL/GREASE	40-4612306	$75,900	35%	20%	45%
SAFETY-GENERAL	40-4612401	$157,175	70%	0%	30%
BUS. MTG. EXP.	40-4612501	$8,600	45%	10%	45%
TELEPHONE	40-4612609	$70,604	45%	10%	45%
LABRATORY ANALYSIS	40-4612612	$87,000	70%	10%	20%
OTHER BUS. EXP-PERMITS	40-4612613	$169,069	33%	21%	46%
SOLIDS/ SCREENINGS DISPO	40-4612622	$552,000	0%	0%	100%
MEMBERSHIP DUES & SUBS	40-4612627	$8,000	40%	20%	40%
Training	40-4612629	$39,500	62%	2%	36%
CHEMICAL-GENERAL	40-4612904	$758,300	2%	18%	80%
PURCHASED ASSETS	40-5150199	$0	47%	6%	47%
Subtotal 4001 - Operations		**$42,498,558**	**$32,744,861**	**$2,395,928**	**$7,357,769**
TOTAL O&M EXPENSES		**$63,017,234**	**$39,831,410**	**$7,586,882**	**$15,598,942**

6.2 APPENDIX 2: EXTRACTED FROM RESERVE POLICY

FISCAL YEAR (FY) 2014-2015 RESERVES

Reserves Category	Amount of Funding	Source of Funds
OPERATING RESERVES **1. Rate Stabilization** These funds are available to support operating costs to minimize drastic fluctuations in rates. **2. Emergency** These funds may be used for unplanned, unbudgeted operational expenses within the fiscal year. **3. Uninsured expenses.** These funds will be used for small self-insured claims as well as out-of-pocket deductibles on insured claims. The amount may be periodically adjusted based on frequency of utilization.	➢ $6 million ➢ $3 million ➢ $300,000	Operating Budget and General Income Tax
PENSION RESERVES • **Pension Trust** These are funds set aside for unfunded retirement liabilities. They will be placed into a "Pension Trust" as regulated by the Internal Revenue Service (IRS).	➢ $5 million with $1.5 million will be designated each year for twenty (20) years unless changed by Board during its annual review	Operating Budget and General Income Tax
CAPITAL RESERVES **1. Planned replacement, repairs and refurbishment.** These funds may be used for planned repair, replacement and refurbishment of capital projects. **2. Emergency** These funds are provided for emergency or unplanned failures. This reserve shall be funded by capital reserves only. **3. Set-aside for a portion of new projects.** This category of reserves is intended to provide funds for new projects (reliability, conversion retrofits, solar panels, etc.) including projects that may generate a source of income for the District.	➢ $13.5 million (with $5 million allocated each year unless changed by the Board during its annual review of the reserves) ➢ $10 million ➢ $30 million	Operating Budget and General Income Tax
UNRESTRICTED/UNDESIGNATED These funds are used for payment of day to day obligations of the District (payroll, account payable, etc.)	➢ $12. 2 million	Operating Budget and General Income Tax

6.3 APPENDIX 3: ASSET LIST & ALLOCATION FACTORS

Table 6-2: Asset Allocation to Water, RW and WW System

		Allocated to:		
Asset Class	Total Costs	Water	RW	WW
Cathodic Protection	$1,497,828	100.0%		0%
Effluent Disposal	$12,890,209			100%
Force Mains	$7,076,530			100%
Land Ocean Outfall	$10,486,418			100%
Meter	$42,089	100.0%		0%
Non-Domestic Pumping Station	$4,812,462		100.0%	0%
Non-Domestic Water Main	$43,935,733		100.0%	0%
Pressure Reducing Station	$5,270,195	100.0%		0%
Pump Station	$41,107,497	100.0%		0%
Reservoir	$92,032,876	100.0%		0%
SCADA Control	$3,983,600	100.0%		0%
Serra	$6,709,370			100%
Sewage Lift Station	$39,859,583			100%
Tank	$59,913,336	100.0%		0%
Treatment Plant	$99,463,270			100%
Trunk Sewer	$31,552,419			100%
Water Filtration Plants	$15,371	100.0%		0%
Water Transmission	$131,015,440	100.0%		0%
Well	$53,754	100.0%		0%
Total	**$591,717,981**	**$334,931,987**	**$48,748,195**	**$208,037,798**
		57%	8%	35%

Table 6-3: Asset Allocations to Water Function Costs

	Water Assets	Base	Peaking	Meters	Fire	Total	Notes
Cathodic Protection	$1,497,828	41%	59%			100%	
Meter	$42,089			100%		100%	
Pressure Reducing Station	$5,270,195	25%	35%		40%	100%	peaking less fire
Pump Station	$41,107,497	25%	35%		40%	100%	peaking less fire
Reservoir	$92,032,876	29%	41%		30%	100%	peaking less fire
SCADA Control	$3,983,600	29%	41%		30%	100%	peaking less fire
Tank	$59,913,336	29%	41%		30%	100%	peaking less fire
Water Filtration Plants	$15,371	37%	53%		10%	100%	peaking less fire
Water Transmission	$131,015,440	25%	35%		40%	100%	peaking less fire
Well	$53,754	37%	53%		10%	100%	peaking less fire
Total	**$334,931,987**	**$89,730,078**	**$127,416,711**	**$42,089**	**$117,743,109**	**$334,931,987**	
Fixed Asset Allocation		**26.8%**	**38.0%**	**0.0%**	**35.2%**		

Table 6-4: Asset Allocations to RW Function Costs

	RW Assets	Base	Peaking	Total	Notes
Non-Domestic Pumping Station	$4,812,462	67%	33%	100%	Peaking
Non-Domestic Water Main	$43,935,733	67%	33%	100%	Peaking
Total	**$48,748,195**	**$32,498,797**	**$16,249,398**	**$48,748,195**	
Fixed Asset Allocation		**67%**	**33%**		

Table 6-5: Asset Allocations to WW Function Costs

ASSET VALUE	WW FY 2015	Flow	BOD	TSS	Admin	Total	Notes
Effluent Disposal	$12,890,209	90%			10%	100%	*Per District Staff*
Force Mains	$7,076,530	70%			30%	100%	*Per District Staff*
Land Ocean Outfall	$10,486,418	90%			10%	100%	*Per District Staff*
Serra	$6,709,370	30%	30%	30%	10%	100%	*Per District Staff*
Sewage Lift Station	$39,859,583	70%			30%	100%	*Per District Staff*
Treatment Plant	$99,463,270	30%	30%	30%	10%	100%	*Per District Staff*
Trunk Sewer	$31,552,419	70%			30%	100%	*Per District Staff*
Total	**$208,037,798**	**$107,832,728**	**$31,851,792**	**$31,851,792**	**$36,501,486**	**$208,037,798**	
Fixed Asset Allocation		52%	15%	15%	18%		

6.4 APPENDIX 4: WATER COST ALLOCATION FACTORS

Table 6-6: Water O&M Cost Allocation Factors

	Water %	FY 2015	Water FY 2015	Power	Supply	Base	Peaking	Conservation	Rev Offsets	Meters	Billing & CS	Fire	General	Total
1001 - Administration														
REGIONAL PARTICIPATION	50%	$24,269	$12,135										100%	100%
POWER-ELECTRIC/GAS	45%	$215,000	$96,750										100%	100%
R & M- MISC.	62%	$167,200	$103,664										100%	100%
R & M-LANDSCAPING	70%	$38,900	$27,230										100%	100%
OPERATING SUPPLY-GENERAL	45%	$71,000	$31,950										100%	100%
AWARDS	33%	$9,200	$3,036										100%	100%
EMPLOYEE RELATIONS	33%	$6,000	$1,980										100%	100%
MEMBERSHIP DUES & SUBS	40%	$104,167	$41,667										100%	100%
TRAINING	70%	$0	$0										100%	100%
POSTAGE	33%	$12,250	$4,043										100%	100%
PUBLIC INFO AND RELATIONS	80%	$226,440	$181,152										100%	100%
ADVERTISE-PUBLIC NOTICE	50%	$131,800	$65,900										100%	100%
PROF. SERVICES-LEGAL	45%	$310,000	$139,500										100%	100%
ADMINISTRATION	33%	$306,000	$100,980										100%	100%
LEASES/RENTS	45%	$16,500	$7,425										100%	100%
BUS. MTG. EXP.	45%	$60,000	$27,000										100%	100%
MISC. OFFICE FURNITURE	33%	$0	$0										100%	100%
MISC. OFFICE EQUIPMENT	40%	$0	$0										100%	100%
TELEPHONE	33%	$0	$0										100%	100%
INS.-EXCESS LIABILITY	45%	$500	$225										100%	100%
PURCHASED ASSETS	45%	$0	$0										100%	100%
LEASEHOLD IMPROVEMENT	45%	$0	$0										100%	100%
Burden Rate Applied	33%	$0	$0										100%	100%
Salaries - Regular Earnings	33%	$11,728,971	$3,870,560					7%			93%		0%	100%
Benefits & Related Expenses	33%	$4,958,721	$1,636,378								100%		0%	100%
0	0%	$0	$0										100%	100%
Subtotal 1001 - Administration		**$18,386,918**	**$6,351,574**	**$0**	**$0**	**$0**	**$0**	**$257,450**	**$0**	**$0**	**$5,249,488**	**$0**	**$844,636**	**$6,351,574**
2001 - Finance - Overhead														
REGIONAL PARTICIPATION	50%	$0	$0								100%		0%	100%
REGIONAL PART.-AMP	50%	$0	$0								100%		0%	100%
PROF SERV-FINANCE	45%	$574,300	$258,435								100%		0%	100%
CERT. EXPENSE	45%	$120	$54								100%		0%	100%
R & M- MISC.	33%	$180,150	$59,450								100%		0%	100%
LEASES/RENTS	45%	$13,000	$5,850								100%		0%	100%
POSTAGE	33%	$215,000	$70,950								100%		0%	100%
OPERATING SUPPLY-GENERAL	33%	$142,785	$47,119								100%		0%	100%
BUS. MTG. EXP.	45%	$1,000	$450								100%		0%	100%
UNCOLLECTABLE ACCOUNTS	33%	$65,000	$21,450								100%		0%	100%
TELEPHONE	45%	$190,005	$85,502								100%		0%	100%
COUNTY TAX COLLECTION FEE	45%	$2,500	$1,125								100%		0%	100%
BANK CHARGES	33%	$281,800	$92,994								100%		0%	100%
EMPLOYEE RELATIONS	33%	$20,000	$6,600								100%		0%	100%
MEMBERSHIP DUES & SUBS	40%	$4,970	$1,988								100%		0%	100%
RECRUITING	33%	$11,150	$3,680								100%		0%	100%
TRAINING	33%	$11,475	$3,787								100%		0%	100%
INS.-EXCESS LIABILITY	45%	$601,633	$270,735								100%		0%	100%
INS.-CLAIMS & PREM ADJMTS	45%	$0	$0								100%		0%	100%
PURCHASED ASSETS	33%	$0	$0								100%		0%	100%
JOF COST REIMBURSEMENT	45%	-$1,003,630	-$451,634								100%		0%	100%
Subtotal 2001 - Finance - Overhead		**$1,311,258**	**$478,534**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$478,534**	**$0**	**$0**	**$478,534**

Table 6-6 (cont.)

	Water %	FY 2015	Water FY 2015	Power	Supply	Base	Peaking	Conservation	Rev Offsets	Meters	Billing & CS	Fire	General	Total
3001 - Engineering														
REGIONAL PARTICIPATION	0%	$250,000	$0	0%	0%	27%	38%	0%	0%	0%	0%	35%	0%	100%
ENG.-GENERAL PROF SERVICES	45%	$537,000	$241,650	0%	0%	27%	38%	0%	0%	0%	0%	35%	0%	100%
ENG-MISC. PROF SERVICES - MAPS & GRAPHS	45%	$10,000	$4,500	0%	0%	27%	38%	0%	0%	0%	0%	35%	0%	100%
CERT. EXPENSE	45%	$1,000	$450	0%	0%	27%	38%	0%	0%	0%	0%	35%	0%	100%
R & M- MISC.	45%	$6,800	$3,060	0%	0%	27%	38%	0%	0%	0%	0%	35%	0%	100%
OPERATING SUPPLY-GENERAL	45%	$5,000	$2,250	0%	0%	27%	38%	0%	0%	0%	0%	35%	0%	100%
BUS. MTG. EXP.	45%	$5,000	$2,250	0%	0%	27%	38%	0%	0%	0%	0%	35%	0%	100%
MEMBERSHIP DUES & SUBS	40%	$5,700	$2,280	0%	0%	27%	38%	0%	0%	0%	0%	35%	0%	100%
PURCHASED ASSETS	0%	$0	$0	0%	0%	27%	38%	0%	0%	0%	0%	35%	0%	100%
Subtotal 3001 - Engineering		**$820,500**	**$256,440**	**$0**	**$0**	**$68,702**	**$97,556**	**$0**	**$0**	**$32**	**$0**	**$90,150**	**$0**	**$256,440**
4001 - Operations														
WATER PURCHASE (MWDOC)		$25,179,915	$24,735,453		100%								0%	100%
MET		$2,957,303	$2,957,303			100%							0%	100%
WATER PURCHASE-OSO		-$135,000	-$135,000			100%							0%	100%
M&O-AGREEMENTS	100%	$655,363	$655,363			100%							0%	100%
REGIONAL PART.SERRA	0%	$2,077,486	$0											0%
POWER-ELECTRIC/GAS	39%	$5,193,950	$2,025,641	84%		16%							0%	100%
OPS PROF.SERVICES-MISC	45%	$368,600	$165,870			41%	59%						0%	100%
CERT. EXPENSE	62%	$21,863	$13,555			41%	59%						0%	100%
R & M- MISC.	33%	$161,000	$53,130			41%	59%						0%	100%
R & M-VEHICLES	35%	$184,000	$64,400			41%	59%						0%	100%
R & M-LANDSCAPING	55%	$491,430	$270,287			41%	59%						0%	100%
MAINS, SERVICES, & APPURT	33%	$472,000	$155,760			41%	59%						0%	100%
R & M FACILITY	40%	$1,639,150	$655,660				100%						0%	100%
POSTAGE	33%	$8,800	$2,904								100%		0%	100%
OPERATING SUPPLY-GENERAL	45%	$482,450	$217,103			28%	39%	33%					0%	100%
SUPPLIES-SMALL TOOLS	70%	$59,200	$41,440			41%	59%						0%	100%
SUPPLIES-GAS AND OIL	35%	$304,900	$106,715			41%	59%						0%	100%
METERS	95%	$450,000	$427,500							100%			0%	100%
EQUIPMENT OIL/GREASE	35%	$75,900	$26,565			41%	59%						0%	100%
SAFETY-GENERAL	70%	$157,175	$110,023			41%	59%						0%	100%
BUS. MTG. EXP.	45%	$8,600	$3,870			41%	59%						0%	100%
TELEPHONE	45%	$70,604	$31,772			41%	59%						0%	100%
LABRATORY ANALYSIS	70%	$87,000	$60,900			41%	59%						0%	100%
OTHER BUS. EXP-PERMITS	33%	$169,069	$55,793			41%	59%						0%	100%
SOLIDS/ SCREENINGS DISPO	0%	$552,000	$0											0%
MEMBERSHIP DUES & SUBS	40%	$8,000	$3,200			41%	59%						0%	100%
Training	62%	$39,500	$24,490			41%	59%						0%	100%
CHEMICAL-GENERAL	2%	$758,300	$15,166			41%	59%						0%	100%
PURCHASED ASSETS	47%	$0	$0	0%	0%	27%	38%	0%	0%	0%	0%	35%	0%	100%
Subtotal 4001 - Operations		**$42,498,558**	**$32,744,861**	**$1,705,023**	**$24,735,453**	**$4,355,530**	**$1,446,950**	**$71,500**	**$0**	**$427,500**	**$2,904**	**$0**	**$0**	**$32,744,861**
Water O&M Reduction due to RW Conversion			$0	0%	0%	27%	38%	0%	0%	0%	0%	35%	0%	
TOTAL O&M EXPENSES		**$63,017,234**	**$39,831,410**	**$1,705,023**	**$24,735,453**	**$4,424,232**	**$1,544,507**	**$328,950**	**$0**	**$427,532**	**$5,730,927**	**$90,150**	**$844,636**	**$39,831,410**
	TRUE	TRUE	TRUE	**$1,705,023**	**$24,735,453**	**$4,424,232**	**$1,544,507**	**$328,950**	**$0**	**$427,532**	**$5,730,927**	**$90,150**	**$844,636**	**$39,831,410**
			O&M Allocation			33%	12%	2%	0%	3%	43%	1%	6%	

Table 6-7: Revenue Requirement to Water Functional Cost Components

	FY 2015	Power	Water Supply	Base	Peaking	Conservation	Rev Offsets	Meters	Billing & CS	Fire	General	Total
REVENUE REQUIREMENTS												
O&M Expenses	$39,831,410	$1,705,023	$24,735,453	$4,424,232	$1,544,507	$328,950	$0	$427,532	$5,730,927	$90,150	$844,636	$39,831,410
Capital Funding	$3,400,000	$0	$0	$910,878	$1,293,447	$0	$0	$427	$0	$1,195,247	$0	$3,400,000
Transfers to Other Fund	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Reserve Funding w/o Rev Adjustments	-$476,083	$0	$0	-$161,254	-$56,294	$0	$0	-$15,583	-$208,881	-$3,286	-$30,785	-$476,083
Additional Rate Rev from Annual Adjustments	$1,357,598	$0	$0	$441,767	$245,902	$0	$0	$34,457	$461,347	$119,594	$54,530	$1,357,598
Additional Rev from Annual PS Adjustments	$127,877	$127,877										$127,877
SUBTOTAL REVENUE REQUIREMENTS	**$44,240,801**	**$1,832,900**	**$24,735,453**	**$5,615,623**	**$3,027,561**	**$328,950**	**$0**	**$446,834**	**$5,983,393**	**$1,401,706**	**$868,381**	**$44,240,801**
Less Non-Operating Revenues												
Utility Billing Charges	$539,527	$0	$0	$182,744	$63,796	$0	$0	$17,659	$236,717	$3,724	$34,888	$539,527
Plan Check Revenue	$250,000	$0	$0	$84,678	$29,561	$0	$0	$8,183	$109,687	$1,725	$16,166	$250,000
Encroachment Fees & Other	$2,000	$0	$0	$677	$236	$0	$0	$65	$877	$14	$129	$2,000
Meter sales	$400,000	$0	$0	$135,484	$47,298	$0	$0	$13,092	$175,499	$2,761	$25,865	$400,000
Refunds & Other Sales	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rebate	$206,536	$0	$0	$69,956	$24,422	$0	$0	$6,760	$90,617	$1,425	$13,355	$206,536
Rental Income	$867,427						$867,427					$867,427
Interest Income	$143,257										$143,257	$143,257
Property Tax	$3,400,000						$3,400,000					$3,400,000
SUBTOTAL NON-OPERATING REVENUES	**$5,808,747**	**$0**	**$0**	**$473,539**	**$165,313**	**$0**	**$4,267,427**	**$45,760**	**$613,398**	**$9,649**	**$233,661**	**$5,808,747**
NET REVENUE REQUIREMENTS	**$38,432,054**	**$1,832,900**	**$24,735,453**	**$5,142,084**	**$2,862,248**	**$328,950**	**-$4,267,427**	**$401,074**	**$5,369,995**	**$1,392,057**	**$634,720**	**$38,432,054**
Reallocation of General Costs		$0	$0	$210,196	$117,002	$14,711	$0	$16,395	$219,513	$56,904	-$634,720	$0
ADJUSTED NET REVENUE REQUIREMENTS	**$38,432,054**	**$1,832,900**	**$24,735,453**	**$5,352,280**	**$2,979,250**	**$343,661**	**-$4,267,427**	**$417,469**	**$5,589,508**	**$1,448,961**	**$0**	**$38,432,054**
Reallocation of Fire Protection to Peaking					$0					$0		$0
TOTAL COST OF SERVICE TO BE RECOVERED FROM RATES	**$38,432,054**	**$1,832,900**	**$24,735,453**	**$5,352,280**	**$2,979,250**	**$343,661**	**-$4,267,427**	**$417,469**	**$5,589,508**	**$1,448,961**	**$0**	**$38,432,054**

6.5 APPENDIX 5: RW COST ALLOCATION FACTORS

Table 6-8: RW O&M Cost Allocation Factors

	RW %	FY 2015	RW FY 2015	Power	Supply	Base Fixed	Peaking	Conservation	Rev Offsets	Meters	Billing & CS	Fire	General	Total
1001 - Administration														
REGIONAL PARTICIPATION	25%	$24,269	$6,067										100%	100%
POWER-ELECTRIC/GAS	10%	$215,000	$21,500										100%	100%
R & M- MISC.	10%	$167,200	$16,720										100%	100%
R & M-LANDSCAPING	0%	$38,900	$0										100%	100%
OPERATING SUPPLY-GENERAL	10%	$71,000	$7,100										100%	100%
AWARDS	26%	$9,200	$2,392										100%	100%
EMPLOYEE RELATIONS	26%	$6,000	$1,560										100%	100%
MEMBERSHIP DUES & SUBS	20%	$104,167	$20,833										100%	100%
TRAINING	0%	$0	$0										100%	100%
POSTAGE	26%	$12,250	$3,185										100%	100%
PUBLIC INFO AND RELATIONS	15%	$226,440	$33,966										100%	100%
ADVERTISE-PUBLIC NOTICE	25%	$131,800	$32,950										100%	100%
PROF. SERVICES-LEGAL	10%	$310,000	$31,000										100%	100%
ADMINISTRATION	26%	$306,000	$79,560										100%	100%
LEASES/RENTS	10%	$16,500	$1,650										100%	100%
BUS. MTG. EXP.	10%	$60,000	$6,000										100%	100%
MISC. OFFICE FURNITURE	26%	$0	$0										100%	100%
MISC. OFFICE EQUIPMENT	20%	$0	$0										100%	100%
TELEPHONE	26%	$0	$0										100%	100%
INS.-EXCESS LIABILITY	10%	$500	$50										100%	100%
PURCHASED ASSETS	10%	$0	$0										100%	100%
LEASEHOLD IMPROVEMENT	10%	$0	$0										100%	100%
Burden Rate Applied	26%	$0	$0										100%	100%
Salaries - Regular Earnings	26%	$11,728,971	$3,049,532										100%	100%
Benefits & Related Expenses	26%	$4,958,721	$1,289,267										100%	100%
0	0%	$0	$0										100%	100%
Subtotal 1001 - Administration		**$18,386,918**	**$4,603,334**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$4,603,334**	**$4,603,334**
2001 - Finance - Overhead														
REGIONAL PARTICIPATION	25%	$0	$0										100%	100%
REGIONAL PART.-AMP	25%	$0	$0										100%	100%
PROF SERV-FINANCE	10%	$574,300	$57,430										100%	100%
CERT. EXPENSE	10%	$120	$12										100%	100%
R & M- MISC.	26%	$180,150	$46,839										100%	100%
LEASES/RENTS	10%	$13,000	$1,300										100%	100%
POSTAGE	26%	$215,000	$55,900										100%	100%
OPERATING SUPPLY-GENERAL	26%	$142,785	$37,124										100%	100%
BUS. MTG. EXP.	10%	$1,000	$100										100%	100%
UNCOLLECTABLE ACCOUNTS	26%	$65,000	$16,900										100%	100%
TELEPHONE	10%	$190,005	$19,001										100%	100%
COUNTY TAX COLLECTION FEE	10%	$2,500	$250										100%	100%
BANK CHARGES	26%	$281,800	$73,268										100%	100%
EMPLOYEE RELATIONS	26%	$20,000	$5,200										100%	100%
MEMBERSHIP DUES & SUBS	20%	$4,970	$994										100%	100%
RECRUITING	26%	$11,150	$2,899										100%	100%
TRAINING	26%	$11,475	$2,984										100%	100%
INS.-EXCESS LIABILITY	10%	$601,633	$60,163										100%	100%
INS.-CLAIMS & PREM ADJMTS	10%	$0	$0										100%	100%
PURCHASED ASSETS	26%	$0	$0										100%	100%
JOF COST REIMBURSEMENT	10%	-$1,003,630	-$100,363										100%	100%
Subtotal 2001 - Finance - Overhead		**$1,311,258**	**$280,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$280,000**	**$280,000**

Table 6-8 (cont.)

	RW %	FY 2015	RW FY 2015	Power	Supply	Base Fixed	Peaking	Conservation	Rev Offsets	Meters	Billing & CS	Fire	General	Total
3001 - Engineering														
REGIONAL PARTICIPATION	100%	$250,000	$250,000	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	100%
ENG.-GENERAL PROF SERVICES	10%	$537,000	$53,700	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	100%
ENG-MISC. PROF SERVICES - MAPS & GRAPHS	10%	$10,000	$1,000	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	100%
CERT. EXPENSE	10%	$1,000	$100	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	100%
R & M- MISC.	10%	$6,800	$680	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	100%
OPERATING SUPPLY-GENERAL	10%	$5,000	$500	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	100%
BUS. MTG. EXP.	10%	$5,000	$500	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	100%
MEMBERSHIP DUES & SUBS	20%	$5,700	$1,140	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	100%
PURCHASED ASSETS	0%	$0	$0	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	100%
Subtotal 3001 - Engineering		**$820,500**	**$307,620**	**$0**	**$0**	**$205,080**	**$102,540**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$307,620**
4001 - Operations														
WATER PURCHASE (MWDOC)	0%	$25,179,915	$444,462		72%	28%							0%	100%
MET	0%	$2,957,303	$0		100%								0%	100%
WATER PURCHASE-OSO	0%	-$135,000	$0		100%								0%	100%
M&O-AGREEMENTS	0%	$655,363	$0		100%								0%	100%
REGIONAL PART.SERRA	0%	$2,077,486	$0										100%	100%
POWER-ELECTRIC/GAS	21%	$5,193,950	$1,090,730	37%									63%	100%
OPS PROF.SERVICES-MISC	10%	$368,600	$36,860										100%	100%
CERT. EXPENSE	2%	$21,863	$437										100%	100%
R & M- MISC.	26%	$161,000	$41,860										100%	100%
R & M-VEHICLES	20%	$184,000	$36,800										100%	100%
R & M-LANDSCAPING	24%	$491,430	$117,943										100%	100%
MAINS, SERVICES, & APPURT	26%	$472,000	$122,720										100%	100%
R & M FACILITY	10%	$1,639,150	$163,915										100%	100%
POSTAGE	26%	$8,800	$2,288										100%	100%
OPERATING SUPPLY-GENERAL	10%	$482,450	$48,245										100%	100%
SUPPLIES-SMALL TOOLS	0%	$59,200	$0										100%	100%
SUPPLIES-GAS AND OIL	20%	$304,900	$60,980										100%	100%
METERS	5%	$450,000	$22,500										100%	100%
EQUIPMENT OIL/GREASE	20%	$75,900	$15,180										100%	100%
SAFETY-GENERAL	0%	$157,175	$0										100%	100%
BUS. MTG. EXP.	10%	$8,600	$860										100%	100%
TELEPHONE	10%	$70,604	$7,060										100%	100%
LABRATORY ANALYSIS	10%	$87,000	$8,700										100%	100%
OTHER BUS. EXP-PERMITS	21%	$169,069	$35,504										100%	100%
SOLIDS/ SCREENINGS DISPO	0%	$552,000	$0										100%	100%
MEMBERSHIP DUES & SUBS	20%	$8,000	$1,600										100%	100%
Training	2%	$39,500	$790										100%	100%
CHEMICAL-GENERAL	18%	$758,300	$136,494										100%	100%
PURCHASED ASSETS	6%	$0	$0	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	100%
Subtotal 4001 - Operations		**$42,498,558**	**$2,395,928**	**$404,448**	**$320,462**	**$124,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,547,019**	**$2,395,928**
RW O&M Increases due to RW Conversion			$0	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	
TOTAL O&M EXPENSES		**$63,017,234**	**$7,586,882**	**$404,448**	**$320,462**	**$329,080**	**$102,540**	**$0**	**$0**	**$0**	**$0**	**$0**	**$6,430,353**	**$7,586,882**
	TRUE	TRUE	TRUE	**$404,448**	**$320,462**	**$329,080**	**$102,540**	**$0**	**$0**	**$0**	**$0**	**$0**	**$6,430,353**	**$7,586,882**
			O&M Allocatio	5%	4%	4%	1%	0%	0%	0%	0%	0%	85%	

Table 6-9: Revenue Requirement Allocations to RW Functional Cost Components

	FY 2015	Power	Water Supply	Base	Peaking	Conservation	Rev Offsets	Meters	Billing & CS	Fire	General	Total	
REVENUE REQUIREMENTS													
O&M Expenses	$7,586,882	$404,448	$320,462	$329,080	$102,540	$0	$0	$0	$0	$0	$6,430,353	$7,586,882	from SMWD Fplan Model v21.xlsm
Transfers to Other Fund	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	O&M Allocation w/o Power & Supply
Reserve Funding w/o Rev Adjustments	-$286,990	$0	$0	-$13,763	-$4,289	$0	$0	$0	$0	$0	-$268,938	-$286,990	O&M Allocation w/o Power & Supply
Additional Rate Rev from Annual Adjustments	$195,104	$0	$0	$9,950	$3,100	$0	$0	$0	$0	$0	$182,054	$195,104	by COS before Rev Adj
Additional Rev from Annual PS Adjustments	$30,334	$30,334										$30,334	by COS before Rev Adj
SUBTOTAL REVENUE REQUIREMENTS	**$7,525,330**	**$434,782**	**$320,462**	**$325,267**	**$101,352**	**$0**	**$0**	**$0**	**$0**	**$0**	**$6,343,468**	**$7,525,330**	
Less Non-Operating Revenues													
Utility Billing Charges	$0										$0	$0	General
Plan Check Revenue	$0										$0	$0	General
Encroachment Fees & Other	$0										$0	$0	General
Meter sales	$0										$0	$0	General
Refunds & Other Sales	$364,790										$364,790	$364,790	General
Rebate	$0										$0	$0	General
Rental Income	$0						$0					$0	General
Interest Income	$27,200										$27,200	$27,200	General
SUBTOTAL NON-OPERATING REVENUES	**$391,990**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$391,990**	**$391,990**	
NET REVENUE REQUIREMENTS	**$7,133,340**	**$434,782**	**$320,462**	**$325,267**	**$101,352**	**$0**	**$0**	**$0**	**$0**	**$0**	**$5,951,479**	**$7,133,340**	
Reallocation of General Costs		$0	$0	$4,537,585	$1,413,893	$0	$0	$0	$0	$0	-$5,951,479	$0	
ADJUSTED NET REVENUE REQUIREMENTS	**$7,133,340**	**$434,782**	**$320,462**	**$4,862,852**	**$1,515,245**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$7,133,340**	
Less Monthly Fixed Charges	-$777,016			-$592,421	-$184,596							-$777,016	
TOTAL COST OF SERVICE TO BE RECOVERED FROM R	**$6,356,324**	**$434,782**	**$320,462**	**$4,270,431**	**$1,330,649**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$6,356,324**	

6.6 APPENDIX 6: CURRENT WW CUSTOMER CLASSIFICATIONS

Table 6-10: Current WW Customer Classifications

SMWD COMMERCIAL USER CLASSIFICATION
Resource: State Water Resources Control Board

CLASS OF SERVICE	CLASS CODE	USER CLASSIFICATION	BOD (mg/l)	SS (mg/l)	COMBINED (mg/l)	PERCENT OF SFD
COMMERCIAL LEVEL 1	C1	II. GENERAL COMMERCIAL				
		Car Wash	20	150	170	43%
		Barber & Beauty Shops	150	110	260	65%
		Department & Retail Stores	150	150	300	75%
		General Commercial Buildings	150	150	300	75%
		Warehouse	150	150	300	75%
		Convalescent Homes	250	100	350	88%
		VI. INSTITUTIONAL				
		Churches	200	200	400	100%
		Schools	130	100	230	58%
COMMERCIAL LEVEL 2	C2	III. MEDIUM-STRENGTH COMMERCIAL				
		Hotels w/o Dining Facilities	310	120	430	108%
		Auto Repair/Sales Shop & Service Station	180	280	460	115%
		Shopping Center (Strip Mall)	310	230	540	135%
		Bars w/o Dining Facilities	300	270	570	143%
COMMERCIAL LEVEL 3	C3	IV. MEDIUM-HIGH STRENGTH COMMERCIAL				
		Convenience Stores	500	300	800	200%
		Liquor Store w/Deli	500	300	800	200%
		Hotel w/Dining Facilities	500	600	1100	275%
		Assisted Living Facilities	500	600	1100	275%
COMMERCIAL LEVEL 4	C4	V. HIGH-STRENGTH COMMERCIAL				
		Bakery or Bakery w/Deli	1000	600	1600	400%
		Restaurant and Bars w/Food	1000	600	1600	400%
		Supermarkets/Grocery Stores	800	800	1600	400%
		Mortuary	800	800	1600	400%

6.7 APPENDIX 7: WW COST ALLOCATION FACTORS

Table 6-11: WW O&M Cost Allocation Factors

	WW %	FY 2015	WW FY 2015	Flow	BOD	TSS	Admin	General	Total
1001 - Administration									
REGIONAL PARTICIPATION	25%	$24,269	$6,067				100%	0%	100%
POWER-ELECTRIC/GAS	45%	$215,000	$96,750				100%	0%	100%
R & M- MISC.	28%	$167,200	$46,816				100%	0%	100%
R & M-LANDSCAPING	30%	$38,900	$11,670				100%	0%	100%
OPERATING SUPPLY-GENEI	45%	$71,000	$31,950				100%	0%	100%
AWARDS	41%	$9,200	$3,772				100%	0%	100%
EMPLOYEE RELATIONS	41%	$6,000	$2,460				100%	0%	100%
MEMBERSHIP DUES & SUBS	40%	$104,167	$41,667				100%	0%	100%
TRAINING	30%	$0	$0				100%	0%	100%
POSTAGE	41%	$12,250	$5,023				100%	0%	100%
PUBLIC INFO AND RELATIC	5%	$226,440	$11,322				100%	0%	100%
ADVERTISE-PUBLIC NOTICI	25%	$131,800	$32,950				100%	0%	100%
PROF. SERVICES-LEGAL	45%	$310,000	$139,500				100%	0%	100%
ADMINISTRATION	41%	$306,000	$125,460				100%	0%	100%
LEASES/RENTS	45%	$16,500	$7,425				100%	0%	100%
BUS. MTG. EXP.	45%	$60,000	$27,000				100%	0%	100%
MISC. OFFICE FURNITURE	41%	$0	$0				100%	0%	100%
MISC. OFFICE EQUIPMENT	40%	$0	$0				100%	0%	100%
TELEPHONE	41%	$0	$0				100%	0%	100%
INS.-EXCESS LIABILITY	45%	$500	$225				100%	0%	100%
PURCHASED ASSETS	45%	$0	$0				100%	0%	100%
LEASEHOLD IMPROVEMEN	45%	$0	$0				100%	0%	100%
Burden Rate Applied	41%	$0	$0				100%	0%	100%
Salaries - Regular Earnings	41%	$11,728,971	$4,808,878				100%	0%	100%
Benefits & Related Expens	41%	$4,958,721	$2,033,076				100%	0%	100%
0	0%	$0	$0				100%	0%	100%
Subtotal 1001 - Administration		**$18,386,918**	**$7,432,010**	**$0**	**$0**	**$0**	**$7,432,010**	**$0**	**$7,432,010**

Table 6-11 (cont.)

	WW %	FY 2015	WW FY 2015	Flow	BOD	TSS	Admin	General	Total
2001 - Finance - Overhead									
REGIONAL PARTICIPATION	25%	$0	$0				100%	0%	100%
REGIONAL PART.-AMP	25%	$0	$0				100%	0%	100%
PROF SERV-FINANCE	45%	$574,300	$258,435				100%	0%	100%
CERT. EXPENSE	45%	$120	$54				100%	0%	100%
R & M- MISC.	41%	$180,150	$73,862				100%	0%	100%
LEASES/RENTS	45%	$13,000	$5,850				100%	0%	100%
POSTAGE	41%	$215,000	$88,150				100%	0%	100%
OPERATING SUPPLY-GENE	41%	$142,785	$58,542				100%	0%	100%
BUS. MTG. EXP.	45%	$1,000	$450				100%	0%	100%
UNCOLLECTABLE ACCOUN	41%	$65,000	$26,650				100%	0%	100%
TELEPHONE	45%	$190,005	$85,502				100%	0%	100%
COUNTY TAX COLLECTION	45%	$2,500	$1,125				100%	0%	100%
BANK CHARGES	41%	$281,800	$115,538				100%	0%	100%
EMPLOYEE RELATIONS	41%	$20,000	$8,200				100%	0%	100%
MEMBERSHIP DUES & SUB	40%	$4,970	$1,988				100%	0%	100%
RECRUITING	41%	$11,150	$4,572				100%	0%	100%
TRAINING	41%	$11,475	$4,705				100%	0%	100%
INS.-EXCESS LIABILITY	45%	$601,633	$270,735				100%	0%	100%
INS.-CLAIMS & PREM ADJ	45%	$0	$0				100%	0%	100%
PURCHASED ASSETS	41%	$0	$0				100%	0%	100%
JOF COST REIMBURSEMEN	45%	-$1,003,630	-$451,634				100%	0%	100%
Subtotal 2001 - Finance - Overhead		**$1,311,258**	**$552,723**	**$0**	**$0**	**$0**	**$552,723**	**$0**	**$552,723**
3001 - Engineering									
REGIONAL PARTICIPATION	0%	$250,000	$0	52%	15%	15%	18%	0%	100%
ENG.-GENERAL PROF SERV	45%	$537,000	$241,650	52%	15%	15%	18%	0%	100%
ENG-MISC. PROF SERVICES	45%	$10,000	$4,500	52%	15%	15%	18%	0%	100%
CERT. EXPENSE	45%	$1,000	$450	52%	15%	15%	18%	0%	100%
R & M- MISC.	45%	$6,800	$3,060	52%	15%	15%	18%	0%	100%
OPERATING SUPPLY-GENE	45%	$5,000	$2,250	52%	15%	15%	18%	0%	100%
BUS. MTG. EXP.	45%	$5,000	$2,250	52%	15%	15%	18%	0%	100%
MEMBERSHIP DUES & SUB	40%	$5,700	$2,280	52%	15%	15%	18%	0%	100%
PURCHASED ASSETS	0%	$0	$0	52%	15%	15%	18%	0%	100%
Subtotal 3001 - Engineering		**$820,500**	**$256,440**	**$132,921**	**$39,262**	**$39,262**	**$44,994**	**$0**	**$256,440**

Table 6-11 (cont.)

	WW %	FY 2015	WW FY 2015	Flow	BOD	TSS	Admin	General	Total
4001 - Operations									
REGIONAL PART.SERRA	100%	$2,077,486	$2,077,486	39%	26%	26%	9%	0%	100%
POWER-ELECTRIC/GAS	40%	$5,193,950	$2,077,580	73.0%	11.5%	11.5%	4.0%	0%	100%
OPS PROF.SERVICES-MISC	45%	$368,600	$165,870				100%	0%	100%
CERT. EXPENSE	36%	$21,863	$7,871				100%	0%	100%
R & M- MISC.	41%	$161,000	$66,010				100%	0%	100%
R & M-VEHICLES	45%	$184,000	$82,800				100%	0%	100%
R & M-LANDSCAPING	21%	$491,430	$103,200				100%	0%	100%
MAINS, SERVICES, & APPU	41%	$472,000	$193,520	70%			30%	0%	100%
R & M FACILITY	50%	$1,639,150	$819,575	52%	15%	15%	18%	0%	100%
POSTAGE	41%	$8,800	$3,608				100%	0%	100%
OPERATING SUPPLY-GENE	45%	$482,450	$217,103				100%	0%	100%
SUPPLIES-SMALL TOOLS	30%	$59,200	$17,760				100%	0%	100%
SUPPLIES-GAS AND OIL	45%	$304,900	$137,205				100%	0%	100%
METERS	0%	$450,000	$0				100%	0%	100%
EQUIPMENT OIL/GREASE	45%	$75,900	$34,155				100%	0%	100%
SAFETY-GENERAL	30%	$157,175	$47,153				100%	0%	100%
BUS. MTG. EXP.	45%	$8,600	$3,870				100%	0%	100%
TELEPHONE	45%	$70,604	$31,772				100%	0%	100%
LABRATORY ANALYSIS	20%	$87,000	$17,400				100%	0%	100%
OTHER BUS. EXP-PERMITS	46%	$169,069	$77,772				100%	0%	100%
SOLIDS/ SCREENINGS DISP	100%	$552,000	$552,000		35%	35%	30%	0%	100%
MEMBERSHIP DUES & SUBS	40%	$8,000	$3,200				100%	0%	100%
Training	36%	$39,500	$14,220				100%	0%	100%
CHEMICAL-GENERAL	80%	$758,300	$606,640		35%	35%	30%	0%	100%
PURCHASED ASSETS	47%	$0	$0	52%	15%	15%	18%	0%	100%
Subtotal 4001 - Operations		**$42,498,558**	**$7,357,769**	**$2,885,419**	**$1,312,759**	**$1,312,759**	**$1,846,831**	**$0**	**$7,357,769**
TOTAL O&M EXPENSES		**$63,017,234**	**$15,598,942**	**$3,018,340**	**$1,352,022**	**$1,352,022**	**$9,876,558**	**$0**	**$15,598,942**
	TRUE	TRUE	TRUE						TRUE
			O&M Allocation	19%	9%	9%	63%	0%	

Table 6-12: Revenue Requirement Allocations to WW Functional Cost Components

Descriptions	FY 2015	Flow	BOD	TSS	Admin	General	Total
REVENUE REQUIREMENTS							
O&M Expenses	$15,598,942	$3,018,340	$1,352,022	$1,352,022	$9,876,558	$0	$15,598,942
Transfer to Other Funds	$0	$0	$0	$0	$0	$0	$0
Reserve Funding	-$2,821,178	-$1,462,308	-$431,939	-$431,939	-$494,993	$0	-$2,821,178
Additional Rev from Annualized Rev Adjustments	$1,712,472	$203,059	$122,188	$122,188	$1,265,037	$0	$1,712,472
SUBTOTAL REVENUE REQUIREMENTS	**$14,490,236**	**$1,759,091**	**$1,042,271**	**$1,042,271**	**$10,646,603**	**$0**	**$14,490,236**
Less Non-Operating Revenues							
Utility Billing Charges	$190,476	$36,856	$16,509	$16,509	$120,601	$0	$190,476
Plan Check Revenue	$0	$0	$0	$0	$0	$0	$0
Encroachment Fees & Other	$0	$0	$0	$0	$0	$0	$0
Meter sales	$0	$0	$0	$0	$0	$0	$0
Refunds & Other Sales	$0	$0	$0	$0	$0	$0	$0
Rebate	$0	$0	$0	$0	$0	$0	$0
Rental Income	$306,238	$59,256	$26,543	$26,543	$193,896	$0	$306,238
Waste Discharge Fees	$10,000	$1,935	$867	$867	$6,332	$0	$10,000
Interest Income	$39,105	$7,567	$3,389	$3,389	$24,759	$0	$39,105
SUBTOTAL NON-OPERATING REVENUES	**$545,818**	**$105,614**	**$47,308**	**$47,308**	**$345,588**	**$0**	**$545,818**
NET REVENUE REQUIREMENTS	**$13,944,418**	**$1,653,477**	**$994,963**	**$994,963**	**$10,301,015**	**$0**	**$13,944,418**
Reallocation of General Costs		$0	$0	$0	$0	$0	$0
TOTAL COST OF SERVICE TO BE RECOVERED FROM RATES	**$13,944,418**	**$1,653,477**	**$994,963**	**$994,963**	**$10,301,015**	**$0**	**$13,944,418**
Units of Service		4,989,890	21,391	31,770	47,129		
		hcf	lbs/day	lbs/day	Acct		
Unit Cost of Service		**$0.331**	**$46.513**	**$31.317**	**$18.214**		

6.8 APPENDIX 8: REFERENCES FOR TABLES AND FIGURES

Table 6-13: References for Tables and Figures Listed in the Report

Figure & Table	File Name	Tab
Figure 2-1: 5-Year Capital Improvement Project (CIP)	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Capital DB
Figure 3-1: Water Operating Financial Plan	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Water DB
Figure 3-2: Projected Water Operating Fund Ending Balances	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Water DB
Figure 3-4: SFR Usage Distribution in Current Tiers and Water Budget Tiers	SMWD WB Rate Model Final.xlsx	SFR
Figure 3-5: SFR Water Budget Bill Frequency	SMWD WB Rate Model Final.xlsx	SFR
Figure 3-6: SFR Usage Distribution by WB Tiers by Lot Size Ranges	SMWD WB Rate Model Final.xlsx	SFR
Figure 3-7: Irrigation Usage & Bills Distribution in Water Budget Tiers	SMWD WB Rate Model Final.xlsx	Irrigation
Figure 3-8: Irrigation Water Budget Bill Frequency	SMWD WB Rate Model Final.xlsx	Irrigation
Figure 4-1: RW Operating Financial Plan	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	RW DB
Figure 4-2: Projected RW Operating Fund Ending Balances	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	RW DB
Figure 4-3: Non-Domestic Water Budget Usage and Bills Distribution	SMWD WB Rate Model Final.xlsx	Non-Domestic
Figure 4-4: Non-Domestic Water Budget Bill Frequency	SMWD WB Rate Model Final.xlsx	Non-Domestic
Figure 5-1: WW Operating Financial Plan	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW DB
Figure 5-2: Projected WW Operating Fund Ending Balances	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW DB
Table 2-1: Inflation Factor Assumptions	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Tables for Reports
Table 2-2: Projected Account Growth Rate and Meters Summary	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Tables for Reports
Table 2-3: Projected Volumetric Water Sales (in acre feet)	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Tables for Reports
Table 2-4: FY 2015 O&M Expenses by Operating Funds	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Tables for Reports
Table 2-5: FY 2015 Non-Operating Revenues by Funds	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Tables for Reports
Table 2-6: Annual CRR Funding from Utility Operating Funds	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Tables for Reports
Table 2-7: Pension Reserve Funding from Operating Funds	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Proforma
Table 2-8: Reserve Funding Target Levels by Funding Source	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Tables for Reports
Table 2-9: Beginning FY 2014 Fund Balances	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Key Inputs

Table 3-1: Current Water Rates	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 3-2: Projected Water Accounts	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 3-3: Projected Water Usage under Current Rate Structure	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 3-4: Projected Water Usage Subject to Power Surcharges	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 3-5: Projected Revenues from Current Water Rates	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 3-6: Projected Miscellaneous Water Revenues	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 3-7: Projected Purchased Water Supply Costs	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	O&M
Table 3-8: Budgeted and Projected Water O&M Expenses	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	O&M
Table 3-9: Budgeted and Projected Water Transfers From/ (To) CRR Fund and Pension Reserve	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Water CF
Table 3-10: Status Quo Water Financial Plan (No Revenue Adjustment)	SMWD FPlan Model FINAL Jan 29 2015 Status Quo.xlsm	Water CF
Table 3-11: Proposed Water Revenue Adjustments	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Water DB
Table 3-12: Proposed Water Financial Plan	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Water CF
Table 3-18: Generalized Landscape Areas by Lot Size	SMWD WB Rate Model Final.xlsx	SFR
Table 3-19: Tier Definitions for Water Budget Rate Structure	SMWD WB Rate Model Final.xlsx	SFR
Table 3-20: Annualized Water Revenue Requirement for FY 2015	SMWD WB Rate Model Final.xlsx	Water COS
Table 3-21: Allocated Water System Cost	SMWD WB Rate Model Final.xlsx	Water COS
Table 3-23: Components for Monthly Fixed Charges for FY 2015 (100% Fixed Option)	SMWD WB Rate Model Final.xlsx	Water Rates
Table 3-24: Monthly Fixed Charge for FY 2015	SMWD WB Rate Model Final.xlsx	Water Rates
Table 3-25: 5-year Monthly Fixed Charges	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates
Table 3-27: FY 2015 Water Supply Component of Volumetric Charges	SMWD WB Rate Model Final.xlsx	Water Rates
Table 3-28: Conservation Component of Volumetric Charges	SMWD WB Rate Model Final.xlsx	Water COS
Table 3-29: Revenue Offset Component of Volumetric Rates	SMWD WB Rate Model Final.xlsx	Water COS
Table 3-30: 100% Fixed Option Water Volumetric Rates from FY 2015 to FY 2019 Excluding Pass-through for Water Supply Costs	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates
Table 3-31: Projected Water Power Surcharges	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates
Table 3-34: Water Rates with 3-year Phase-in before MWD Refunds Offsets	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates
Table 3-35: Water Rates with 3-year Phase-in using MWD Refunds Offsets for FY 2015 & 2016	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates

Table 4-1: Current Recycled Water Rates	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 4-2: Projected Recycled Water Accounts	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 4-3: Projected Recycled Water Usage under Current Rate Structure	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 4-4: Projected RW Usage Subject to Power Surcharges	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 4-5: Projected Revenues from Current RW Rates	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 4-6: Projected Miscellaneous RW Revenues	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 4-7: Purchased Water Supply Costs	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	O&M
Table 4-8: Projected RW O&M Expenses	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	O&M
Table 4-9: Projected RW Operating Fund Transfers From /(To) CRR Fund and Pension Reserve	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	RW CF
Table 4-10: Status Quo RW Financial Plan (No Revenue Adjustment)	SMWD FPlan Model FINAL Jan 29 2015 Status Quo.xlsm	RW CF
Table 4-11: Proposed Water Revenue Adjustments	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	RW DB
Table 4-12: Proposed RW Financial Plan	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	RW CF
Table 4-13: RW Revenue Requirement for FY 2015	SMWD WB Rate Model Final.xlsx	RW COS
Table 4-14: Allocated Recycled Water System Cost	SMWD WB Rate Model Final.xlsx	RW COS
Table 4-15: 100% Fixed Option Monthly Service Charges	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates
Table 4-16: RW Revenues & Revenue Requirement Components FY 2015 to FY 2019	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates
Table 4-17: 100% Fixed Option - RW Volumetric Rates from FY 2015 to FY 2019	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates
Table 4-18: Projected RW Power Surcharges	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates
Table 4-19: 3-year Phase-in RW Water Rates	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates
Table 5-1: Current Wastewater Rates	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 5-2: Projected WW Account Summary	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 5-3: Projected WW Billed Flows (ccf) under Current Rate Structure	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 5-4: Projected WW Revenues from Current Rates	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 5-5: Projected Miscellaneous WW Revenues	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Rev
Table 5-6: Projected WW O&M Expenses	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	O&M
Table 5-7: Projected WW Transfers From /(To) CRR Fund and Pension Reserve	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW CF

Table 5-8: Status Quo WW Financial Plan (No Revenue Adjustment)	SMWD FPlan Model FINAL Jan 29 2015 Status Quo.xlsm	WW CF
Table 5-9: Proposed WW Revenue Adjustments	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW DB
Table 5-10: Proposed WW Financial Plan	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW CF
Table 5-11: Mass Balance Analysis	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW COS
Table 5-12: WW Revenue Requirement for FY 2015	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW COS
Table 5-13: Units of WW Service for FY 2015	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW COS
Table 5-14: Unit Cost of Service Development	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW COS
Table 5-15: WW COS Allocation to Customer Classes	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW COS
Table 5-16: 100% Monthly Fixed Charge Option WW Rates for FY 2015	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates
Table 5-17: 5-year 100% Monthly Fixed Charge Option WW Rates	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates
Table 5-18: 3-year Phase-in WW Water Rates	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Phase-in Water & RW Rates
Table 6-1: Operations & Maintenance (O&M) Expenses Allocation Factors	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Key Inputs
Table 6-2: Asset Allocation to Water, RW and WW System	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Assets
Table 6-3: Asset Allocations to Water Function Costs	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Water COS
Table 6-4: Asset Allocations to RW Function Costs	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	RW COS
Table 6-5: Asset Allocations to WW Function Costs	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW COS
Table 6-6: Water O&M Cost Allocation Factors	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	Water COS
Table 6-7: Revenue Requirement to Water Functional Cost Components	SMWD WB Rate Model Final.xlsx	Water COS
Table 6-8: RW O&M Cost Allocation Factors	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	RW COS
Table 6-9: Revenue Requirement Allocations to RW Functional Cost Components	SMWD WB Rate Model Final.xlsx	RW COS
Table 6-10: Current WW Customer Classifications	*Rate Study Draft - Appendix Table 6-10 add.pdf* *Provided by District Staff*	
Table 6-11: WW O&M Cost Allocation Factors	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW COS
Table 6-12: Revenue Requirement Allocations to WW Functional Cost Components	SMWD FPlan Model FINAL Jan 29 2015 Proposed.xlsm	WW COS