

SAN DIEGUITO WATER DISTRICT Water Rate Study

March 5, 2019



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1. Executive Summary

1.1. Background

The San Dieguito Water District (District) staff aims to conduct a water rate study every two years to ensure that water rates and charges are sufficient to meet enterprise revenue requirements. The last study (which the Board approved) recommended revenue increases of 6.5% on February 1, 2016 and January 1, 2017. These were the last two rate increases implemented by the District. The District strives to conduct water rate studies every two years because its water purchase costs can vary significantly from year to year based on local water availability. The District's local surface water is more economical than imported purchased water from the San Diego County Water Authority.

In the fall of 2017, the San Dieguito Water District engaged Raftelis to conduct a Water Rate Study (Study) consisting of a financial plan update and rate adjustments for FY 2019 and FY 2020. This report presents the financial plan and the resulting rates for implementation in May of 2019 and 2020.

This Executive Summary summarizes the District's financial plan based on the proposed revenue adjustments and the resulting water rates. It also contains a description of the rate study process, methodology, results and recommendations. The District wishes to utilize fair and equitable rates that:

1. Meet fiscal needs in terms of operational expenses, reserve goals, and capital investment to maintain the system
2. Are fair and equitable, therefore proportionately allocating the costs of providing service in accordance with California Constitution Article XIII D, Section 6 (commonly referred to as Proposition 218)
3. Result in stable charges over time for customers.

1.2. Methodology

In 2015, Raftelis and the District developed rates using Cost of Service (COS) principles set forth by the American Water Works Association M1 Manual titled *Principles of Water Rates, Fees and Charges* (AWWA M1 Manual). COS principles endeavor to distribute costs to customer classes in accordance with the way each class uses the water system. This 2019 Study uses the COS results of the prior 2015 rate study. It is very common to perform a COS study every 5 to 10 years instead of yearly because many costs can change dramatically every year, such as water purchase costs and capital costs. Performing a COS Study every year may cause unnecessary rate changes. To

minimize customer rate and bill fluctuations, it is common to set rates for several years before revisiting the COS. The 2015 rate study used the AWWA Base-Extra Capacity Method to distribute costs to customer classes and tiers. This method separates costs into four main cost causation components: (1) base costs, (2) extra capacity costs, (3) customer costs, and (4) direct fire protection costs. Base costs are costs associated with meeting average daily demand needs and include operations and maintenance costs and capital costs designed to meet average load conditions. Extra capacity costs are costs (both operating and capital costs) associated with meeting peak demand. Customer costs are costs associated with serving customers, such as meter reading, billing and customer service, etc. Direct fire protection costs are related solely to the fire protection function of a water system, such as fire hydrants, fire connections and related mains and valves.

The financial plan update assesses the revenue required to sustain operations, maintenance, capital requirements, and debt service. Since this Study is not changing or recalculating the COS, the resulting percent change in the revenue requirement directly translates into a percent change to the rates.

1.3. Results and Recommendations

Table 1-1 shows the proposed revenue adjustments that are part of the selected financial plan. Note that the revenue adjustments are for the District’s rates only and do not include the San Diego County Water Authority (SDCWA) Infrastructure Access Charge (IAC) pass-through. The IAC is set by the SDCWA at the start of every calendar.

Table 1-1: Proposed Revenue Adjustments

	FY 2019 May 1, 2019	FY 2020 May 1, 2020
Revenue Adjustment	6.5%	6.5%

1.3.1. FACTORS AFFECTING REVENUE ADJUSTMENTS

The following items affect the District’s revenue requirement (i.e. costs) and thus the need for revenue adjustments. The District’s expenses include Operation and Maintenance (O&M) expenses and capital expenses.

- Wholesale Water Purchase Costs:** The District projects its water purchase costs will rise. FY 2019 water costs are projected to be 35% higher than FY 2018. The District experienced favorable conditions with the Lake Hodges water supply in FY 2018, reducing the need for more expensive imported water. Additionally, San Diego County Water Authority (SDCWA) rates are increasing by 4 percent.
- Unfunded Pension Liabilities:** The District must pay down Unfunded Accrued Liabilities (UAL) due to new unfunded liability valuations and the estimated future return on investments from the California Public Employees’ Retirement System (CalPERS). The

financial plan described herein assumes a payment schedule over 15 years, totaling approximately \$13 million.

- **O&M expenses:** Overall, the District’s O&M expenses (excluding water costs) are expected to increase approximately 7% from FY 2018 to FY 2019.
- **Water System Capital Investment:** The District will invest approximately \$15.6 million over the next five years in infrastructure, in particular, the joint facilities’ master plan projects. The average District capital investment over the next three years is approximately \$3.1 million per year.
- **Increased Water Sales:** With the easing of consumption restrictions after the drought, the District is projecting slightly increased water sales. Fiscal Year 2018 showed a 10% increase over FY 2017. The District projects an average of 1.3% increase in usage over the next five subsequent years.

1.3.2. PROPOSED WATER RATES

The District’s potable water service fees are comprised of two components: (1) a fixed charge called a Water Meter Service Charge and (2) a Commodity Rate. The District also passes through the IAC from the SDCWA, which is a fixed charge assessed to the District.

1.3.2.1. Water Meter Service Charge

The fixed charge, which the District calls a Water Meter Service Charge, is based on the meter size serving a property, and is calculated to recover a portion of the District’s fixed costs, such as the costs of billing and collecting, customer service, meter reading, meter maintenance, and a portion of extra-capacity related costs. In addition to the Water Meter Service Charge, customers also pay the separate SDCWA IAC based on meter size.

Table 1-2 shows the existing bi-monthly and proposed Water Meter Service Charge for FY 2019 along with the SDCWA IAC by meter size.

Table 1-2: Current and Proposed FY 2019 Bi-Monthly Water Meter Service Charges

Meter Size	Proposed			Total Proposed Fixed Charges
	Current	Service Charge	IAC	
5/8"	\$39.82	\$42.41	\$6.02	\$48.43
3/4"	\$39.82	\$42.41	\$6.02	\$48.43
1"	\$58.63	\$62.44	\$9.63	\$72.07
1.5"	\$105.24	\$112.08	\$18.06	\$130.14
2"	\$161.40	\$171.89	\$31.30	\$203.19
3"	\$292.52	\$311.53	\$57.79	\$369.32
4"	\$479.81	\$511.00	\$98.73	\$609.73
6"	\$947.59	\$1,009.18	\$180.60	\$1,189.78
8"	\$1,509.16	\$1,607.26	\$313.04	\$1,920.30

The District is proposing to set rates for the next two years based on the revenue adjustments proposed in Table 1-1. Table 1-3 shows the Bi-monthly Water Meter Service Charge for the next two years. Note that the charges in Table 1-3 do not include the SDCWA IAC pass-through.

Table 1-3: Two Year Bi-Monthly Water Meter Service Charges

Adjustment	6.5%	6.5%
Meter Size	FY 2019	FY 2020
5/8"	\$42.41	\$45.16
3/4"	\$42.41	\$45.16
1"	\$62.44	\$66.50
1.5"	\$112.08	\$119.37
2"	\$171.89	\$183.06
3"	\$311.53	\$331.78
4"	\$511.00	\$544.21
6"	\$1,009.18	\$1,074.78
8"	\$1,607.26	\$1,711.73

1.3.2.2. Commodity Rates

Table 1-4 shows the current and proposed two-year commodity rates by customer class. The rates are designed to recover the costs associated with serving each class and tier as discussed in Section 4. Agriculture and Commercial classes continue to have one rate for both classes; likewise, the Public and Governmental classes share a rate. The basis for combining these classes is that they have similar peaking factors – meaning that the classes use water (during peak times of use) in a similar fashion and thus can be combined - since the basis for grouping customers together into classes is their peaking (extra capacity) demands on the water system.

Table 1-4: Current and Proposed Bi-Monthly Commodity Rates (\$/HCF)

Commodity Rates				
Class	Tiers	Current	FY 2019	FY 2020
Single Family Residence (SFR)				
	Tier 1	\$2.81	\$2.99	\$3.19
	Tier 2	\$4.46	\$4.75	\$5.06
	Tier 3	\$5.51	\$5.87	\$6.25
	Tier 4	\$6.28	\$6.69	\$7.12
SFR -w- Agriculture				
	Tier 1	\$2.81	\$2.99	\$3.19
	Tier 2	\$4.46	\$4.75	\$5.06
	Tier 3	\$5.51	\$5.87	\$6.25
	Tier 4	\$5.51	\$5.87	\$6.25
SFR -w- Commercial				
	Tier 1	\$2.81	\$2.99	\$3.19
	Tier 2	\$4.46	\$4.75	\$5.06
	Tier 3	\$5.51	\$5.87	\$6.25
	Tier 4	\$5.51	\$5.87	\$6.25
Multi-Family Residence (MFR) - per Dwelling Unit				
	Tier 1	\$2.81	\$2.99	\$3.19
	Tier 2	\$4.46	\$4.75	\$5.06
	Tier 3	\$5.51	\$5.87	\$6.25
	Tier 4	\$6.28	\$6.69	\$7.12
MFR -w- Agriculture				
	Tier 1	\$2.81	\$2.99	\$3.19
	Tier 2	\$4.46	\$4.75	\$5.06
	Tier 3	\$5.51	\$5.87	\$6.25
	Tier 4	\$5.51	\$5.87	\$6.25
MFR -w- Commercial				
	Tier 1	\$2.81	\$2.99	\$3.19
	Tier 2	\$4.46	\$4.75	\$5.06
	Tier 3	\$5.51	\$5.87	\$6.25
	Tier 4	\$5.51	\$5.87	\$6.25
Agriculture	Flat	\$4.78	\$5.09	\$5.42
Commercial	Flat	\$4.78	\$5.09	\$5.42
Public	Flat	\$5.23	\$5.57	\$5.93
Government	Flat	\$5.23	\$5.57	\$5.93
Landscaping	Flat	\$5.51	\$5.87	\$6.25
Construction	Flat	\$5.61	\$5.97	\$6.36

Together, the Water Meter Service Charges and the Commodity Rates are structured to recover the costs of providing water service to each customer class and manage the District’s water resources.

1.3.2.3. Fire Line / Meter Service Charge

Table 1-5 shows the existing and proposed Fire Line / Meter Service charges for private fire protection for the next two years. The existing charges are escalated according to the revenue adjustments in Table 1-1.

Table 1-5: Fire Line / Meter Service Charges

Meter Size	Current	FY 2019	FY 2020
5/8"	\$8.47	\$9.02	\$9.61
3/4"	\$8.47	\$9.02	\$9.61
1"	\$8.47	\$9.02	\$9.61
1.5"	\$9.55	\$10.17	\$10.83
2"	\$16.65	\$17.73	\$18.88
3"	\$42.12	\$44.86	\$47.77
4"	\$86.04	\$91.63	\$97.59
6"	\$243.69	\$259.53	\$276.40
8"	\$515.61	\$549.12	\$584.82

1.3.2.4. Drought Rates

Drought Rates allow the District to recover sufficient revenue to fund operations during periods of restricted water use. Drought Rates vary depending on the severity of a drought and associated revenue loss.

Revenue Collection during a Drought

During a drought, the District's revenue requirement (costs) decreases along with revenue. However, the District's revenue decreases more than its costs do, which creates challenges in funding operations. Most of the District's costs are fixed (salaries, benefits, debt service, etc.) and therefore drought rates are required to recover lost revenue to cover its fixed costs. The District's drought revenue requirement is lower than its non-drought revenue requirement because as the District serves less water it also purchases and treats less water, thereby saving the associated costs.

Customer Bills during a Drought

Provided that customers cutback their water use in line with the drought cutback goal set by the District, their drought water bill should be lower than their non-drought bill. Conversely, those that do not cutback consumption will face higher charges. The Board would adopt the drought rates separately from any other type of rate increase. For the duration of the rate proposal period (2 years), the Board would have the ability to adopt drought rates by increasing the then current commodity rate without having to re-issue the Proposition 218 notice. Table 1-6 shows the percentage maximum rate increase per drought level.

Table 1-6: Drought Surcharge Percentage on Commodity Rates

	Up to 10%	Up to 20%	Up to 30%	Up to 40%	50% or Greater
% Increase	9.9%	23.5%	42.2%	65.6%	91.9%

2. Water System

This section briefly describes the water system and the District-provided customer account and water use data for FY 2017 – FY 2018.

2.1. Water Sources and System Facilities

The San Dieguito Water District provides potable water to 11,788 connections in the communities of Leucadia, Old Encinitas, Cardiff and portions of New Encinitas. The remainder of the City is served by the Olivenhain Municipal Water District. The San Dieguito Water District is a subsidiary district of the City of Encinitas. The City Council also serves as the Board of Directors of the District.

For potable water, the District receives local water from Lake Hodges and imported raw water from the San Diego County Water Authority. Both sources are treated at the R.E. Badger Filtration Plant located in Rancho Santa Fe. The plant is jointly owned with the Santa Fe Irrigation District. Treated water from the San Diego County Water Authority can also be delivered directly to the District.

The amount of water available from Lake Hodges varies from year to year; in FY 2019, the District projects to use 2,825 acre feet (AF) of local water from Lake Hodges and approximately 3,334 AF of imported water from SDCWA. The District also sells recycled water received from the San Elijo Joint Powers Authority (SEJPA). The District's current conservation objectives are driven by limited water resources, regional drought conditions, rapidly increasing costs of imported water and the volatility of local water supply.

The District operates and maintains 175 miles of pipelines, the 7.5 million-gallon (MG) Encinitas Ranch reservoir, the 2.5 MG Balour Reservoir, 19 pressure reducing stations, 1 pump station, and 11,788 water meters. In addition, the District also jointly owns the 40 MGD Badger Filtration Plant, a 13 MG clear well, a hydroelectric plant, the San Dieguito Pump Station, the 850 AF San Dieguito Reservoir and 14 miles of transmission mains.

2.2. Number of Accounts

Table 2-1 shows the estimated number of water accounts, including Fire Service, by meter size for FY 2019. The District provided the meter count data for FY 2017, which was then inflated to estimate FY 2019 counts. The number of accounts are used to forecast the amount of fixed revenue the District will receive from Meter Service Charges.

Table 2-1: Estimated Accounts by Meter Size (Projected - FY 2019)

Meter Size	Potable Water Accounts	Fire Service Accounts
5/8"	3,749	-
3/4"	5,688	-
1"	1,475	1,887
1.5"	435	1
2"	436	23
3"	2	-
4"	2	74
6"	-	53
8"	1	20
Total	11,788	2,058

2.3. Account and Water Use Growth Assumptions

The revenue calculated for each fiscal year in the financial plan is a function of the number of accounts, account growth, water use trends, existing rates, and non-rate revenues. The account growth assumed as part of this study is shown in Table 2-2. It also shows the assumed water use in acre-feet. The District assumed that water sales will slowly recover since the end of the drought.

Table 2-2: Account Growth and Water Use Assumptions

Inflation Factors	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Account Growth	0.5%	0.5%	0.5%	0.5%	0.5%
General	3.0%	3.0%	3.0%	3.0%	3.0%
Other Revenue	3.0%	3.0%	3.0%	3.0%	3.0%
Change in Water Demand Factor	0.4%	1.5%	1.5%	1.5%	1.5%
Water Demand Factor	100.4%	101.5%	101.5%	101.5%	101.5%
Potable Water Sales (AF)	5,851	5,938	6,028	6,118	6,210

2.4. Water Use

Table 2-3 shows the projected water use by customer class in hundred cubic feet (ccf), which is the unit utilized in calculating bills. The total projected water use for FY 2019 is approximately 2,548,790 ccf or 5,851 acre feet.

Table 2-3: Water Use by Customer Class (ccf) - FY 2019

Customer Class	Usage (ccf)
Single Family Residence (SFR)	1,410,391
SFR -w- Agriculture	19,889
SFR -w- Commercial	910
Multi-Family Residence (MFR) - per Dwelling Unit	504,227
MFR -w- Agriculture	9,298
MFR -w- Commercial	1,230
Agriculture	89,223
Commercial	238,104
Public	58,356
Government	11,170
Landscaping	193,277
Construction	12,716
Total (ccf)	2,548,790
Total (AF)	5,851

3. Financial Plan

This section describes the assumptions used in projecting operating and capital expenses as well as calculating debt service coverage requirements that determine the overall revenue adjustments required to ensure the District’s financial stability. Revenue adjustments represent the average rate increase for District customers as a whole since we are not performing a Cost of Service Study.

3.1. Water Sales, Water Purchases, and Inflationary Assumptions

To ensure that future costs are reasonably projected, we make informed assumptions about water sales, water purchases and inflationary factors. Table 3-1 shows the water use and purchases assumptions in acre feet incorporated in the 5-year financial plan. Line 2 shows the projected water use for the District. To meet this demand, the District must purchase enough water, which includes additional water purchases to account for water losses in the system, such as water lost during treatment, leaks in pipes, etc. The District estimates a 5.0% water loss. The use in line 2 is inflated 5.0% (line 3) to arrive at the total purchases needed in line 10 in acre feet. The District purchases water from SDCWA and owns local water in Lake Hodges. In FY 2018, the District sourced more water from Lake Hodges, reducing the need to purchase more expensive water from SDCWA. The amount of water sourced from Lake Hodges on average is approximately 2,000 AF as shown in line 9.

Table 3-1: Water Purchase Assumptions

Line No.		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
1	Sales					
2	Potable	5,851	5,938	6,028	6,118	6,210
3	Water Loss Assumption	5.0%	5.0%	5.0%	5.0%	5.0%
4	Purchases / Sources					
5	Imported Treated	308	312	317	322	326
6	Imported Raw	3,026	3,939	4,028	4,118	4,211
7	Total Imported Purchases	3,334	4,251	4,345	4,440	4,537
8	Other Sources					
9	Local Raw (Lake Hodges)	2,825	2,000	2,000	2,000	2,000
10	Total Potable Purchases (AF)	6,159	6,251	6,345	6,440	6,537

The account growth assumptions in Table 2-2 and the inflationary assumptions in Table 3-2 are used to project the District’s expenses across the study period.

Table 3-2: Expense Inflationary Assumptions

Inflation Factors	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Salary	2.0%	2.0%	2.0%	2.0%	2.0%
Benefits	1.0%	1.0%	1.0%	1.0%	1.0%
Benefits - Medical	1.0%	1.0%	1.0%	1.0%	1.0%
Benefits - CalPers	0.0%	0.0%	0.0%	2.5%	2.5%
Benefits- OPEB	5.0%	5.0%	5.0%	5.0%	5.0%
Utilities	4.0%	4.0%	4.0%	4.0%	4.0%
Internal Cost Allocation	2.0%	2.0%	2.0%	2.0%	2.0%

3.2. O&M Expenses

The District’s O&M budget is shown by fiscal year in Table 3-3. The O&M budget incorporates the inflationary factors discussed in Sections 2.3 and 3.1. Note that the SDCWA Infrastructure Access Charge (IAC) is not included as it is passed through directly to the customer by the District. Costs are projected to increase in large part due to the increase in water purchase costs (line 14).

Table 3-3: Projected O&M Expenses

Line No.	Expense	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
1	Administration	\$2,493,280	\$2,529,932	\$2,567,487	\$2,605,971	\$2,645,408
2	Customer Service	\$837,752	\$857,355	\$877,447	\$898,055	\$919,180
3	Water Purchases and Treatment					
4	Treatment Costs	\$2,500,801	\$2,575,825	\$2,653,100	\$2,732,693	\$2,814,674
5	Improted Treated Water	\$402,556	\$415,303	\$438,837	\$465,862	\$495,231
6	Improted Untreated Water	\$3,081,370	\$4,128,353	\$4,391,310	\$4,690,006	\$5,035,625
7	Local Untreated Water	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
8	MWD Readiness to Serve	\$50,504	\$52,524	\$54,625	\$57,356	\$60,224
9	CWA Infrastructure Access Charge	\$547,902	\$571,051	\$582,635	\$562,704	\$593,228
10	CWA Empergency Storage Fee	\$745,866	\$746,113	\$775,957	\$810,951	\$851,499
11	MWD Capacity Reservation	\$94,899	\$91,915	\$95,592	\$99,903	\$104,898
12	CWA Customer Service Fee	\$273,602	\$270,178	\$280,985	\$293,657	\$308,339
13	CWA Supply Reliability	\$289,022	\$313,715	\$326,264	\$340,978	\$358,027
14	Subtotal Water Purchases and Treatment	\$8,061,521	\$9,239,977	\$9,674,304	\$10,129,109	\$10,696,746
15	Recycled Water Program	\$847,010	\$869,880	\$893,401	\$917,924	\$943,144
16	Field Operations	\$2,111,671	\$2,153,079	\$2,195,417	\$2,240,873	\$2,287,358
17	Planning and Engineering	\$414,318	\$422,100	\$430,041	\$438,143	\$446,411
18	Total O&M	\$14,765,552	\$16,072,323	\$16,638,097	\$17,230,075	\$17,938,246

3.3. Capital Improvement Plan

Table 3-4 shows the District’s five-year Capital Improvement Plan summary. The District is funding capital investment through System Development Charges (Capacity Fees) and rate revenue (also known as PAY-GO funding). It currently does not propose incurring additional debt to fund capital projects.

Table 3-4: Detailed Capital Improvement Plan

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Non-Destructive Pipeline Assessment	\$200,000	\$0	\$0	\$0	\$0
Water Rate Study Update (2-year)	\$0	\$100,000	\$0	\$100,000	\$0
Joint Facilities Master Plan Projects	\$1,750,000	\$1,750,000	\$1,750,000	\$2,250,000	\$2,250,000
Joint Facilities Capital Acquisitions	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Water Infrastructure Improvements	\$445,000	\$600,000	\$600,000	\$600,000	\$600,000
Transmission Line Maintenance	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Meter Replacement and Automation Program	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
SCADA Automation Upgrade Program	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Urban Water Management Plan Update (5-year)	\$0	\$0	\$75,000	\$0	\$0
Water Master Plan Update (10-year)	\$150,000	\$0	\$0	\$0	\$0
Total	\$3,025,000	\$2,930,000	\$2,905,000	\$3,430,000	\$3,330,000

3.4. Existing and Proposed Debt Service

Table 3-5 shows the District's existing debt service payments. The financial plan presented in this section assumes no additional debt.

Table 3-5: Existing and Proposed Debt Service

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Existing Debt Service					
2007 Bonds	\$627,919	\$623,619	\$636,466	\$634,397	\$636,044
2014 Bonds	\$776,779	\$771,500	\$765,300	\$768,100	\$769,700
Total Existing Debt Service	\$1,401,694	\$1,395,119	\$1,401,766	\$1,402,497	\$1,405,744
Proposed Debt Service - SRF Debt	\$0	\$0	\$0	\$0	\$0
Total Debt Service	\$1,401,694	\$1,395,119	\$1,401,766	\$1,402,497	\$1,405,744

3.5. Proposed Financial Plan and Revenue Adjustments

The proposed revenue adjustments maintain adequate revenue to fund operating expenses, capital expenditures and compliance with bond covenants. Financial plan modelling assumes the revenue adjustments occur in May 2019 and 2020. The proposed revenue adjustments would enable the District to execute the CIP shown in Table 3-4 and exceed its debt service coverage requirement of 115% over the study period.

Table 3-6 shows the proposed FY 2019 and 2020 revenue adjustments in May each year. At this time, the District is setting rates for FY 2019 and FY 2020. The District evaluates rates on a two-year basis and will reevaluate revenue needs for FY 2021 onward.

Table 3-6: Proposed Revenue Adjustments

	FY 2019	FY 2020
	May 1, 2019	May 1, 2020
Revenue Adjustment	6.5%	6.5%

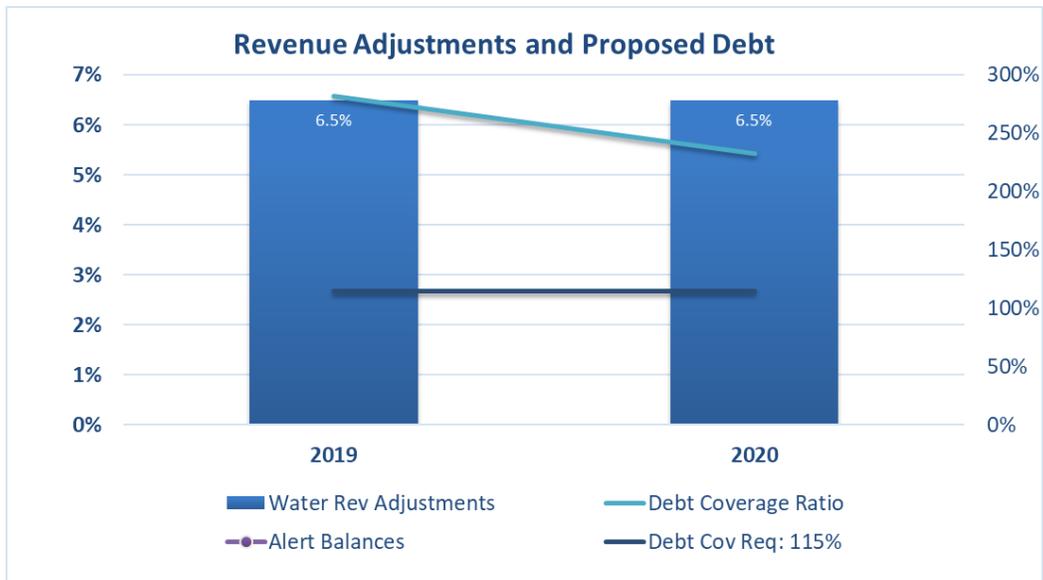
Table 3-7 shows the yearly cash flow over the next two years with the revenue adjustments shown in Table 3-6. Line 3 shows the additional revenue from the revenue adjustments. Line 30 shows the District meets debt service coverage requirements during the study period.

Table 3-7: Two-Year Water Operating Cash Flow

Line No.	Operating Cash Flow	FY 2018	FY 2019	FY 2020
1	Revenue - Potable (Bi-Monthly)			
2	Revenue from SDWD Rates	\$15,544,184	\$14,938,814	\$15,111,610
3	Total Additional Revenue from Revenue Adjustments	\$0	\$161,837	\$1,156,605
4	Total Rate Revenue	\$15,544,184	\$15,100,651	\$16,268,215
5				
6	Other Revenue			
7	Infrastructure Access Charge (Pass-through)	\$532,536	\$560,634	\$563,437
8	Misc Operating Revenue	\$596,923	\$599,023	\$607,743
9	Non-Operating - Land Sale	\$0	\$614,000	\$0
10	Property Taxes	\$1,050,000	\$1,000,000	\$1,005,000
11	Total Revenue	\$17,723,643	\$17,874,308	\$18,444,395
12				
13	O&M Expenses			
14	Administration (Org 92690)	\$2,096,867	\$2,493,280	\$2,529,932
15	Customer Service (Org 92691)	\$843,008	\$837,752	\$857,355
16	Water Purchases and Treatment (Org 92692)	\$6,627,959	\$8,061,521	\$9,239,977
17	Field Operations (Org 92694)	\$2,063,216	\$2,111,671	\$2,153,079
18	Planning and Engineering (Org 92695)	\$479,755	\$414,318	\$422,100
19	Total O&M Expenses	\$12,110,805	\$13,918,542	\$15,202,443
20				
21	Debt Service			
22	Existing Debt	\$1,398,844	\$1,401,694	\$1,395,119
23	Proposed Debt - Market	\$0	\$0	\$0
24	Proposed Debt - SRF	\$0	\$0	\$0
25	Total Debt Service Expenses	\$1,398,844	\$1,401,694	\$1,395,119
26				
27	Total Expenses	\$13,509,649	\$15,320,236	\$16,597,561
28				
29	Net Cash Flow	\$4,213,994	\$2,554,072	\$1,846,834
30	Debt Coverage	401%	282%	232%

Figures 3-1 through 3-5 display the financial plan in graphical format. Figure 3-1 shows the modeled revenue adjustments (blue bars) and also graphs the calculated and minimum debt coverage requirements as shown by the light and dark blue lines, respectively.

Figure 3-1: Proposed Revenue Adjustments



graphically illustrates the operating financial plan – it compares existing (current) and proposed revenues with projected expenses. The green and blue lines show the current and proposed revenue respectively. The expenses include O&M, purchased water, debt service and reserve funding and are shown by the stacked bars; total revenues at existing and proposed rates are shown by the horizontal green and blue lines, respectively. Current revenue from existing rates, in green, does not meet future total expenses and shows the need for revenue adjustments.

Figure 3-2: Proposed Operating Financial Plan

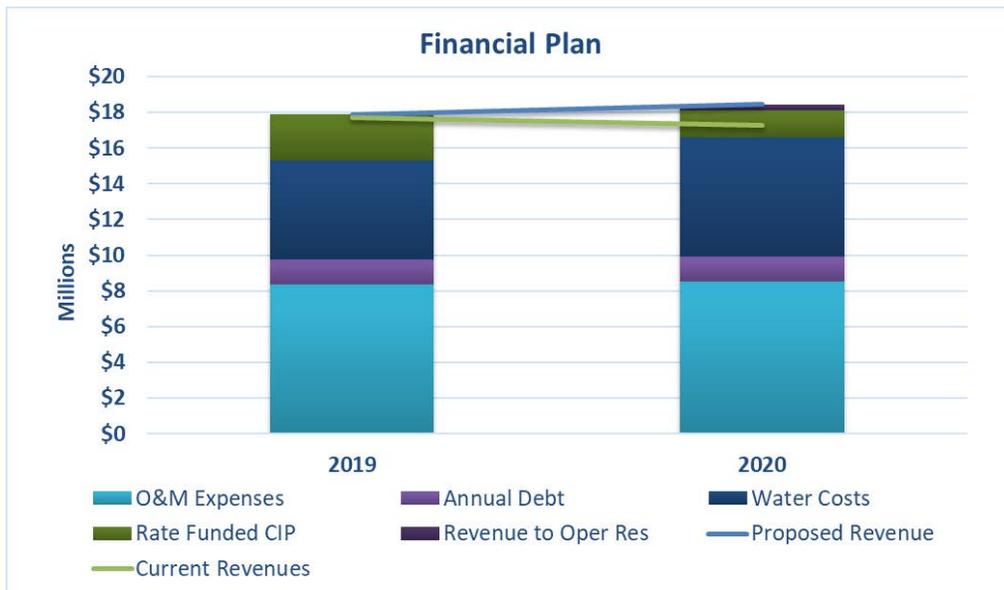


Figure 3-2 summarizes the projected CIP and its funding sources – which for this study is solely rate revenue (also known as PAY-GO) and a small amount of capacity fee revenue (not shown).

Figure 3-2: Projected CIP and Funding Sources

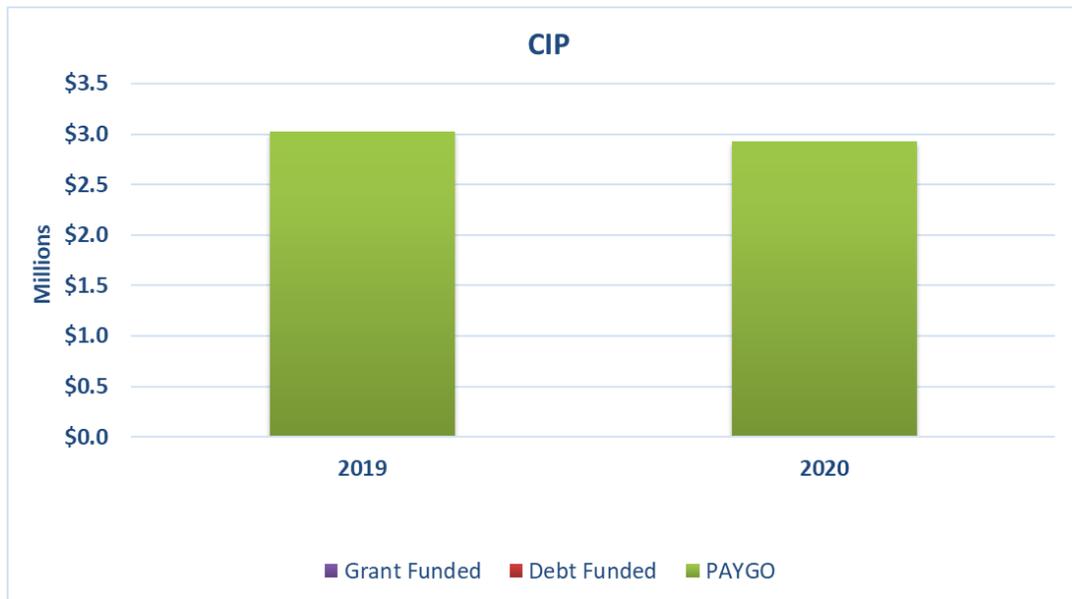
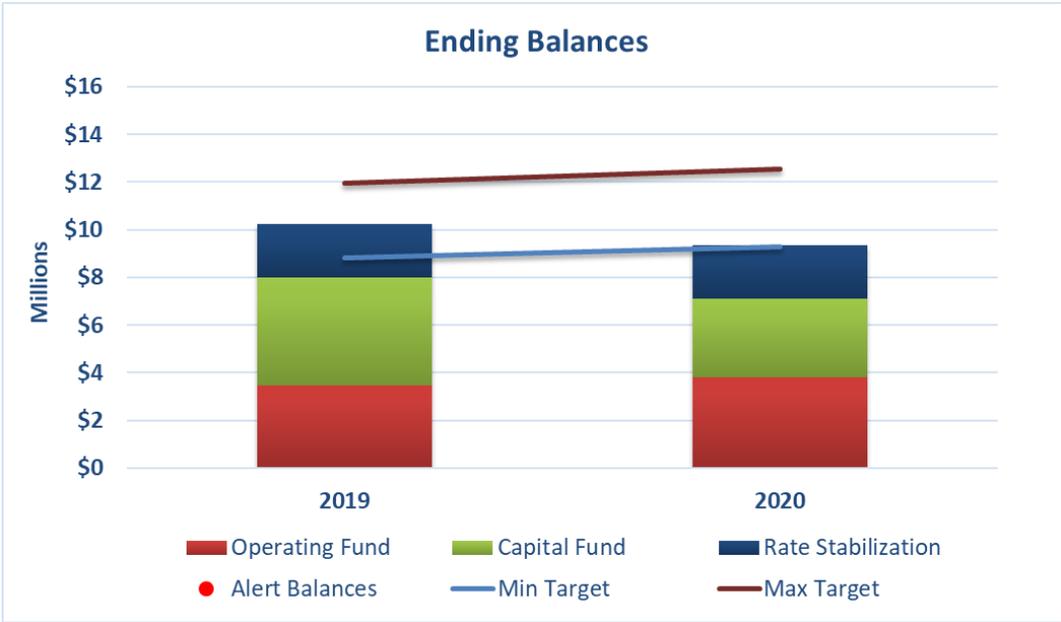


Figure 3-3 displays the ending balance of all the District’s reserves combined. The dark red horizontal line is the maximum reserve target balance, with the minimum reserve target represented by the blue line. The target reserve balances were approved by the Board of Directors on October 18, 2017 and are as follows:

1. **Operating Reserve:** 90 days of O&M expenses
2. **Capital Replacement Reserve**
 - a. **Minimum:** 100% the average annual CIP expenditure over the next five years
 - b. **Maximum:** Two times the average annual CIP expenditure over the next five years
3. **Rate Stabilization:** Fifteen percent of annual water revenues (commodity and meter service charges).

The selected revenue adjustments create reserve balances that meet the minimum target reserves throughout the study period.

Figure 3-3: Projected Operating Fund Ending Balances



Appendix A – Financial Plan Detail shows the cash flow detail and the flow of funds for all the District’s reserves.

4. Proposed Rates

As a result of the proposed financial plan in Section 3, we propose 6.5% revenue adjustments as shown in Table 3-6 for FY 2019 and FY 2020. The revenue adjustment translates to a direct rate increase to the Water Meter Service Charges, Fire Line Charges, and Commodity Rates. Drought Rates are described in Section 5.

4.1. Proposed Water Meter Service Charges

The proposed bi-monthly Water Meter Service Charges for FY 2019 and FY 2020 are shown in Table 4-1. The proposed charges escalate the FY 2018 charges based on the revenue adjustments in Table 3-6.

Table 4-1: Proposed FY 2019 and FY 2020 Water Meter Service Charges

Meter Size	Current	FY 2019	FY 2020
5/8"	\$39.82	\$42.41	\$45.16
3/4"	\$39.82	\$42.41	\$45.16
1"	\$58.63	\$62.44	\$66.50
1.5"	\$105.24	\$112.08	\$119.37
2"	\$161.40	\$171.89	\$183.06
3"	\$292.52	\$311.53	\$331.78
4"	\$479.81	\$511.00	\$544.21
6"	\$947.59	\$1,009.18	\$1,074.78
8"	\$1,509.16	\$1,607.26	\$1,711.73

The District passes through the San Diego County Water Authority Infrastructure Access Charge (SDCWA IAC) to its customers as an additional charge based on meter size. The charges for calendar year 2020 have not been released by the SDCWA at this time. Table 4-2 shows the IAC assuming a 4% increase from CY 2019.

Table 4-2: Estimated FY 2019 and FY 2020 SDCWA IAC Pass-Through Charges

Meter Size	Current	CY 2019	CY 2020 Estimated Increase 4.0%
5/8"	\$6.02	\$6.02	\$6.26
3/4"	\$6.02	\$6.02	\$6.26
1"	\$9.63	\$9.63	\$10.02
1.5"	\$18.06	\$18.06	\$18.78
2"	\$31.30	\$31.30	\$32.55
3"	\$57.79	\$57.79	\$60.10
4"	\$98.73	\$98.73	\$102.68
6"	\$180.60	\$180.60	\$187.82
8"	\$313.04	\$313.04	\$325.56

4.2. Proposed Fire Line / Meter Service Charge

The fire line/meter service charges will also increase by the revenue adjustments in Table 3-6. The resulting rates are shown below.

Table 4-3: Proposed FY 2019 and FY 2020 Fire Line / Meter Service Charge

Meter Size	Current	FY 2019	FY 2020
5/8"	\$8.47	\$9.02	\$9.61
3/4"	\$8.47	\$9.02	\$9.61
1"	\$8.47	\$9.02	\$9.61
1.5"	\$9.55	\$10.17	\$10.83
2"	\$16.65	\$17.73	\$18.88
3"	\$42.12	\$44.86	\$47.77
4"	\$86.04	\$91.63	\$97.59
6"	\$243.69	\$259.53	\$276.40
8"	\$515.61	\$549.12	\$584.82

4.3. Commodity Rates

The proposed FY 2019 and FY 2020 commodity rates are shown in Table 4-4. As with the fixed charges, they are based on the FY 2018 rates, increased by the rate adjustments in Table 3-6.

Table 4-4: Proposed FY 2019 and FY 2020 Commodity Rates

Commodity Rates				
Class	Tiers	Current	FY 2019	FY 2020
Single Family Residence (SFR)				
	Tier 1	\$2.81	\$2.99	\$3.19
	Tier 2	\$4.46	\$4.75	\$5.06
	Tier 3	\$5.51	\$5.87	\$6.25
	Tier 4	\$6.28	\$6.69	\$7.12
SFR -w- Agriculture				
	Tier 1	\$2.81	\$2.99	\$3.19
	Tier 2	\$4.46	\$4.75	\$5.06
	Tier 3	\$5.51	\$5.87	\$6.25
	Tier 4	\$5.51	\$5.87	\$6.25
SFR -w- Commercial				
	Tier 1	\$2.81	\$2.99	\$3.19
	Tier 2	\$4.46	\$4.75	\$5.06
	Tier 3	\$5.51	\$5.87	\$6.25
	Tier 4	\$5.51	\$5.87	\$6.25
Multi-Family Residence (MFR) - per Dwelling Unit				
	Tier 1	\$2.81	\$2.99	\$3.19
	Tier 2	\$4.46	\$4.75	\$5.06
	Tier 3	\$5.51	\$5.87	\$6.25
	Tier 4	\$6.28	\$6.69	\$7.12
MFR -w- Agriculture				
	Tier 1	\$2.81	\$2.99	\$3.19
	Tier 2	\$4.46	\$4.75	\$5.06
	Tier 3	\$5.51	\$5.87	\$6.25
	Tier 4	\$5.51	\$5.87	\$6.25
MFR -w- Commercial				
	Tier 1	\$2.81	\$2.99	\$3.19
	Tier 2	\$4.46	\$4.75	\$5.06
	Tier 3	\$5.51	\$5.87	\$6.25
	Tier 4	\$5.51	\$5.87	\$6.25
Agriculture	Flat	\$4.78	\$5.09	\$5.42
Commercial	Flat	\$4.78	\$5.09	\$5.42
Public	Flat	\$5.23	\$5.57	\$5.93
Government	Flat	\$5.23	\$5.57	\$5.93
Landscaping	Flat	\$5.51	\$5.87	\$6.25
Construction	Flat	\$5.61	\$5.97	\$6.36

5. Drought Rates

5.1. Drought Rate Background

Consistent with its Water Supply Shortage Response Plan, the District can establish drought rates to:

1. Recover lost revenue due to decreased consumption during a drought
2. Encourage water conservation to meet the desired conservation goals for each drought stage.

The District is subject to penalties from the SDCWA should it exceed its water allocation. Also, during the most recent drought, the District was subject to penalties from the State Water Resources Control Board if it did not reach its mandated water use reduction of 28%. Drought Rates help maximize the probability that the District will escape penalties and meet its costs. Drought Rates help the District recoup lost revenues when District customers curtail their water consumption during periods of droughts.

Revenue Collection during a Drought

During a drought, the District's revenue requirement (costs) decreases along with revenue. However, the District's revenue decreases more than its costs do. The majority of the District's costs are fixed (salaries, benefits, debt service, etc.) and therefore Drought Rates are required to recover lost revenue to cover its fixed costs. The District's drought revenue requirement is lower than its non-drought revenue requirement because, as the District serves less water, it also purchases and treats less water, thereby saving the associated costs.

Customer Bills during a Drought

Provided that customers cutback their water use in line with the drought cutback goal, their total water bill should be lower than their bill during "normal" water/rainfall years. Conversely, those that do not cutback consumption will face higher charges.

5.2. Drought Rate Calculation

The first step in calculating drought rates is to estimate the cutback in water use from each customer class. Raftelis estimated the cutback in use by using District customer use data and assuming various cutbacks (%) for each tier. Table 5-1 shows the estimated cutbacks, in percent and volume, for each class and tier. For the Residential classes (SFR and MFR), Raftelis assumed that Tier 1 cutback would not occur until cutbacks greater than 30% are required. The resulting total cutback in HCF and percent for each drought level is shown in lines 44 and 45.

Table 5-1: Estimated Use Cutbacks in Percentages and HCF

Line No.	Customer Class	FY 2019 Estimated Water Use (HCF)	Up to 10%		Up to 20%		Up to 30%		Up to 40%		50% or Greater	
			Estimated Cutback (%)	Estimated Cutback (HCF)								
1	Single Family Residence											
2	Tier 1	584,836	0%	-	0%	-	0%	-	5%	29,242	20%	116,967
3	Tier 2	269,853	5%	13,493	10%	26,985	20%	53,971	35%	94,449	45%	121,434
4	Tier 3	344,249	20%	68,850	35%	120,487	50%	172,125	66%	227,205	85%	292,612
5	Tier 4	211,452	25%	52,863	52%	109,955	82%	173,391	99%	209,338	100%	211,452
6		1,410,391										
7	Single Family - Agriculture											
8	Tier 1	1,981	0%	-	0%	-	0%	-	5%	99	20%	396
9	Tier 2	1,287	5%	64	10%	129	20%	257	35%	450	45%	579
10	Tier 3	2,858	20%	572	35%	1,000	50%	1,429	66%	1,886	85%	2,429
11	Tier 4	13,763	25%	3,441	52%	7,157	82%	11,286	99%	13,626	100%	13,763
12		19,889										
13	Single Family - Commercial											
14	Tier 1	539	0%	-	0%	-	0%	-	5%	27	20%	108
15	Tier 2	191	5%	10	10%	19	20%	38	35%	67	45%	86
16	Tier 3	174	20%	35	35%	61	50%	87	66%	115	85%	148
17	Tier 4	6	25%	2	52%	3	82%	5	99%	6	100%	6
18		910										
19	Multi-family											
20	Tier 1	319,940	0%	-	0%	-	0%	-	5%	15,997	20%	63,988
21	Tier 2	81,523	5%	4,076	10%	8,152	20%	16,305	35%	28,533	45%	36,686
22	Tier 3	41,139	20%	8,228	35%	14,399	50%	20,569	66%	27,152	85%	34,968
23	Tier 4	61,625	25%	15,406	52%	32,045	82%	50,533	99%	61,009	100%	61,625
24		504,227										
25	Multi-family - Agriculture											
26	Tier 1	412	0%	-	0%	-	0%	-	5%	21	20%	82
27	Tier 2	205	5%	10	10%	20	20%	41	35%	72	45%	92
28	Tier 3	205	20%	41	35%	72	50%	102	66%	135	85%	174
29	Tier 4	8,477	25%	2,119	52%	4,408	82%	6,951	99%	8,392	100%	8,477
30		9,298										

Line No.	Customer Class	FY 2019 Estimated Water Use (HCF)	Up to 10%		Up to 20%		Up to 30%		Up to 40%		50% or Greater	
			Estimated Cutback (%)	Estimated Cutback (HCF)								
31	Multi-family - Commercial											
32	Tier 1	294	0%	-	0%	-	0%	-	5%	15	20%	59
33	Tier 2	108	5%	5	10%	11	20%	22	35%	38	45%	49
34	Tier 3	96	20%	19	35%	34	50%	48	66%	64	85%	82
35	Tier 4	731	25%	183	52%	380	82%	599	99%	724	100%	731
36		1,230										
37	Agriculture	89,223	15%	13,383	25%	22,306	48%	42,827	58%	51,749	59%	52,641
38	Commercial	238,104	5%	11,905	9%	21,429	10%	23,810	10%	23,810	12%	28,572
39	Public	58,356	15%	8,753	40%	23,342	45%	26,260	48%	28,011	50%	29,178
40	Government	11,170	15%	1,676	29%	3,239	30%	3,351	35%	3,910	40%	4,468
42	Landscaping	193,277	25%	48,319	60%	115,966	83%	160,420	99%	191,344	100%	193,277
43	Construction	12,716	0%	-	0%	-	0%	-	0%	-	0%	-
44	Total Cutback - HCF	2,548,790		253,453		511,600		764,427		1,017,483		1,275,130
45	Total Cutback - %			9.9%		20.1%		30.0%		39.9%		50.0%

Using the estimated cutbacks in water use from Table 5-1, we can calculate the estimated lost revenue as shown in Table 5-2,- line 45.

Table 5-2: Lost Revenue by Cutback Level

Line No.	Customer Class	Proposed 2019 Non-Drought Rate	Up to 10% Lost Revenue	Up to 20% Lost Revenue	Up to 30% Lost Revenue	Up to 40% Lost Revenue	50% or Greater Lost Revenue
1	SF Residential						
2	Tier 1	\$2.99	\$0	\$0	\$0	\$87,510	\$350,042
3	Tier 2	\$4.75	\$64,089	\$128,178	\$256,355	\$448,622	\$576,799
4	Tier 3	\$5.87	\$404,021	\$707,037	\$1,010,053	\$1,333,271	\$1,717,091
5	Tier 4	\$6.69	\$353,559	\$735,403	\$1,159,674	\$1,400,094	\$1,414,236
6							
7	Single Family - Agriculture						
8	Tier 1	\$2.99	\$0	\$0	\$0	\$296	\$1,186
9	Tier 2	\$4.75	\$306	\$611	\$1,223	\$2,140	\$2,751
10	Tier 3	\$5.87	\$3,354	\$5,870	\$8,386	\$11,069	\$14,256
11	Tier 4	\$5.87	\$20,192	\$41,998	\$66,228	\$79,958	\$80,766
12							
13	Single Family - Commercial						
14	Tier 1	\$2.99	\$0	\$0	\$0	\$81	\$323
15	Tier 2	\$4.75	\$45	\$91	\$181	\$317	\$408
16	Tier 3	\$5.87	\$204	\$357	\$510	\$673	\$866
17	Tier 4	\$5.87	\$9	\$18	\$29	\$35	\$35
18							
19	Multi-family						
20	Tier 1	\$2.99	\$0	\$0	\$0	\$47,873	\$191,494
21	Tier 2	\$4.75	\$19,361	\$38,723	\$77,446	\$135,530	\$174,253
22	Tier 3	\$5.87	\$48,282	\$84,493	\$120,704	\$159,329	\$205,197
23	Tier 4	\$6.69	\$103,040	\$214,324	\$337,972	\$408,039	\$412,161
24							
25	Multi-family - Agriculture						
26	Tier 1	\$2.99	\$0	\$0	\$0	\$62	\$246
27	Tier 2	\$4.75	\$49	\$97	\$195	\$340	\$438
28	Tier 3	\$5.87	\$240	\$421	\$601	\$793	\$1,022
29	Tier 4	\$5.87	\$12,436	\$25,867	\$40,790	\$49,246	\$49,744
30							
31	Multi-family - Commercial						
32	Tier 1	\$2.99	\$0	\$0	\$0	\$44	\$176
33	Tier 2	\$4.75	\$26	\$51	\$103	\$180	\$232
34	Tier 3	\$5.87	\$113	\$198	\$283	\$373	\$481
35	Tier 4	\$5.87	\$1,072	\$2,230	\$3,517	\$4,246	\$4,289
36							
37							
38	Agriculture	\$5.09	\$68,131	\$113,551	\$218,019	\$263,439	\$267,981
39	Commercial	\$5.09	\$60,606	\$109,090	\$121,211	\$121,211	\$145,454
40	Public	\$5.57	\$48,756	\$130,015	\$146,267	\$156,018	\$162,519
41	Government	\$5.57	\$9,333	\$18,043	\$18,666	\$21,776	\$24,887
42	Landscaping	\$5.87	\$283,544	\$680,507	\$941,367	\$1,122,836	\$1,134,178
43	Construction	\$5.97	\$0	\$0	\$0	\$0	\$0
44							
45	Total Lost Revenue		\$1,500,767	\$3,037,174	\$4,529,779	\$5,855,404	\$6,933,508
46	Non-Drought Commodity Revenue		\$11,900,875	\$11,900,875	\$11,900,875	\$11,900,875	\$11,900,875
47	Percent of Commodity Revenue Lost		13%	26%	38%	49%	58%

We must adjust the lost revenue for savings due to lower water purchases and water treatment expenses. Table 5-3 shows the estimated savings for each drought stage in line 5. The savings is calculated by multiplying the estimated total cutback for each drought level (shown in line 4) by the variable water purchase and treatment costs shown in line three. We then subtract the savings for each drought stage from the total lost revenue shown in line 45 of Table 5-2 – the resulting net lost revenue by drought stage is shown in line 6 of Table 5-3.

Table 5-3: Calculation of Drought Savings

Line No.	Variable Costs	FY 2019	Up to 10%	Up to 20%	Up to 30%	Up to 40%	50% or Greater
1	Imported Trtd & Raw Water	\$3,483,926					
2	435.2 TREATMENT COSTS	\$1,250,401					
3	Subtotal Variable Costs	\$4,734,327					
4	Cutback (%)		9.9%	20.1%	30.0%	39.9%	50.0%
5	Total Drought Savings		\$470,784	\$950,287	\$1,419,908	\$1,889,954	\$2,368,528
6	Net Revenue Lost After Savings (For One Year)		\$1,029,984	\$2,086,886	\$3,109,871	\$3,965,450	\$4,564,980
7	Drought Volumetric Revenue Requirement - All Classes		\$11,430,092	\$10,950,588	\$10,480,967	\$10,010,922	\$9,532,347

Lastly, we calculate the percentage increase that must be applied to all rates to recoup the lost revenue, shown in Table 5-4. The percentage increase needed for each drought level is calculated by dividing the net lost revenue (line 1) by the expected drought revenue (line 2). The result is shown in line 4 of Table 5-4. We apply this percentage increase to the proposed non-drought rates to yield the drought rates. Table 5-4 also shows the dollar increase for each drought stage, assuming the proposed FY 2019 rates.

Table 5-4: FY 2019 Drought Rate Calculation

Line No	FY 2019	Up to 10%		Up to 20%		Up to 30%		Up to 40%		50% or Greater	
1	Estimated Lost Revenue (after savings)	\$1,029,984		\$2,086,886		\$3,109,871		\$3,965,450		\$4,564,980	
2	Expected Vol ¹ Drought Revenue	\$10,400,108		\$8,863,702		\$7,371,097		\$6,045,472		\$4,967,367	
3	Drought Vol Revenue Requirement	\$11,430,092		\$10,950,588		\$10,480,967		\$10,010,922		\$9,532,347	
4	% Increase	9.9%		23.5%		42.2%		65.6%		91.9%	

	Drought Rate	Drought Rate	\$ Increase									
5	Customer Class											
6	Tier 1	\$2.99	\$3.29	\$0.30	\$3.70	\$0.70	\$4.26	\$1.26	\$4.96	\$1.96	\$5.74	\$2.75
7	Tier 2	\$4.75	\$5.22	\$0.47	\$5.87	\$1.12	\$6.75	\$2.00	\$7.87	\$3.12	\$9.12	\$4.37
8	Tier 3	\$5.87	\$6.45	\$0.58	\$7.25	\$1.38	\$8.34	\$2.48	\$9.72	\$3.85	\$11.26	\$5.39
9	Tier 4	\$6.69	\$7.35	\$0.66	\$8.26	\$1.57	\$9.51	\$2.82	\$11.08	\$4.39	\$12.83	\$6.15
10	Single Family - Agriculture											
11	Tier 1	\$2.99	\$3.29	\$0.30	\$3.70	\$0.70	\$4.26	\$1.26	\$4.96	\$1.96	\$5.74	\$2.75
12	Tier 2	\$4.75	\$5.22	\$0.47	\$5.87	\$1.12	\$6.75	\$2.00	\$7.87	\$3.12	\$9.12	\$4.37
13	Tier 3	\$5.87	\$6.45	\$0.58	\$7.25	\$1.38	\$8.34	\$2.48	\$9.72	\$3.85	\$11.26	\$5.39
14	Tier 4	\$5.87	\$6.45	\$0.58	\$7.25	\$1.38	\$8.34	\$2.48	\$9.72	\$3.85	\$11.26	\$5.39
15	Single Family - Commercial											
16	Tier 1	\$2.99	\$3.29	\$0.30	\$3.70	\$0.70	\$4.26	\$1.26	\$4.96	\$1.96	\$5.74	\$2.75
17	Tier 2	\$4.75	\$5.22	\$0.47	\$5.87	\$1.12	\$6.75	\$2.00	\$7.87	\$3.12	\$9.12	\$4.37
18	Tier 3	\$5.87	\$6.45	\$0.58	\$7.25	\$1.38	\$8.34	\$2.48	\$9.72	\$3.85	\$11.26	\$5.39
19	Tier 4	\$5.87	\$6.45	\$0.58	\$7.25	\$1.38	\$8.34	\$2.48	\$9.72	\$3.85	\$11.26	\$5.39

Line No	FY 2019 Drought Rate	Up to 10% Drought		Up to 20% Drought		Up to 30% Drought		Up to 40% Drought		50% or Greater Drought		
		Rate	\$ Increase	Rate	\$ Increase							
20	Multi-family											
21	Tier 1	\$2.99	\$3.29	\$0.30	\$3.70	\$0.70	\$4.26	\$1.26	\$4.96	\$1.96	\$5.74	\$2.75
22	Tier 2	\$4.75	\$5.22	\$0.47	\$5.87	\$1.12	\$6.75	\$2.00	\$7.87	\$3.12	\$9.12	\$4.37
23	Tier 3	\$5.87	\$6.45	\$0.58	\$7.25	\$1.38	\$8.34	\$2.48	\$9.72	\$3.85	\$11.26	\$5.39
24	Tier 4	\$6.69	\$7.35	\$0.66	\$8.26	\$1.57	\$9.51	\$2.82	\$11.08	\$4.39	\$12.83	\$6.15
25	Multi-family - Agriculture											
26	Tier 1	\$2.99	\$3.29	\$0.30	\$3.70	\$0.70	\$4.26	\$1.26	\$4.96	\$1.96	\$5.74	\$2.75
27	Tier 2	\$4.75	\$5.22	\$0.47	\$5.87	\$1.12	\$6.75	\$2.00	\$7.87	\$3.12	\$9.12	\$4.37
28	Tier 3	\$5.87	\$6.45	\$0.58	\$7.25	\$1.38	\$8.34	\$2.48	\$9.72	\$3.85	\$11.26	\$5.39
29	Tier 4	\$5.87	\$6.45	\$0.58	\$7.25	\$1.38	\$8.34	\$2.48	\$9.72	\$3.85	\$11.26	\$5.39
30	Multi-family - Commercial											
31	Tier 1	\$2.99	\$3.29	\$0.30	\$3.70	\$0.70	\$4.26	\$1.26	\$4.96	\$1.96	\$5.74	\$2.75
32	Tier 2	\$4.75	\$5.22	\$0.47	\$5.87	\$1.12	\$6.75	\$2.00	\$7.87	\$3.12	\$9.12	\$4.37
33	Tier 3	\$5.87	\$6.45	\$0.58	\$7.25	\$1.38	\$8.34	\$2.48	\$9.72	\$3.85	\$11.26	\$5.39
34	Tier 4	\$5.87	\$6.45	\$0.58	\$7.25	\$1.38	\$8.34	\$2.48	\$9.72	\$3.85	\$11.26	\$5.39
35	Agriculture	\$5.09	\$5.59	\$0.50	\$6.29	\$1.20	\$7.24	\$2.15	\$8.43	\$3.34	\$9.77	\$4.68
36	Commercial	\$5.09	\$5.59	\$0.50	\$6.29	\$1.20	\$7.24	\$2.15	\$8.43	\$3.34	\$9.77	\$4.68
38	Public	\$5.57	\$6.12	\$0.55	\$6.88	\$1.31	\$7.92	\$2.35	\$9.22	\$3.65	\$10.69	\$5.12
39	Government	\$5.57	\$6.12	\$0.55	\$6.88	\$1.31	\$7.92	\$2.35	\$9.22	\$3.65	\$10.69	\$5.12
41	Landscaping	\$5.87	\$6.45	\$0.58	\$7.25	\$1.38	\$8.34	\$2.48	\$9.72	\$3.85	\$11.26	\$5.39
42	Construction	\$5.97	\$6.57	\$0.59	\$7.38	\$1.41	\$8.50	\$2.52	\$9.89	\$3.92	\$11.47	\$5.49

¹Vol = Volumetric

5.2.1.DROUGHT RATE ADOPTION

The Board would adopt the drought rates separately from any other type of rate increase. For the duration of the rate proposal period (2 years), the Board would have the ability to adopt drought rates by increasing the then current commodity rate without having to re-issue the Proposition 218 notice.

Appendix A – Financial Plan Detail

Line No.	Operating Cash Flow	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	Revenue - Potable (Bi-Monthly)											
2	Revenue from SDWD Rates	\$15,544,184	\$14,938,814	\$15,111,610	\$15,290,169	\$15,468,761	\$15,651,352	\$15,836,622	\$16,024,613	\$16,215,365	\$16,408,919	\$16,605,317
3	Total Additional Revenue from Revenue Adjustments	\$0	\$161,837	\$1,156,605	\$2,572,598	\$3,593,942	\$4,205,587	\$4,506,770	\$4,972,732	\$5,294,238	\$5,357,432	\$5,421,555
4	Total Rate Revenue	\$15,544,184	\$15,100,651	\$16,268,215	\$17,862,767	\$19,062,703	\$19,856,939	\$20,343,392	\$20,997,345	\$21,509,603	\$21,766,351	\$22,026,872
5												
6	Other Revenue											
7	Infrastructure Access Charge (Pass-through)	\$532,536	\$560,634	\$563,437	\$566,254	\$569,086	\$571,931	\$574,791	\$577,665	\$580,553	\$583,456	\$586,373
8	Misc Operating Revenue	\$596,923	\$599,023	\$607,743	\$616,716	\$625,951	\$635,455	\$645,236	\$655,303	\$665,663	\$676,326	\$687,301
9	Non-Operating - Land Sale	\$0	\$614,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	Property Taxes	\$1,050,000	\$1,000,000	\$1,005,000	\$1,010,025	\$1,015,075	\$1,020,151	\$1,025,251	\$1,030,378	\$1,035,529	\$1,040,707	\$1,045,911
11	Total Revenue	\$17,723,643	\$17,874,308	\$18,444,395	\$20,055,762	\$21,272,815	\$22,084,475	\$22,588,670	\$23,260,690	\$23,791,348	\$24,066,840	\$24,346,457
12												
13	O&M Expenses											
14	Administration (Org 92690)	\$2,096,867	\$2,493,280	\$2,529,932	\$2,567,487	\$2,605,971	\$2,645,408	\$2,685,825	\$2,727,250	\$2,769,709	\$2,813,232	\$2,857,848
15	Customer Service (Org 92691)	\$843,008	\$837,752	\$857,355	\$877,447	\$898,055	\$919,180	\$940,833	\$963,030	\$985,785	\$1,009,111	\$1,033,025
16	Water Purchases and Treatment (Org 92692)	\$6,627,959	\$8,061,521	\$9,239,977	\$9,674,304	\$10,129,109	\$10,696,746	\$11,350,065	\$12,017,252	\$12,698,222	\$13,420,852	\$14,187,788
17	Field Operations (Org 92694)	\$2,063,216	\$2,111,671	\$2,153,079	\$2,195,417	\$2,240,873	\$2,287,358	\$2,334,898	\$2,383,519	\$2,433,246	\$2,484,106	\$2,536,127
18	Planning and Engineering (Org 92695)	\$479,755	\$414,318	\$422,100	\$430,041	\$438,143	\$446,411	\$454,847	\$463,456	\$472,241	\$481,206	\$490,355
19	Total O&M Expenses	\$12,110,805	\$13,918,542	\$15,202,443	\$15,744,696	\$16,312,151	\$16,995,102	\$17,766,470	\$18,554,507	\$19,359,202	\$20,208,507	\$21,105,143
20												
21	Debt Service											
22	Existing Debt	\$1,398,844	\$1,401,694	\$1,395,119	\$1,401,766	\$1,402,497	\$1,405,744	\$1,406,016	\$633,950	\$0	\$0	\$0
23	Proposed Debt - Market	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
24	Proposed Debt - SRF	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	Total Debt Service Expenses	\$1,398,844	\$1,401,694	\$1,395,119	\$1,401,766	\$1,402,497	\$1,405,744	\$1,406,016	\$633,950	\$0	\$0	\$0
26												
27	Total Expenses	\$13,509,649	\$15,320,236	\$16,597,561	\$17,146,462	\$17,714,648	\$18,400,846	\$19,172,485	\$19,188,457	\$19,359,202	\$20,208,507	\$21,105,143
28												
29	Net Cash Flow	\$4,213,994	\$2,554,072	\$1,846,834	\$2,909,301	\$3,558,167	\$3,683,629	\$3,416,185	\$4,072,233	\$4,432,146	\$3,858,334	\$3,241,314
30	Debt Coverage	401%	282%	232%	308%	354%	362%	343%	742%	#N/A	#N/A	#N/A

		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
31 Operating Reserve	<i>Inc Yes</i>											
32 Beginning Balance		\$2,605,508	\$3,680,376	\$3,576,776	\$3,892,853	\$4,043,557	\$4,194,835	\$4,370,048	\$4,563,896	\$4,771,374	\$4,980,234	\$5,191,034
33 Net Cash Flow		\$4,213,994	\$2,554,072	\$1,846,834	\$2,909,301	\$3,558,167	\$3,683,629	\$3,416,185	\$4,072,233	\$4,432,146	\$3,858,334	\$3,241,314
34 Intermediate Balance		\$6,819,502	\$6,234,448	\$5,423,610	\$6,802,154	\$7,601,724	\$7,878,465	\$7,786,233	\$8,636,129	\$9,203,521	\$8,838,567	\$8,432,347
35 Transfers In - Rate Stabilization Res		\$0	\$95,489	\$19,852	\$18,750	\$19,269	\$19,210	\$19,356	\$19,505	\$19,656	\$19,810	\$19,965
37 Transfer Out - Rate Stabilization Res		(\$1,160,728)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
38 Intermediate Balance		\$5,554,049	\$6,219,937	\$5,323,462	\$6,700,903	\$7,500,993	\$7,777,675	\$7,685,588	\$8,535,634	\$9,103,177	\$8,738,377	\$8,332,312
39 Transfers Out - Capital Repl. Res		(\$2,526,347)	(\$2,740,302)	(\$1,522,852)	(\$2,764,729)	(\$3,422,955)	(\$3,528,900)	(\$3,243,971)	(\$3,897,007)	(\$4,263,376)	(\$3,686,250)	(\$3,056,027)
40 Ending Balance		\$3,027,701	\$3,479,636	\$3,800,611	\$3,936,174	\$4,078,038	\$4,248,776	\$4,441,617	\$4,638,627	\$4,839,801	\$5,052,127	\$5,276,286
41 Interest Income		\$98,472	\$97,141	\$92,242	\$107,383	\$116,798	\$121,272	\$122,279	\$132,748	\$140,433	\$138,907	\$137,086
42 Fund Requirements												
43 Policy Maximum												
44 Days of current year operating budget.	Days	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
45 Policy - Target												
46 Days of current year operating budget.	90 Days	\$3,027,701	\$3,479,636	\$3,800,611	\$3,936,174	\$4,078,038	\$4,248,776	\$4,441,617	\$4,638,627	\$4,839,801	\$5,052,127	\$5,276,286
47												
48 Required Transfers Out		\$2,526,347	\$2,740,302	\$1,522,852	\$2,764,729	\$3,422,955	\$3,528,900	\$3,243,971	\$3,897,007	\$4,263,376	\$3,686,250	\$3,056,027
49												
50 Capital Replacement Reserve												
51 Beginning Balance		\$5,866,071	\$4,690,320	\$4,597,581	\$3,369,818	\$3,397,553	\$3,560,912	\$3,936,054	\$3,778,936	\$4,566,610	\$5,767,861	\$6,236,436
52 Federal Capital Grants		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
53 Capital Contributions (Capacity Fees)		\$180,000	\$100,000	\$100,500	\$101,003	\$101,508	\$102,015	\$102,525	\$103,038	\$103,553	\$104,071	\$104,591
54 Transfers In - Capital		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
55 Other Revenues		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
56 Market Debt Proceeds - Proposed		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
57 SRF Proceeds - Proposed		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
58 CIP		\$0	(\$3,025,000)	(\$2,930,000)	(\$2,905,000)	(\$3,430,000)	(\$3,330,000)	(\$3,580,000)	(\$3,295,000)	(\$3,268,000)	(\$3,440,600)	(\$3,442,720)
59 Intermediate Balance		\$6,046,071	\$1,765,320	\$1,768,081	\$565,820	\$69,061	\$332,927	\$458,579	\$586,974	\$1,402,163	\$2,431,331	\$2,898,307
60 Transfers In - From Operating Reserve		\$2,526,347	\$2,740,302	\$1,522,852	\$2,764,729	\$3,422,955	\$3,528,900	\$3,243,971	\$3,897,007	\$4,263,376	\$3,686,250	\$3,056,027
61 Ending Balance		\$8,572,418	\$4,505,622	\$3,290,933	\$3,330,550	\$3,492,016	\$3,861,826	\$3,702,550	\$4,483,981	\$5,665,539	\$6,117,582	\$5,954,334
62 Interest Income		\$144,385	\$91,959	\$78,885	\$67,004	\$68,896	\$74,227	\$76,386	\$82,629	\$102,321	\$118,854	\$121,908
63												
64 Fund Requirements												
65 Policy Maximum												
66 % of 5-year average CIP costs	200%	\$4,916,000	\$6,248,000	\$6,470,000	\$6,616,000	\$6,761,200	\$6,765,440	\$6,810,528	\$6,723,160	\$6,767,547	\$6,883,320	\$6,885,440
67 Policy Minimum												
68 % of 5-year average CIP costs	100%	\$2,458,000	\$3,124,000	\$3,235,000	\$3,308,000	\$3,380,600	\$3,382,720	\$3,405,264	\$3,361,580	\$3,383,773	\$3,441,660	\$3,442,720
69												
70 Required Transfers In		\$0	\$1,358,680	\$1,466,919	\$2,742,180	\$3,311,539	\$3,049,793	\$2,946,685	\$2,774,606	\$1,981,611	\$1,010,329	\$544,413
71 Required Transfers Out		\$3,656,418	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
72 Difference		\$2,458,000	\$3,124,000	\$3,235,000	\$3,308,000	\$3,380,600	\$3,382,720	\$3,405,264	\$3,361,580	\$3,383,773	\$3,441,660	\$3,442,720
73												

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
74 Fleet Replacement Fund Balance	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
75 Beginning Balance											
76 Transfers In from Operations	\$104,726	\$110,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000
77 Purchases	-\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
78 Ending Balance	\$44,726	\$110,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000
79 Interest Income	\$447	\$1,100	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
80 Source: "SDWD FY 17-18 Revenue and Expenditures (Revised Budget).xlsx" per 6.25.18 M. Kazungu email; "SDWD FY 18-19 Revenue and Expenditures (Approved Budget) per 6.27.18 Email.xlsx" from M. Kazungu											
81 Fund Requirements											
82 Policy Maximum	#N/A										
83 Policy Minimum	#N/A										
84											
85 Rate Stabilization	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
86 Beginning Balance	\$1,170,900	\$2,336,311	\$2,286,593	\$2,312,275	\$2,339,583	\$2,366,913	\$2,394,849	\$2,423,197	\$2,451,961	\$2,481,147	\$2,510,763
87 Transfers In	\$1,160,728	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
89 Transfers Out	\$0	(\$95,489)	(\$19,852)	(\$18,750)	(\$19,269)	(\$19,210)	(\$19,356)	(\$19,505)	(\$19,656)	(\$19,810)	(\$19,965)
90 Ending Balance	\$2,331,628	\$2,240,822	\$2,266,742	\$2,293,525	\$2,320,314	\$2,347,703	\$2,375,493	\$2,403,692	\$2,432,305	\$2,461,338	\$2,490,798
91 Interest Income	\$35,025	\$45,771	\$45,533	\$46,058	\$46,599	\$47,146	\$47,703	\$48,269	\$48,843	\$49,425	\$50,016
92											
93 Fund Requirements											
94 Policy Maximum	\$2,331,628	\$2,240,822	\$2,266,742	\$2,293,525	\$2,320,314	\$2,347,703	\$2,375,493	\$2,403,692	\$2,432,305	\$2,461,338	\$2,490,798
95 % of annual potable water rate and service charge revenue	15%										
96 Policy Minimum	\$2,331,628	\$2,240,822	\$2,266,742	\$2,293,525	\$2,320,314	\$2,347,703	\$2,375,493	\$2,403,692	\$2,432,305	\$2,461,338	\$2,490,798
97 % of annual potable water rate and service charge revenue	15%										
98 Required Transfers In	\$1,160,728	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
99 Required Transfers Out	\$0	\$95,489	\$19,852	\$18,750	\$19,269	\$19,210	\$19,356	\$19,505	\$19,656	\$19,810	\$19,965
100											
101 Total Reserves	\$13,931,747	\$10,226,079	\$9,358,285	\$9,560,249	\$9,890,368	\$10,458,305	\$10,519,661	\$11,526,299	\$12,937,644	\$13,631,046	\$13,721,417
102 Total Min Reserve Target	\$7,817,329	\$8,844,458	\$9,302,352	\$9,537,699	\$9,778,952	\$9,979,198	\$10,222,375	\$10,403,899	\$10,655,879	\$10,955,125	\$11,209,803
103											
104 Total Max Reserve Target (Don't Have max for Oper Reserve)	\$7,247,628	\$11,968,458	\$12,537,352	\$12,845,699	\$13,159,552	\$13,361,918	\$13,627,639	\$13,765,479	\$14,039,652	\$14,396,785	\$14,652,523
105 Total Min Reserve Target	\$7,817,329	\$8,844,458	\$9,302,352	\$9,537,699	\$9,778,952	\$9,979,198	\$10,222,375	\$10,403,899	\$10,655,879	\$10,955,125	\$11,209,803