



Rainbow Municipal Water District

Potable Water Cost of Service Study

Executive Summary / October 30, 2015



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1 EXECUTIVE SUMMARY

1.1 BACKGROUND

In early 2015, the Rainbow Municipal Water District (the District) contracted with Raftelis Financial Consultants (RFC) to conduct a Water Rate Study (Study) to include a ten-year Financial Plan. This report presents the Financial Plan and the resulting rates for implementation on January 1, 2016.

This Executive Summary summarizes the water rates and contains a description of the rate study process, methodology, results, and recommendations for the District's water rates. The District's last rate adjustment was effective on January 1, 2014. The District wishes to establish fair and equitable rates that:

- » Meet the District's fiscal needs in terms of operational expenses, reserve goals, and capital expenditures to maintain the system;
- » Proportionately allocate the costs of providing service in accordance with California Constitution article XIII D, section 6 (commonly referred to as Proposition 218).

1.2 PROCESS

RFC first developed a Financial Plan for the District which projects revenues and expenses, incorporates capital expenditures, as well as proposed debt and reserve targets, and recommends total revenue adjustments during the five-year study period. RFC presented the Financial Plan forecasts to the Board of Directors (Board) and received their input and direction. Based on the Financial Plan forecast and direction from the Board, RFC proposes a 6% revenue increase in fiscal year ending (FYE) 2016 and FYE 2017 and 2% revenue increases in FYE 2018 through FYE 2020 in order to meet the operating and capital expenses and achieve minimum reserve targets by the end of FY 2020.

The proposed rate structure consists of four components: 1) A fixed monthly Operations and Maintenance (O&M) charge; 2) A fixed Pass-Through charge from San Diego County Water Authority (SDCWA); 3) Commodity or volumetric rates; and 4) A pumping charge comprised of a fixed and variable component. The proposed commodity rate structures consist of a 3-tier rate structure for single-family residential (SFR), Transitional Special Agriculture Water Rate (TSAWR) domestic, and agriculture customers with a domestic residence on the property and a uniform commodity rate structure for all other classes.

1.3 METHODOLOGY

The water rates were developed using cost of service principles set forth by the American Water Works Association M1 Manual titled *Principles of Water Rates, Fees and Charges* (AWWA M1 Manual). Cost of service principles endeavor to distribute costs to customer classes in accordance with the way each class uses the water system. This methodology is described in detail in Sections 4 and 5. For this Study, the Base-Extra Capacity Method of the AWWA M1 Manual was used for distributing costs. Costs were separated into three components: "(1) base costs, (2) extra capacity costs, and (3) customer costs. Base costs are costs that are 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 associated with meeting peak demand. Customer costs are costs associated with serving customers, such as meter reading, billing, customer service, etc.

The rates are designed to meet the requirements of Proposition 218; all rates are charged to customers based on the cost of providing service. Tiered rates include supply under average conditions and peaking costs associated with each tier.

1.4 RESULTS AND RECOMMENDATIONS

Table 1-1 shows the recommended Financial Plan. Although Table 1-1 shows anticipated revenue adjustments for each year of the study period, the District will review and confirm the needed revenue adjustments on a yearly basis. Revenue adjustments represent the average increase in rates for the District as a whole; rate changes for individual classes and tiers will depend on the cost of service. These increases do not include increases in water costs after calendar year (CY) 2016.

Table 1-1: Financial Plan

	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020
Revenue Adjustments	6.00%	6.00%	2.00%	2.00%	2.00%
Pass-through of SDCWA costs	Yes ¹	Yes	Yes	Yes	Yes
Water Demand Factor (Change from Prior Year)	94.00%	100.00%	100.00%	100.00%	100.00%
Proposed Debt (Proceeds)	\$0	\$0	\$0	\$0	\$0
Capital Investment Plan	\$2,478,680	\$4,000,000	\$4,120,000	\$2,546,160	\$2,622,545

Table 1-2 shows the recommended reserves and the target for each reserve.

Table 1-2: Recommended Reserves

Reserve	Target	FYE 2016 Target Balance	FYE 2017 Target Balance	FYE 2018 Target Balance	FYE 2019 Target Balance	FYE 2020 Target Balance
Operating Reserve	60 days of O&M	\$2,819,814	\$2,938,745	\$3,002,141	\$3,067,629	\$3,135,281
Water Capital Projects Reserve	1 yr avg CIP	\$3,322,176	\$3,322,176	\$3,322,176	\$3,322,176	\$3,322,176
Liability Self Insurance Reserve	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
New Water Sources Reserve	No min target					
Rate Stabilization Reserve	10% of Water Sales	\$3,389,636	\$3,641,142	\$3,912,326	\$4,127,250	\$4,356,219

Factors Affecting Revenue Adjustments

The following items affect the District's revenue requirement (i.e. costs) and thus its water rates. The District's expenses include Operation and Maintenance (O&M) expenses, capital expenses, and Pass-Through costs from the SDCWA.

¹ Rates for FYE 2016 include the cost of purchased water from SDCWA.

- » **O&M expenses:** Overall, the District's O&M expenses are expected to increase by approximately 3-5% from FY 2015 to FY 2016. Additionally, the District did not pass-through SDCWA rate increases in January 2015 and needs to adjust rates in order to recover the cost of purchased water. RFC recommends that future purchased water cost increases are passed through.
- » **Water System Capital Investment:** The District is projecting approximately \$6.5 million in capital expenditures for FYE 2016 and FYE 2017. These investments will be funded partially by reserves and partially by anticipated capacity fee revenue. The average reserve (rate) funded capital expenditures of these two fiscal years is approximately \$2.5 million per year and the average capacity fee funded capital expenditures of these two fiscal years is approximately \$0.67M per year.
- » **Reserve Funding:** The District plans to use reserves during the study period to offset rate increases. By FY 2018, the Water Capital Projects Reserve will be completely depleted due to significant capital expenditures. However, with the proposed revenue adjustments and the anticipated capacity fee revenue, all reserves will reach minimum target levels by the end of FY 2020. Section 3 shows the reserve balances for the selected Financial Plan for each year of the Study Period.
- » **Reduced Water Sales:** The State is requiring a cutback of 36% in domestic water use. State and local public outreach efforts to conserve water are affecting water use and revenues of the District. The District has seen a 10% decrease in water use from FYE 2014 to FYE 2015 and has projected another 6% decrease for FYE 2016². Going forward, it is expected that sales will continue to be less than the norm before the drought. The reduced sales have resulted in lower revenues and depletion of reserves.

Proposed Water Rates

The District's water service fees are comprised of four components: (1) a RMWD O&M Fixed Charge, (2) a SDCWA Fixed Charge, (3) a Commodity Rate, and (4) a Pumping Charge. The O&M Charge is a fixed charge based on the size of meter serving a property, and is calculated to recover a portion of the District's fixed costs, such as the costs of billing and collections, customer service, meter reading, meter maintenance, and a portion of capacity related costs. The SDCWA Fixed Charge is based on the charges imposed by SDCWA and for which the District has no control. The commodity rates recover the costs associated with meeting base and extra capacity requirements. The pumping charges recover the costs associated with pumping water to higher elevations.

Table 1-3 shows the current and proposed monthly O&M charge by meter size. At the direction of the Board, RFC developed a separate fixed charge for agriculture customers.

² Based on District Staff, the District may see much larger reductions than originally anticipated. According to staff, the District has already seen a 25% reduction in usage.

Table 1-3: Current and Proposed Monthly O&M Charges (\$/Meter)

Meter Size	Current RMWD O&M Charge	FY 2016 Proposed O&M Charge ³	FY 2016 Proposed Ag O&M Charge ⁴
5/8"	\$28.35	\$23.83	\$43.27
3/4"	\$35.45	\$23.83	\$43.27
1"	\$46.10	\$37.21	\$69.62
1-1/2"	\$70.90	\$70.67	\$135.48
2"	\$124.05	\$110.82	\$214.52
3"	\$212.70	\$237.95	\$464.81
4"	\$354.50	\$425.30	\$833.65
6"	\$602.60	\$873.62	\$1,716.25

Table 1-4 shows the current and proposed SDCWA Pass-Through monthly fixed charge by meter size. The District did not pass through the SDCWA January 2015 rate increases and therefore has been utilizing reserves to cover the additional costs.

Table 1-4: Current and Proposed Monthly SDCWA Pass-Through Charges (\$/Meter)

Meter Size	Current SDCWA Domestic Fixed Charge	Current SDCWA TSAWR Domestic Fixed Charge	Current SDCWA Commercial Fixed Charge	Proposed SDCWA Pass-Through Charge ⁵	Proposed TSAWR SDCWA Pass-Through Charge ⁶
5/8"	\$30.48	\$30.48	\$16.17	\$35.02	\$17.05
3/4"	\$30.48	\$30.48	\$16.17	\$35.02	\$17.05
1"	\$48.77	\$48.77	\$25.87	\$58.37	\$28.42
1-1/2"	\$91.44	\$91.44	\$48.50	\$116.75	\$56.84
2"	\$158.49	\$91.44	\$84.07	\$186.79	\$90.94
3"	\$274.31	\$91.44	\$145.50	\$408.61	\$198.93
4"	\$487.66	\$91.44	\$258.66	\$735.50	\$358.08
6"	\$1,097.24	\$91.44	\$581.99	\$1,517.71	\$738.90

The proposed rates have been adjusted to recover the full costs from SDCWA. In addition, RFC recommends both TSAWR customer classes (domestic and commercial) be charged the same fixed Pass-Through charge based on their proportional share of the following SDCWA charges: Readiness-to-Serve Charge, Infrastructure Access Charge, Customer Service Charge, and the Capacity Reservation Charge. TSAWR customers receive water at a discounted rate because they have agreed

³ Proposed RMWD O&M monthly fixed charge for all customer classes except Agriculture, TSAWR Domestic, and TSAWR Commercial (i.e. SFR, MFR, Commercial, and Institutional)

⁴ Proposed RMWD O&M monthly fixed charge for Agriculture, TSAWR Domestic, and TSAWR Commercial customer classes.

⁵ Proposed SDCWA monthly Pass-Through charge for all customer classes except TSAWR (i.e. SFR, MFR, Commercial, Agriculture, and Institutional).

⁶ Proposed SDCWA monthly Pass-Through charge for TSAWR Domestic and TSAWR Commercial customer classes.

to reduce usage during water shortages. Since they are required to reduce usage, they do not receive the benefit of emergency storage or the guarantee of supply reliability and therefore do pay the Emergency Storage Charge or the Supply Reliability Charge.

Table 1-5 shows the current commodity rates by user class.

Table 1-5: Current Monthly Commodity Rates (\$/HCF)

Customer Class	Tier Width	Current Commodity Rate (\$/HCF ⁷)
Domestic (A, D, MF)		
Tier 1	1-6 HCF	\$3.00
Tier 2	7 & above	\$3.15
Commercial		\$3.15
Construction		\$3.15
TSAWR/Domestic		
Tier 1	1-6 HCF	\$3.00
Tier 2	7 - 26 HCF	\$3.15
Tier 3	27 & above	\$2.83
TSAWR/Commercial		\$2.83

RFC recommends splitting the current Domestic class into various classes as shown in Table 1-6. The tiers are designed to provide essential indoor use in the first tier, average single family outdoor use in the second tier and usage above that falls into the top tier. A separate rate for each class based on the peaking (i.e., extra capacity) needs of each class was developed. For these customers, the commodity rate is a distinct uniform rate per hundred cubic feet (HCF) of water usage. Cost of service principles justify higher rates for classes with higher peaking ratios as shown in Table 1-6. The rates are fully derived in Sections 5 and 6 of this Study.

Table 1-7 shows the current and proposed Pumping Charges. The Pumping Charges consist of a fixed component designed to recover the general maintenance and salaries costs related to the pumping facilities and a commodity component designed to recover the electricity costs associated with pumping water to the higher elevations.

Together, the four components of the District’s proposed water service fees are structured to recover the proportionate costs of providing water service to each customer class and to deter waste, encourage water use efficiency, and manage the District’s water resources.

⁷ HCF = Hundred Cubic Feet

Table 1-6: Proposed Monthly Commodity Rates (\$/HCF)

Customer Class	Tier Width	Proposed FY 2016 Commodity Rate (\$/HCF)
Single Family Residential		
Tier 1	1-10 HCF	\$3.31
Tier 2	11 - 26 HCF	\$3.48
Tier 3	27 & above	\$3.82
Agriculture (with residence)		
Tier 1	1-10 HCF	\$3.31
Tier 2	11 - 26 HCF	\$3.48
Tier 3	27 & above	\$3.24
TSAWR Domestic		
Tier 1	1-10 HCF	\$3.31
Tier 2	11 - 26 HCF	\$3.48
Tier 3	27 & above	\$2.77
Agriculture (w/o residence)		\$3.24
TSAWR Commercial		\$2.77
MFR		\$3.40
Commercial		\$3.51
Institutional		\$3.59
Construction		\$4.31

Table 1-7: Current and Proposed Monthly Pumping Charges

		Current Pumping Charge	Proposed Pumping Charge
Fixed Pumping Charge (\$/Month)		\$8.77	\$9.51
Commodity Rates (\$/HCF)			
Zone 1	Rainbow Heights	\$0.43	\$0.77
Zone 2	Improvement District U-1	\$0.27	\$0.48
Zone 3	Vallecitos	\$0.15	\$0.27
Zone 4	Northside	\$0.05	\$0.09
Zone 5	Morro Tank	\$0.08	\$0.14
Zone 6	Huntley	\$0.31	\$0.55
Zone 7	Magee Tank	\$1.42	\$2.53