

# **An Addendum to the 2019**

## *Cost of Service and Rate Study*

SANTA MARGARITA WATER DISTRICT

SEPTEMBER 2021

### **Financial Forecast and Rate Update**

**Fiscal Years 2022 –2024**

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# 1 ADDENDUM EXECUTIVE SUMMARY

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The Santa Margarita Water District (District) developed this Addendum to its Cost of Service and Rate Study (Study), dated November 2019, updating the financial forecast, and resulting customer rates contained in the Study. The District's Study was developed based on cost allocation principles and requirements in accordance with California constitution article XIII D, section 6, commonly referred to as Proposition 218.

The Study covered a period of five Fiscal Years (FY), 2020 through 2024. The District previously enacted the customer rates contained in the Study for FY 2020 and FY 2021. The Addendum is intended to be used to establish customer rates for FY 2022, FY 2023, and FY 2024. All rate changes indicated in this Addendum are assumed to take place on January 1 of the Fiscal Year indicated.

As compared to the 2019 Study, the Addendum documents the following key changes in the District's financial status and outlook, and related changes in customer rate requirements:

- **Lower Operating Expenses.** Total operating expenditures are approximately \$2.4 million lower in FY 2022 than in the 2019 Study, reflecting primarily lower water cost assumptions and lower salaries and benefit costs.
- **Less Debt and Related Debt Repayment Costs.** The Addendum indicates lower debt service costs of \$2 million to \$3 million per year over the three-year period covered. This reflects issuing less total debt than contemplated by the 2019 Study, as well as utilizing debt on a more deferred basis.
- **District's underlying cost drivers remain the same.** The District expects its total outlays, including both operating expenses and debt service, to increase by an average of 5.0% per year over the next three years. The updated forecast includes higher general operating cost escalation for FY 2023 and FY 2024 than expected by the prior Study, based on recent trends of higher inflation. The update also reflects near-term Capital Improvement Program (CIP) expenditure needs, which contemplates more funding from revenues as opposed to financing through additional debt.
- **Lower Overall Rate Revenue Requirements / Impacts to Customer Bills.** The 2019 Study contemplated 4.5% increases to aggregate rate revenues for each of the three years covered by the Addendum. The updated assumptions and analysis documented by this Addendum allow for a 4.0% increase for FY 2022, and a 4.5% increase for FY 2023 and FY 2024. This will result in lower total rate revenues and lower average customer bills for each of the next three fiscal years than was contemplated by the 2019 Study.

## 1.1 USE AND SCOPE OF THE ADDENDUM

The District is proposing to update its potable water, recycled water, and wastewater rates to ensure cost recovery, to fund capital projects, and meet its Strategic Plan goals. The proposed rates and forecast presented within this Addendum reflect the District's actual experience over the past two Fiscal Years and reflect best estimates of costs, water demands, and wastewater discharges over the next three Fiscal Years. The Addendum updates the financial information and related assumptions contained in Chapters 1, 3, and 4 of the 2019 Study (these are re-numbered as Chapters 1, 2 and 3, respectively in the Addendum).

The Addendum does not contemplate any changes to the District's overall rate design, customer allocations, or functional and cost allocations established in the original Study from 2019. As such, the Addendum does not update Chapters 5 (Cost of Service Analysis) or Chapter 6 (Rate Design), which outline and cover these

topics. The Addendum is likewise not updating Chapter 2 of the 2019 Study, which principally covered the District's then-existing rate structure and discussed the key proposed rate design and cost allocation method changes. The Addendum is only documenting changes in certain costs, customer demands, and other assumptions. The Addendum then identifies updated customer rates, derived in the same manner as established in the 2019 Study.

## 1.2 UPDATED SUMMARY OF CUSTOMER IMPACTS

### Customer Impacts

As indicated in Section 1.1, the Addendum developed and documented the need for overall lower rates for the next three Fiscal Years than contemplated by the 2019 Study. Overall, the proposed FY 2022 rates are based on an aggregate increase to total District rate revenues of 4.0%. However, due to the variable nature of the demands for different customer classes, total bill impact will vary by customer, as summarized in this section. Customer usage is indicated in units of hundred cubic feet (ccf), whereas 1 ccf totals 748 gallons of water. The full listing of the rates developed by the Addendum are provided in section 1.4.

#### Single-Family Residential

Based on current rates, the combined monthly water and wastewater bill for a typical single-family residential customer (a ¾" meter with 14 ccf of water used in Zone 3, and 9 ccf of wastewater discharged) is \$99.27. Under the proposed rates, effective January 1, 2022, the combined monthly bill would be \$102.54, an increase of \$3.27 (3.3%).

#### Multi-Family Residential

Based on current rates, the combined monthly water and wastewater bill for a typical residential multi-family customer (with a ¾-inch meter in Power Zone 2 using 5 ccf per month) is \$66.77. Under the proposed rates, effective January 1, 2022, the combined bill would be \$69.42 an increase of \$2.65 (4.0%) per month.

#### Commercial Accounts

Commercial customers will see a greater than average increase in FY 2022 due to a larger portion of their bills coming from fixed, as opposed to commodity charges. For example, a typical commercial customer, a C1 wastewater class (low strength) with a 2-inch meter, is in Power Zone 4 and uses an average consumption of 25 ccf of water per month. This typical customer will experience an increase of \$11.56 (6.4%) to their monthly bill, or from \$181.94 to \$193.50.

#### Domestic Water Irrigation Accounts

Based on current rates, a typical monthly bill for a domestic irrigation customer (2-inch meter using 157 ccf of water in Power Zone 4) is \$551.75. Under the proposed rates, effective January 1, 2022, the monthly bill would be \$568.57, an increase of \$16.81 (3.0%).

## Recycled Water Irrigation Accounts

Based on current rates, a typical recycled water irrigation customer (2-inch meter using 161 ccf of water in Power Zone B) is \$459.34. Under the proposed rates, effective January 1, 2022, the monthly bill would be \$473.26, an increase of \$13.92 (3.0%).

### 1.3 UPDATED FINANCIAL FORECAST

The updated financial forecast is used to evaluate the adequacy of the District's current rate revenues to meet our current and future financial needs and rate changes. This analysis also incorporates current reserve fund balances, available bond proceeds, and projected capital improvement expenditures. Table 1-1 below indicates the District's financial outlook including the additional rate revenues developed through the Addendum.

Table 1-1 Financial Forecast Summary

REVENUE CATEGORY	ACTUAL			UPDATED PROJECTION	
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Rate Revenue (with Increase)	\$75,073	\$84,873	\$83,204	\$86,664	\$90,564
Other Revenue	\$7,641	\$6,294	\$5,590	\$5,922	\$5,893
1% Property Tax	\$8,735	\$9,095	\$9,167	\$9,442	\$9,725
Total System Revenues with Rate Increase	\$91,448	\$100,263	\$97,961	\$102,028	\$106,182
<b>Aggregate Rate Increase %</b>	<b>3.9%</b>	<b>4.5%</b>	<b>4.0%</b>	<b>4.5%</b>	<b>4.5%</b>
EXPENDITURE CATEGORY	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Operating Expenditures	\$70,955	\$75,555	\$78,673	\$81,314	\$84,445
Debt Service	\$2,057	\$4,898	\$7,735	\$7,748	\$8,625
Total Expenditures	\$73,012	\$80,452	\$86,408	\$89,062	\$93,071
Plus: Connection Fee Revenues	\$0	\$0	\$0	\$1,086	\$2,260
Less: Purchased Assets	\$1,857	\$1,192	\$950	\$993	\$1,037
<b>Net Available for Capital Expenditures</b>	<b>\$16,579</b>	<b>\$18,618</b>	<b>\$10,603</b>	<b>\$13,059</b>	<b>\$14,334</b>

Notes:

- Dollars shown in 1,000s.
- Totals above may not sum due to rounding.
- Rate percentage increases are effective on January 1 of each Fiscal Year, and indicate a total aggregate increase, not the increase for any specific customer or service types, which will vary.

## Operating Expenditures

The Addendum utilizes the District's FY 2022 Budget for expenses as the base year and forecasts expenditures for FY 2023 and FY 2024 based on known cost changes and expected inflation. The District is committed to efficiently providing high-quality, reliable water and wastewater services to its customers, and maintaining a strong financial position to ensure its systems are maintained and emergencies and unforeseen costs have limited impacts to ratepayers. The District also continues to pursue its Capital Improvement Plan (CIP) Budget, including local water supply projects and substantial improvements to its wastewater treatment and water reclamation plants, per the District's Strategic Plan goals.

The District forecasts that operating expenses are projected to increase over the next two years based on the following significant cost categories and assumptions.

- **Water Purchases:** The Metropolitan Water District of Southern California (MET) forecasts costs increasing by 5.0% annually for FYs 2023 and 2024. Purchases of MET water currently comprises all the District's potable water purchases. However, commencing in the mid-year of FY 2022, the District will begin utilizing approximately 80% of the potable water produced at the San Juan Capistrano Groundwater Recovery Plant (GP), which will increase water purchase costs on the first 1,600 AF utilized. However, such cost increases are expected to be offset by the sharing of administrative costs with the City's customers. Further, the District expects to maximize the production at the GP, ultimately providing the District with 3,200 AF of potable water by 2024 at a lower cost than through MET. The District is also pursuing the Ranch Water Filtration Plant, another local potable water supply project with lower overall costs than MET water, with potential production of 400-800 acre-feet available in FY 2023 and 2024.
- **Salaries and Benefits:** The District's labor costs have fared better than projected in the 2019 Study. While such costs are still projected to increase by approximately 4.0% annually in FY 2023 and 2024, the District's FY 2022 Budgeted costs are approximately \$400,000 lower than the prior Study, mainly due to lower benefit costs than previously forecasted.
- **Power Costs:** The District's power costs are anticipated to increase at 5.5% per year in FY 2023 and FY 2024, or 1.5% above the District's expected long-run outlook of 4.0%. The District's power costs can be volatile due to both its own system and customer demands as well as pricing from the investor-owned utilities the District makes purchases from. The District is increasing the estimated inflation by 1.5% for the Addendum due to elevated recent inflation and rate increases by investor-owned utilities.

These three cost components constitute 72% of the District's FY 2022 Budget. The District's other operating costs, such as General and Administrative, Operations and Maintenance, and Wastewater Treatment, are forecast to increase by 4.5% in FY 2023 and FY 2024, or 1.5% higher than the District's long-run outlook of 3.0% due to recent elevated inflation in the Los Angeles-Long Beach-Anaheim, CA region.

Table 1-2 outlines the projected expenditures for the next three years starting with FY 2022.

Table 1-2 FY 2020 Budgeted and Projected Expenses (\$'000)

	ACTUAL	ACTUAL	PROJECTED	PROJECTED	PROJECTED
EXPENDITURE CATEGORY	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Water Purchase Costs	\$27,224	\$30,500	\$29,588	\$29,915	\$30,898
Salaries & Benefits	\$20,279	\$21,111	\$21,442	\$22,311	\$23,248
Power	\$4,996	\$5,705	\$5,792	\$6,110	\$6,446
All Other Operating Expenses	\$18,455	\$18,238	\$21,852	\$22,978	\$23,859
<b>Total Expenditures</b>	<b>\$70,955</b>	<b>\$75,555</b>	<b>\$78,673</b>	<b>\$81,314</b>	<b>\$84,450</b>

Note: Totals above may not sum due to rounding.

## Capital Improvement Plan

The District's Capital Improvement Plan Budget section of its FY 2022 Budget outlines its anticipated capital project needs. An updated summary of the District's capital projects and categories is provided below.

**Capital Repair and Replacement Plan (CRP):** The District continues to reinvest in its infrastructure to maintain its high level of service to its customers. CRP projects also help to extend the life of the District's existing fixed assets.

**Oso Creek Water Reclamation Plant (OCWRP) Optimization:** The District identified the expansion of the OCWRP as the optimum approach to meeting future its wastewater treatment needs and its goal of recycling the equivalent of 100% of the District's wastewater.

**Chiquita Water Reclamation Plant (CWRP) Expansion and Upgrades:** Based on the expected buildout of the District's service area, the treatment capacity of CWRP will need to be expanded. The first phase, which consists of the construction of additional aeration basins and secondary clarifiers to increase the CWRP's secondary process capacity, is expected to be completed in FY 2022.

**Water Supply and Reliability – San Juan Capistrano Groundwater Plant Maximization:** The District is currently engaged in a proceeding to annex the City of San Juan Capistrano's water and sewer systems into the District. Among the City of San Juan Capistrano's water system assets is a groundwater extraction facility known as the Groundwater Recovery Plant. The District expects to undertake certain capital improvements to wells, pumps, and related infrastructure to increase the production capacity of the plant by an estimated 2,000 acre-feet per year.

**Ranch Water Filtration Plant:** The District has an existing agreement with the Rancho Mission Viejo (RMV) Mutual Water Company to purchase up to 2,500 acre-feet per year of groundwater produced by RMV. This project will change the ultimate use from irrigation to potable domestic use, by utilizing treatment of the extracted groundwater to potable water standards.

**Recycled Water Conversion and Conveyance:** The District is in the process of expanding its recycled water system, in conjunction with the completion of the Trampas Canyon Reservoir and Dam, which will increase the District’s recycled water storage to facilitate higher peak-demand seasonal usage. Projects underway include converting irrigation customers using potable water to recycled water, such as in the Las Flores community. The District is also nearing completion of projects in the Talega community, including the Pico Recycled Water Pump Station, which will create an intertie allowing for the purchase of additional recycled water from the City of San Clemente.

**Technology:** The District periodically upgrades or implements new technology systems. Future projects include additional development of the Geographic Information System (GIS) system, a new Computerized Maintenance Management System (CMMS), an Enterprise Content Management Portal, and related data analysis and reporting applications.

## Capital Funding Needs

The table below illustrates the District’s projected capital project spending over the next three fiscal years. Amounts indicated are intended to capture the District’s net remaining requirements left to be paid from either Revenue Bonds, rate revenues, or reserves. Amounts are net of any existing, prior funds generated from General Obligation Bonds or other anticipated reimbursements. The Addendum includes total net remaining expenditures of \$170 million over the upcoming three-year period. As compared to the 2019 Study, total expenditures for the Study period (including FY 2020 and FY 2021) are approximately \$10 million higher, or a 5% increase since 2019.

Table 1-3 Projected Capital Project Spending – From Rate Revenues and Revenue Bonds (\$'000)

CIP CATEGORIES	NET REMAINING*	FY 2022	FY 2023	FY 2024
CRP	\$101,644	\$37,280	\$30,262	\$14,869
OCWRP Optimization	\$38,916	\$17,556	\$16,261	\$5,099
CWRP – Expansion and Upgrades	\$2,892	\$723	\$1,446	\$723
Supply and Reliability	\$43,755	\$9,063	\$10,840	\$23,552
Technology	\$1,547	\$527	\$527	\$493
RW Conversion and Conveyance	\$1,180	\$1,180	\$0	\$0
<b>Total</b>	<b>\$189,933</b>	<b>\$66,329</b>	<b>\$59,335</b>	<b>\$44,737</b>

\*Portions of net remaining costs are projected to be incurred in FY 2025 and beyond.

Note: Totals above may not sum due to rounding.

## Capital Funding Strategy

The District’s long-term goal is to have sufficient revenues to pay for its capital projects from ongoing rate revenues and reserves on a “pay-as-you-go” basis to the extent practical. In the near-term, however, the District anticipates financing approximately 50% of its capital needs through debt financing due to the inclusion of several large, strategic projects. The updated analysis reflects \$118 million in new revenue bond financing over the Study period, including the \$60 million already issued in FY 2021. This compares to \$132 million in new revenue bonds contemplated by the 2019 Study. Including the new State Funding Revolving (SFR) Loan which financed the Trampas Reservoir and Dam Project, with repayment commencing in FY 2022, and other existing debt service payments, the District’s annual debt service payments are projected to total



\$10.7 million in FY 2025. The timing and sizes of the new individual bond issuances in FY 2023 and FY 2024 will be subject to change based on the costs and timing of project construction.

Table 1-4 Projected Revenue Bond Issuances

CATEGORY	ACTUAL			UPDATED PROJECTION	
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Projected Bond Issuance	NA	\$60 million	NA	\$23 million	\$35 million
Associated Debt Service per Issuance <sup>(1)</sup>	NA	\$2.8 million	NA	\$1.4 million	\$2.1 million

(1) The debt service payments are assumed to commence the year following the issuance.

The funding strategy is designed to meet the goals outlined in the District’s Reserve and Fiscal Policies and is further outlined in Chapter 3. The Policies include two provisions which are critical to the District’s long-range financial planning and rate setting process. These include maintaining reserves equal to a full year of operating costs, or 365 “days” of reserves and maintaining a debt service coverage ratio of at least 1.50x (the debt service ratio is calculated by dividing net revenues by total annual debt service).

## 1.4 RATES

### Water Rates

The District’s water rate structure consists of three charges:

- **Fixed Service Charge:** The fixed service charge varies by the size of the meter serving a property and recovers a portion of the District’s fixed costs, including the operational costs, as well as a portion of debt service obligations. This charge also includes a portion of ongoing capital projects for asset rehabilitation, repair, and replacement.
- **Commodity Service Charge:** The commodity service charge is comprised of per unit rates charged for each unit of water delivered. The majority of the District’s customers are on a tiered rate structure, with each tier corresponding to the proportional cost of service when taking into account marginal costs of increased water use.
- **Power Surcharge:** The power surcharge recovers the costs of pumping water to the upper elevation zones. The surcharge is charged per unit of water sold.

### *Updated Current and Projected Water Fixed Service Charge*

All water users, including potable water, recycled water, and fire service customers, are charged a common monthly fixed service charge – availability of water service collectively benefits each of these types of users along with the proportional cost of their potential instantaneous water demand. For customers with a fire service meter, they also pay this basic monthly charge to fund their share of the water system costs incurred to make water available in the event of an emergency. The monthly fixed service charges recover the District’s costs that will occur regardless of the number of units of water sold. Examples of the District’s fixed costs include system maintenance, administration, and personnel costs.

**Table 1-5 Monthly Potable and Recycled Water Fixed Charge Rates – Three-Year Outlook (\$/Meter Size)**

METER SIZE	CURRENT		ADDENDUM UPDATED RATES	
	FY 2021	FY 2022	FY 2023	FY 2024
¾" & Res. 1"	\$23.46	\$24.51	\$25.16	\$25.64
Commercial 1"	\$30.89	\$32.43	\$33.56	\$34.28
1 ½"	\$49.07	\$51.83	\$54.14	\$55.43
2"	\$71.33	\$75.59	\$79.33	\$81.34
2 ½"	\$98.05	\$104.10	\$109.57	\$112.42
3"	\$131.45	\$139.74	\$147.37	\$151.27
4"	\$198.25	\$211.02	\$222.97	\$228.98
6"	\$383.05	\$408.21	\$432.12	\$443.98
8"	\$605.71	\$645.80	\$684.10	\$703.01

The District implemented a fire meter specific fixed charge, as outlined in the 2019 Study. Table 1-6 below shows the proposed fire meter fixed charges.

**Table 1-6 Monthly Fire Meter Fixed Charge Rates – Three-Year Outlook (\$/Meter Size)**

METER SIZE	CURRENT		ADDENDUM UPDATED RATES	
	FY 2021	FY 2022	FY 2023	FY 2024
Commercial 1"	\$28.37	\$29.79	\$31.36	\$32.29
1 ½"	\$43.85	\$46.31	\$48.96	\$50.38
2"	\$62.82	\$66.55	\$70.52	\$72.53
2 ½"	\$85.57	\$90.83	\$96.39	\$99.10
3"	\$114.02	\$121.19	\$128.72	\$132.32
4"	\$170.91	\$181.90	\$193.39	\$198.76
6"	\$328.30	\$349.86	\$372.30	\$382.57
8"	\$517.93	\$552.22	\$587.86	\$604.03
10"	\$771.08	\$822.38	\$875.64	\$899.68

### *Potable Water Commodity Charge Rates*

Based on the District's costs as presented above, the following table shows the current and updated water commodity rates proposed to be implemented each January for the next three years, commencing with January 2022 (FY 2022).

Table 1-7 Potable Water Commodity Charge Rates (\$/CCF)

	CURRENT		ADDENDUM UPDATED RATES	
RESIDENTIAL	FY 2021	FY 2022	FY 2023	FY 2024
Tier 1	\$2.38	\$2.46	\$2.56	\$2.80
Tier 2	\$2.79	\$2.86	\$2.95	\$3.16
Tier 3	\$3.64	\$3.76	\$3.81	\$3.96
Tier 4	\$6.06	\$6.17	\$6.22	\$6.36
IRRIGATION- DOM	FY 2021	FY 2022	FY 2023	FY 2024
Tier 1	\$2.87	\$2.95	\$3.02	\$3.18
Tier 2	\$3.86	\$4.01	\$4.06	\$4.20
Tier 3	\$6.18	\$6.59	\$6.63	\$6.76
COMMERCIAL	FY 2021	FY 2022	FY 2023	FY 2024
Commercial	\$2.31	\$2.51	\$2.62	\$2.87
Construction	\$3.86	\$4.01	\$4.06	\$4.20

In addition to recovering a base unit cost of water, the District also imposes a power surcharge for customers residing in higher elevations to recover the additional electrical cost incurred for pumping water to the District's upper hydraulic zones. The charges are simply calculated by dividing the total power costs in a zone by the number of units of water sold.

Table 1-8 Potable Water Power Surcharge Rates (\$/CCF)

	CURRENT		ADDENDUM UPDATED RATES	
WATER ZONE	FY 2021	FY 2022	FY 2023	FY 2024
3	\$0.11	\$0.11	\$0.12	\$0.12
4	\$0.19	\$0.19	\$0.20	\$0.21
5	\$0.31	\$0.32	\$0.34	\$0.35

### *Recycled Water Commodity Charge Rates*

Similar to the potable water rates, the recycled water commodity charge recovers the cost of recycled water supplies, storage, and pumping. The updated recycled water rates are presented as follows:

Table 1-9 Recycled Water Commodity Charge Rates (\$/CCF)

RECYCLED - TIERED	CURRENT	ADDENDUM UPDATED RATES		
	FY 2021	FY 2022	FY 2023	FY 2024
Tier 1	\$2.41	\$2.47	\$2.48	\$2.53
Tier 2	\$2.87	\$3.28	\$3.25	\$3.25
Tier 3	\$5.22	\$5.45	\$5.65	\$6.06
RECYCLED - UNIFORM	FY 2021	FY 2022	FY 2023	FY 2024
Commercial	\$2.36	\$2.51	\$2.53	\$2.59
Construction	\$2.87	\$3.28	\$3.25	\$3.25

Similar to potable water, the District also recovers pumping costs from recycled water users. Recycled Water pumping charges are increasing more than projected in the original 2019 Study. This is due to updated account and usage data, indicating fewer recycled water accounts and volume to spread the pumping costs over. The proposed pumping charges are as follows:

Table 1-10 Recycled Power Surcharge Rates (\$/CCF)

RECYCLED WATER ZONE	CURRENT	ADDENDUM UPDATED RATES		
	FY 2021	FY 2022	FY 2023	FY 2024
<b>IRRIGATION (NON-DOMESTIC)</b>				
C	\$0.25	\$0.31	\$0.33	\$0.34
D	\$0.44	\$0.51	\$0.53	\$0.56
E	\$0.55	\$0.66	\$0.69	\$0.72

### *Wastewater Rates*

The District owns and operates two wastewater treatment plants, has capacity in the 3A Water Reclamation Plant, which is operated by the Moulton Niguel Water District, and is also a member of the South Orange County Wastewater Authority (SOCWA), which is a Joint Powers Authority that operates the Jay B. Latham Water Reclamation Plant. The District also utilizes agreements with the City of San Clemente and the Irvine Ranch Water District for wastewater treatment.

Like the District's water rate structure, the wastewater rates consist of two charges:

- **Fixed Service Charge:** Fixed charge that recovers the District's fixed operational and maintenance costs that are not related to the quantity of wastewater discharged, as well as for ongoing capital repair and replacement projects.
- **Commodity Charge:** Per unit charges for each unit of wastewater discharged into the wastewater collection system. These charges vary based on customer class and on the assumed wastewater strength characteristics within each class.

### *Monthly Fixed Service Charge*

All wastewater users are charged a common monthly fixed service charge. Multi-family residential customers with an individual meter per dwelling units are indicated in the table below.

Table 1-11 Single-Family & Multi-Family Residential Wastewater Fixed Charge Rates (\$/Customer Account)

	CURRENT	ADDENDUM UPDATED RATES		
	FY 2021	FY 2022	FY 2023	FY 2024
Single-Family Residential	\$29.18	\$30.33	\$32.21	\$33.87
Multi-Family Residential*	\$26.01	\$27.21	\$29.06	\$30.51

\*For accounts with a separate water meter for a single dwelling unit. Multi-family residential customers with a common meter serving more than a single dwelling unit pay fixed service charges pursuant to Table 1-12.

The rates for multi-family properties with a common meter that serve multiple dwelling- or living-units will be billed a base billing and administrative charge plus a charge per dwelling unit. The average multi-family common service connection in the District has a 2-inch water meter and serves 11 dwelling units.

Table 1-12 Multi-Family Common Wastewater Fixed Charge Rates

	CURRENT	ADDENDUM UPDATED RATES		
	FY 2021	FY 2022	FY 2023	FY 2024
Base Monthly Charge	\$11.33	\$12.76	\$14.41	\$14.96
Per Dwelling Unit Charge	\$14.68	\$14.45	\$14.65	\$15.55

The fixed charges for commercial customers account for both the strength of the wastewater that is discharged into the system and the quantity of the typical wastewater discharged. This impact is estimated based on water meter size; 2-inches and below; and larger than 2-inches. Unlike some agencies, the District's commercial customers have separate outdoor irrigation meters. Therefore, the domestic water meter is a reasonable measure of wastewater discharges.

**Table 1-13 Commercial Wastewater Fixed Charge Rates (\$/Customer Account)**

CUSTOMER CLASS	METER SIZE	CURRENT	ADDENDUM UPDATED RATES		
		FY 2021	FY 2022	FY 2023	FY 2024
CR	2-inches and smaller	\$27.84	\$29.01	\$30.88	\$32.45
	Larger than 2-inches	\$27.84	\$29.01	\$30.88	\$32.45
C1	2-inches and smaller	\$27.86	\$29.03	\$30.90	\$32.47
	Larger than 2-inches	\$156.37	\$155.57	\$159.11	\$168.56
C2	2-inches and smaller	\$86.30	\$86.57	\$89.20	\$94.35
	Larger than 2-inches	\$157.69	\$156.87	\$160.42	\$169.95
C3	2-inches and smaller	\$88.85	\$89.08	\$91.74	\$97.05
	Larger than 2-inches	\$160.25	\$159.38	\$162.97	\$172.66
C4	2-inches and smaller	\$92.81	\$92.98	\$95.69	\$101.25
	Larger than 2-inches	\$164.21	\$163.28	\$166.92	\$176.85

The impacts of the proposed changes to Commercial customers are indicated in the table below. Approximately 86% of the District’s commercial customers have 2-inch water meters and are in the C1 or C2 wastewater class. Meters larger than 2-inches, which comprise only 3% of all accounts, will experience a slight decrease from the existing rate due to slight changes in the strength of discharge-based costs. The table below illustrates the breakdown of the District’s commercial customers and their charges.

**Table 1-14 Commercial Wastewater Customer Rate Impact**

CLASS	METER SIZE	PROJECTED CUSTOMER COUNT FY 2022	TOTAL ANNUAL REVENUE WITH PROPOSED FY 2022 RATE
CR	2-inches and smaller	17	\$5,976
	Larger than 2-inches	1	\$352
C1	2-inches and smaller	668	\$232,854
	Larger than 2-inches	19	\$35,814
C2	2-inches and smaller	138	\$143,703
	Larger than 2-inches	6	\$11,404
C3	2-inches and smaller	14	\$15,111
	Larger than 2-inches	3	\$5,793
C4	2-inches and smaller	64	\$70,976
	Larger than 2-inches	2	\$3,957

### *Wastewater Commodity Charges*

In addition to the monthly fixed service charge, the District imposes customer class specific wastewater commodity charges. The commodity charge rates vary by customer class to account for the differences in the strength of the wastewater (loading) discharged into the wastewater collection system, which is measured by the concentration of biochemical oxygen demand (BOD)<sup>1</sup> and total suspended solids (TSS)<sup>2</sup>. For example, the BOD loadings of a restaurant will be higher than an office building due to the organics washed into the collection system during food preparation and clean-up. The commercial strength is determined based on each customer’s business type as defined by the North American Industry Classification System (NAICS). Based on the type of business, the quality (strength) of the wastewater discharged to the District’s sewer collection system will differ. The quality is a measure of the concentration of biochemical oxygen demand (BOD) and total suspended solids (TSS). The District’s BOD and TSS assumptions are based on the State Water Resources Control Board’s Revenue Program Guidelines.

The proposed wastewater commodity charge rates are summarized in Table 1-15 below.

Table 1-15 Wastewater Commodity Charge Rates (\$/CCF)

COMMODITY CHARGE RATES (WASTEWATER)	CURRENT	ADDENDUM UPDATED RATES		
	FY 2021	FY 2022	FY 2023	FY 2024
Commercial – C1	\$0.90	\$0.95	\$0.99	\$1.03
Commercial – C2	\$1.08	\$1.16	\$1.22	\$1.26
Commercial – C3	\$1.51	\$1.48	\$1.54	\$1.60
Commercial – C4	\$2.41	\$2.59	\$2.71	\$2.81
Commercial – CR	\$0.84	\$0.56	\$0.59	\$0.61
Residential	\$1.08	\$1.08	\$1.12	\$1.16

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<sup>1</sup> BOD is the amount of dissolved oxygen that must be present in water in order for microorganisms to decompose the organic matter in the wastewater.

<sup>2</sup> TSS is the entire amount of organic and inorganic and inorganic particles dispersed in wastewater.

## 2 ANALYSIS INPUTS AND ASSUMPTIONS

### 2.1 FORECAST ASSUMPTIONS

The key cost inflation factors utilized by the Addendum are presented in Table 2-1 below. Compared to the prior Study, the District is now forecasting General Inflation and Energy Inflation will be 1.5% higher than the long-run average rates expected in FY 2023 and FY 2024. These potential increases are due to recent trends in the Los Angeles-Long Beach-Anaheim, CA area Consumer Price Index, which registered increases of 4-7% on an annualized basis over the past four months (April – July of 2021). The increases for the MET Water costs were based on the most recent projections published by MET and are subject to changed based on MET’s next biennial budget expected to be adopted next year.

Table 2-1 Escalation Factors

ESCALATION FACTOR	ADDENDUM UPDATED		
	FY 2022	FY 2023	FY 2024
General Inflation	3.00%	4.50%	4.50%
Salaries and Benefits Inflation	Per Budget	4.05%	4.20%
Energy Inflation	Per Budget	5.50%	5.50%
MET Water Cost Inflation	4.00%	5.00%	5.00%
Account Growth	1.0%	0.7%	0.7%

### Water Demand Forecast Update

The Addendum updates the District’s customer demands for the current and remaining two forecast years in the Study. The prior 2019 Study relied on usage patterns from FY 2017-FY 2019 and adjusted for factors like weather and permanent changes in customer behavior, such as conservation measures, to arrive at base-case usage under “normal” conditions. The Addendum utilizes customer data from FY 2020 and FY 2021 and makes similar adjustments, including adjusting for additional residential usage due to COVID-19. Overall, the update does not substantially change the District’s demand outlook. The 2019 Study had projected approximately 21,688 acre-feet (AF) of potable water demands for FY 2022; the update now projects 21,831 AF, just 143 AF higher. For recycled water demands, the prior Study had projected 7,195 AF for FY 2022; the update now projects 7,004 AF.

As with the 2019 Study forecast, demand is projected to increase incrementally over the next several years due to new account growth in the District’s service area. The District expects to continue to add approximately 400-700 new potable accounts each year as new development occurs. The Addendum contemplates approximately 0.7% growth per year, on the lower side given that new development is currently transitioning to a new planning area, with new homes not expected to be occupied until the 4<sup>th</sup> quarter of 2022. Demand growth is expected to continue to reflect lower demands per account for new development as compared to the District’s current average levels. The District’s current average customer usage is influenced by more established areas within the District’s service area, such as in the City of Mission Viejo and Coto de Caza areas with larger areas of outdoor irrigation. Newly developing areas, by contrast, have homes with lower outdoor watering needs and utilized recycled water services throughout the community.



## 2.2 BASELINE INPUTS

### Water System Profile

Table 2-2 Water System Customer Profile

CUSTOMER CLASS	NUMBER OF ACCOUNTS	FY 2022 DEMAND <sup>(1)</sup>	FY 2022 DEMAND <sup>(2)</sup>
Single-Family Residential	38,344	6,158,496	14,138
Multi-Family Residential	14,721	1,125,793	2,584
Commercial	980	460,091	1,056
Irrigation	1,450	1,764,531	4,051
Fire Service	1,319	599	1
<b>Total</b>	<b>56,816</b>	<b>9,509,510</b>	<b>21,831</b>

Notes:

(1) Measured in billing units of one hundred cubic feet (ccf).

(2) Measured in acre-feet (AF).

- Totals above may not sum due to rounding.

### Wastewater System Profile

Table 2-3 Wastewater System Customer Profile

CUSTOMER CLASS	NUMBER OF ACCOUNTS
Commercial – C1	688
Commercial – C2	144
Commercial – C3	17
Commercial – C4	66
Commercial – CR	18
Residential Single-Family	38,240
Residential Multi-Family	14,720

### Recycled Water System Profile

Table 2-4 Recycled Water System Customer Profile

CUSTOMER CLASS	NUMBER OF ACCOUNTS	FY 2022 DEMAND <sup>(1)</sup>	FY 2022 DEMAND <sup>(2)</sup>
Irrigation	1,464	2,766,752	6,352
Construction	16	283,976	652
<b>Total</b>	<b>1,480</b>	<b>3,050,728</b>	<b>7,004</b>

Notes:

(1) Measured in billing units of one hundred cubic feet (ccf).

(2) Measured in acre-feet (AF).

## 2.3 POTABLE WATER SUPPLY

Total water demands, as shown in Section 2.2, are assumed to be 21,831 acre-feet (AF) for potable water and 7,004 acre-feet (AF) for recycled water. The District's main source of water supply is imported water from MET. The District purchases two different types of water from MET: untreated, raw water, which the District treats at the Baker Water Filtration Plant (Baker Plant); and fully treated water from MET that is directly distributed to customers once received by the District. The District is also in the process of developing and acquiring new, local potable water sources as discussed below.

The following are summaries of the District's potable water supplies assumed in the Addendum:

- **Baker Water Filtration Plant Water:** The District's most basic and inexpensive source is purchased as raw water from Metropolitan Water District of Orange County (MWDOC) that is treated at the Irvine Ranch Water District's Baker Water Filtration Plant. The District owns a capacity right in the plant equivalent to 8,400 AF per year and saves approximately \$925,000 per year based on the lower treatment cost compared to MET water. Because this is the District's least expensive potable water supply source, it is allocated by the Study for essential water demands, which includes indoor water usage for residential and commercial customers.
- **MET Treated Water:** Currently, the District's additional treated water supplies are purchased from MET through the MWDOC. These purchases are the District's largest single source of water cost and are increased or decreased based on changes in demand. The Addendum projects the District's use of MET water will decline by approximately 4,000 AF by FY 2024 due to new potable sources expected to be available over the next three years.
- **City of San Juan Capistrano's Groundwater Plant (GP):** The District anticipates completing the acquisition of the City's water and sewer enterprise fund operations and related customers in the first half of FY 2022. The City's water system includes the GP, which produces potable water from local groundwater. Currently, the GP is producing approximately 2,000 AF per year of potable water. The District anticipates utilizing approximately 80% (1,600 AF) of GP water per year once the acquisition is completed, with the balance of 20% being allocated to existing City of San Juan Capistrano customers.  
  
The District further contemplates maximizing the capacity of the GP to 4,000 total AF, and ultimately utilizing 3,200 AF for existing District customers. While the existing 2,000 AF of GP water is more expensive than MET water, once the capacity is expanded to 4,000 AF, the District expects to produce GP water for approximately \$200 per AF less than MET water. The Addendum assumes the District will utilize 1,600 AF of GP water in FY 2022, 2,400 AF in FY 2023, and 3,200 AF in FY 2024.
- **Ranch Water Filtration Plant:** The District is in the initial environmental and design stages for this project, which the Addendum projects to provide 400 and 800 AF of potable water in FY 2023 and FY 2024, respectively.

## 3 REVENUE REQUIREMENT ANALYSIS

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The Addendum updates the revenue requirement analysis section, which establishes the basis and magnitude for increases in customer rate revenues. The Addendum update indicates similar, though lower overall, rate revenue requirements than the 2019 Study. In total, the Addendum contemplates approximately \$1.4 million less in total customer rate revenues, permitting a lower rate increase of 4.0% in January of 2022, versus the 4.5% increase required in the prior Study. This is due to lower operating expenses and debt service costs than identified in the prior Study. Additionally, the Addendum documents the revenue requirements will fund more capital project costs directly, on a pay-as-you-go basis, as opposed to utilizing debt.

The analysis utilizes the updated financial forecast contained in Chapter 1 and assumptions from Chapter 2 of this Addendum. This analysis also incorporates current unrestricted cash and investment balances and anticipated capital improvement plan expenditures.

Once the revenue requirement is established by compiling the District's cost drivers, the following three tests are utilized to refine the annual revenue requirements:

- (1) Cash Flow Sufficiency Test
- (2) Debt Coverage Ratio Test
- (3) Available Cash Reserve Test

As presented in this section, without the rate revenue increases contemplated, the District would face the following financial deficiencies:

- The District's water service (potable and recycled) revenues would not be sufficient to cover its operating costs and debt service in FY 2024.
- The District's water and wastewater service revenues would not be sufficient to meet pay-as-you-go capital project needs in FY 2022 – FY 2024.
- As a result of the deficiencies above, the District would need to spend down its cash reserves for these unmet needs, ultimately ending up with reserves substantially below its Fiscal and Reserve Policy goal requirement.

### **Cash Flow Sufficiency Test**

The cash flow sufficiency test evaluates the District's ability to meet operating and capital expenditures. When projected revenues are insufficient to meet operating and capital cost on a cash flow basis, rate revenues are adjusted accordingly. The cash flow test is conducted separately for the District's water service (potable and recycled water) and wastewater service.

### **Debt Service Coverage Ratio Test**

The second test is the debt service coverage ratio test. The debt service coverage ratio is calculated by dividing net cash flow (net revenues) by the required debt service amount.

The District anticipates issuing additional debt over the next three years. To ensure favorable credit ratings and the resulting low interest rate on its debt, the District adopted a policy goal, under its Reserve and Fiscal Policies, of maintaining a debt service coverage ratio of at least 1.50x, or 50 percent of annual debt service. The revenue requirement analysis therefore includes a 1.50x debt service coverage ratio test.

The debt coverage test is assessed on the District's service lines on a combined basis. This is because all the rate revenues are pledged for the purpose of debt repayment and are the basis of the District's 1.50x debt service coverage policy.

### **Available Cash Reserves Test**

The third test is the available cash reserves test. The District adopted Reserve and Fiscal Policies which are part of the District's comprehensive financial strategy to ensure conservative and prudent fiscal practices. The policies call for the District to maintain financial reserves to ensure the District provides a high level of emergency preparedness for its customers and well-maintained infrastructure for current and future customers. To accomplish these goals, the District's Reserve Policy establishes certain reserve funding level minimums and goals. This includes a Fiscal Policy goal of maintaining reserves at least equal to a full year of operating costs, or 365 "days" of reserves. The District designed its forecast rates and charges to ensure this goal is accomplished.

## **3.1 POTABLE WATER AND RECYCLED WATER SYSTEM**

### **Projected Revenues and Expenditures Prior to Rate Adjustments**

Table 3-1 below outlines the District's projected revenues and expenditures for Fiscal Years 2022 through 2024, and the resulting net surplus or shortfall in each such year. The District's Fiscal Year 2022 Budget is used as the baseline for projecting the subsequent years. Revenue projections are prior to any rate adjustments (including the FY 2022 Budget assumption of a mid-year increase). Additionally of note, the District's FY 2021 rate revenues were the result of higher than is typical customer demands, due to weather and other factors which are not projected to recur as part of the updated demand forecast. As discussed above, expenses are projected to increase based on known cost increases and/or general trends in inflation and system costs.

**Table 3-1 Actual and Projected Potable Water and Recycled Water System Operating Revenues and Expenses Prior To Rate Adjustments**

REVENUE CATEGORY	ACTUAL			ADDENDUM UPDATED	
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Rate Revenue	\$51,404	\$59,411	\$55,801	\$55,801	\$55,801
Joint Operating Facilities Revenue	\$896	\$765	\$936	\$964	\$993
Misc. Operating	\$2,360	\$1,909	\$1,490	\$1,534	\$1,580
Misc. Non-Operating	\$1,871	\$1,544	\$1,169	\$1,281	\$1,220
Share of 1% Prop. Tax Revenues	\$4,169	\$4,341	\$4,375	\$4,507	\$4,642
<b>Total Revenues</b>	<b>\$60,700</b>	<b>\$67,971</b>	<b>\$63,772</b>	<b>\$64,088</b>	<b>\$64,236</b>
EXPENSE CATEGORY	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Water Purchases	\$27,224	\$30,500	\$29,588	\$29,915	\$30,898
Regional Facilities	\$119	\$259	\$661	\$691	\$722
Power	\$3,109	\$3,551	\$3,604	\$3,803	\$4,012
Salaries & Benefits	\$10,520	\$10,952	\$11,123	\$11,574	\$12,060
Operations and Maintenance	\$5,402	\$5,596	\$5,868	\$6,132	\$6,408
Wastewater Treatment	\$0	\$0	\$0	\$0	\$0
General & Admin	\$2,824	\$2,586	\$3,771	\$4,014	\$4,115
<b>Total Operating Expenditures</b>	<b>\$49,198</b>	<b>\$53,444</b>	<b>\$54,614</b>	<b>\$56,128</b>	<b>\$58,215</b>
Debt Service	\$1,664	\$3,963	\$6,259	\$6,271	\$6,443
<b>Total Non-Capital Expenditures</b>	<b>\$50,862</b>	<b>\$57,406</b>	<b>\$60,873</b>	<b>\$62,399</b>	<b>\$64,658</b>
Capital Project Funding	\$9,838	\$10,565	\$3,976	\$5,107	\$5,661
<b>Total Funding Needs</b>	<b>\$60,700</b>	<b>\$67,971</b>	<b>\$64,849</b>	<b>\$67,507</b>	<b>\$70,321</b>
<b>Net Revenues/(Shortfall)</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$1,078)</b>	<b>(\$3,419)</b>	<b>(\$6,084)</b>

Notes:

- Dollars shown in 1,000s.
- Totals above may not sum due to rounding.
- Tables excludes revenues and costs related to serving Lake Mission Viejo Association.
- Capital Project Funding indicated is the portion required for pay-as-you-go funding.

For FY 2022 and FY 2023, the District is projected to generate sufficient revenues to pay for its operating expenses, debt service, and fund a portion of its annual capital improvement program without any rate increases. However, based on the full required needs for pay-as-you-go funding, the District's rate revenues are not sufficient. As will be shown in the Cash Reserves test section, without the additional rate revenues, the District would need to draw on reserves to meet its capital needs and would not meet its reserve policy goals. With inflation and other cost increases, the District is also projected to have a slight operating deficit beginning in FY 2024.

## Projected Revenue Requirements

Table 3-2 Recommended Potable Water and Recycled Water System Operating Revenue Requirements

REVENUE CATEGORY	ACTUAL			ADDENDUM UPDATED	
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Rate Revenue (Base)	\$51,404	\$59,411	\$55,801	\$55,801	\$55,801
Other Revenues	\$9,296	\$8,560	\$7,970	\$8,286	\$8,435
<b>Percent Rate Increase (From Prior Year)</b>	<b>3.90%</b>	<b>4.50%</b>	<b>4.00%</b>	<b>4.50%</b>	<b>4.50%</b>
<b>Additional Rate Revenues</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,078</b>	<b>\$3,419</b>	<b>\$6,084</b>
Total Revenues	\$60,700	\$67,971	\$64,849	\$67,507	\$70,321
<b>Total Funding Needs</b>	<b>\$60,700</b>	<b>\$67,971</b>	<b>\$64,849</b>	<b>\$67,507</b>	<b>\$70,321</b>
<b>Net Revenues/(Shortfall)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Notes:

- Dollars shown in 1,000s.
- Totals above may not sum due to rounding.
- Percent Revenue Increases are assumed on January 1 of each Fiscal Year indicated.
- Total Funding Needs are defined in Table 3-1.

## 3.2 WASTEWATER SYSTEM

### Projected Revenues and Expenditures Prior to Rate Adjustments

Table 3-3 on the following page outlines the District's projected revenues and expenditures for Fiscal Years 2022 through 2024, and the resulting net surplus or shortfall in each such year. The District's Fiscal Year 2022 Budget is utilized as the baseline for projecting the two subsequent years. Rate revenues are prior to any rate adjustments.

Table 3-3 Projected Wastewater System Revenues and Expenditures **Prior To Rate Adjustments**

REVENUE CATEGORY	ACTUAL		ADDENDUM UPDATED		
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Rate Revenue	\$23,669	\$25,462	\$25,826	\$25,826	\$25,826
Joint Operating Facilities Revenue	\$533	\$455	\$557	\$574	\$591
Misc. Operating	\$856	\$692	\$540	\$557	\$573
Misc. Non-Operating	\$1,124	\$928	\$703	\$811	\$729
Share of 1% Prop. Tax Revenues	\$4,566	\$4,754	\$4,792	\$4,935	\$5,083
<b>Total Revenues</b>	<b>\$30,748</b>	<b>\$32,292</b>	<b>\$32,418</b>	<b>\$32,702</b>	<b>\$32,801</b>
EXPENSE CATEGORY	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Water Purchases	\$0	\$0	\$0	\$0	\$0
Regional Facilities	\$3	\$6	\$15	\$16	\$16
Power	\$1,887	\$2,155	\$2,187	\$2,308	\$2,434
Salaries & Benefits	\$9,759	\$10,160	\$10,319	\$10,737	\$11,187
Operations and Maintenance	\$3,583	\$3,712	\$3,892	\$4,068	\$4,251
Wastewater Treatment	\$4,196	\$3,945	\$4,535	\$4,739	\$4,952
General & Admin	\$2,330	\$2,133	\$3,110	\$3,319	\$3,395
<b>Total Operating Expenditures</b>	<b>\$21,757</b>	<b>\$22,111</b>	<b>\$24,059</b>	<b>\$25,185</b>	<b>\$26,235</b>
Debt Service	\$393	\$935	\$1,476	\$1,477	\$2,182
<b>Total Non-Capital Expenditures</b>	<b>\$21,150</b>	<b>\$23,046</b>	<b>\$25,535</b>	<b>\$26,663</b>	<b>\$28,418</b>
<b>Capital Project Funding</b>	<b>\$8,598</b>	<b>\$9,246</b>	<b>\$7,382</b>	<b>\$7,657</b>	<b>\$7,237</b>
<b>Total Funding Needs</b>	<b>\$30,748</b>	<b>\$32,292</b>	<b>\$32,917</b>	<b>\$34,320</b>	<b>\$35,655</b>
<b>Net Revenues /(Shortfall)</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$499)</b>	<b>(\$1,618)</b>	<b>(\$2,853)</b>

Notes:

- Dollars shown in 1,000s.
- Totals above may not sum due to rounding.
- Tables excludes revenues and costs related to serving Lake Mission Viejo Association.
- Capital Project Funding indicated is the portion required for pay-as-you-go funding.

For FY 2022 through FY 2024, the District is projected to generate sufficient revenues to pay for its operating expenses, debt service, and fund a portion of its annual capital improvement program. However, based on the full required needs for pay-as-you-go funding, the District's rate revenues are not sufficient. As will be shown in the Cash Reserves test section, without the additional rate revenues, the District would need to draw on reserves to meet its capital needs, which would lead to the District not meeting its reserve policy goals. With inflation and other cost increases, the level of deficit on the wastewater service line increases from approximately \$0.5 million in FY 2022 to \$2.8 million in FY 2024.

## Projected Revenue Requirements

Table 3-4 Projected Wastewater System Revenue Requirements

REVENUE CATEGORY	ACTUAL		ADDENDUM UPDATED		
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Rate Revenue	\$23,669	\$25,462	\$25,826	\$25,826	\$25,826
Other Revenues	\$7,079	\$6,830	\$6,592	\$6,876	\$6,976
<b>Percent Rate Increase (From Prior Year)</b>	<b>3.90%</b>	<b>4.50%</b>	<b>4.00%</b>	<b>4.50%</b>	<b>4.50%</b>
<b>Additional Rate Revenues</b>	<b>\$0</b>	<b>\$0</b>	<b>\$499</b>	<b>\$1,618</b>	<b>\$2,853</b>
Total Revenues	\$30,748	\$32,292	\$32,917	\$34,320	\$35,655
<b>Total Funding Needs</b>	<b>\$30,748</b>	<b>\$32,292</b>	<b>\$32,917</b>	<b>\$34,320</b>	<b>\$35,655</b>
<b>Net Revenues/(Shortfall)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Notes:

- Dollars shown in 1,000s.
- Totals above may not sum due to rounding.
- Percent Revenue Increases are assumed on January 1 of each Fiscal Year indicated.
- Total Funding Needs are defined in Table 3-3.



### 3.3 CAPITAL IMPROVEMENT PLAN

The District developed a Capital Improvement Program (CIP) Budget which outlines its upcoming capital project needs. The CIP is shown below in the table below by service line. The table also indicates the expected funding sources, including pay-as-you-go funding from either Net Revenues or Reserves.

Table 3-5 Projected Capital Improvement Program Expenditures

CIP BY SERVICE LINE	ACTUAL		ADDENDUM UPDATED		
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Potable Water	\$7,144	\$9,951	\$16,559	\$19,943	\$27,897
Recycled Water	\$45,606	\$16,587	\$6,153	\$7,048	\$3,748
Wastewater	\$9,314	\$14,709	\$43,617	\$32,344	\$13,091
<b>Total Capital Improvements</b>	<b>\$62,064</b>	<b>\$41,247</b>	<b>\$66,329</b>	<b>\$59,335</b>	<b>\$44,737</b>
CIP FUNDING BREAKDOWN	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Bonds, Loans, and Reimbursements	\$45,129	\$41,247	\$39,790	\$23,000	\$35,000
Net Revenues / Reserves	\$16,935	\$0	\$26,539	\$36,335	\$9,737

Notes:

- Dollars shown in 1,000s.
- Totals above may not sum due to rounding.

### 3.4 DEBT SERVICE COVERAGE AND AVAILABLE CASH

#### Debt Coverage Ratio Test

The District's current debt obligations are secured by a pledge of net "System Revenues" which are defined as potable water, recycled water, and wastewater revenues. The obligations require the District to achieve a debt service coverage ratio of 1.15x each year. Additionally, to ensure favorable bond credit ratings and prevent dropping below its legal debt service coverage requirement, the District adopted a Fiscal Policy to maintain a debt service coverage ratio of at least 1.50x. The revenue requirement analysis therefore includes a 1.50x debt service coverage ratio test.

The Addendum projects the District to need a total of \$118 million of new debt in the period covered. This is \$14 million lower than the \$132 million in new debt contemplated by the 2019 Study. Additionally, due to deferred realization and timing of such debt issues, the District's debt service is \$2 million to \$3 million less for the fiscal years 2022-2024. As a result, the District's debt service coverage ratios are much stronger than in the 2019 Study. However, as indicated in the following table, the District would still require rate revenue increases to meet its 1.50x policy goal throughout the period.

**Table 3-6 Projected Debt Service Coverage Prior To Rate Adjustments**

CATEGORY	ACTUAL			ADDENDUM UPDATED	
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Total District Revenues <sup>(1)</sup>	\$91,448	\$100,263	\$96,190	\$96,790	\$97,039
Total District Operating Expenditures	\$70,955	\$75,555	\$78,673	\$81,314	\$84,450
Total District Net Revenues	\$20,493	\$24,708	\$17,517	\$15,477	\$12,588
Total District Debt Service	\$2,057	\$4,898	\$7,735	\$7,748	\$8,625
<b>Debt Service Coverage Ratio</b>	<b>10.0x</b>	<b>5.0x</b>	<b>2.3x</b>	<b>2.0x</b>	<b>1.46x</b>

Notes:

- (1) Includes all revenues prior to rate adjustments from Table 3-1 (potable and recycled water) and Table 3-3 (wastewater), plus projected connection fee revenues of \$1.1 million in FY 2023 and \$2.3 million in FY 2024.
- Dollars shown in 1,000s.

The District's debt service coverage ratios will decrease significantly without any rate revenue increases. Debt coverage would be only 1.46x in FY 2024, which is below the District's 1.50x policy minimum. With the rate increases indicated, however, the District is projected to exceed its target, as shown in the table below.

**Table 3-7 Projected Debt Service Coverage After Rate Adjustments**

CATEGORY	ACTUAL			ADDENDUM UPDATED	
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Total District Revenues <sup>(1)</sup>	\$91,448	\$100,263	\$97,766	\$101,826	\$105,976
Total District Operating Expenditures	\$70,955	\$75,555	\$78,673	\$81,314	\$84,450
Total District Net Revenues	\$20,493	\$24,708	\$19,093	\$20,514	\$21,525
Total District Debt Service	\$2,057	\$4,898	\$7,735	\$7,748	\$8,625
<b>Debt Service Coverage Ratio</b>	<b>10.0x</b>	<b>5.0x</b>	<b>2.5x</b>	<b>2.7x</b>	<b>2.5x</b>

Notes:

- (1) Includes all revenues from Table 3-6, plus revenues from rate increases.
- Dollars shown in 1,000s.

## Unrestricted Cash Reserves Test

The District's adopted Reserve and Fiscal Policies establish certain reserve funding levels, including both minimum requirements and goals. Additionally, the Policies incorporate an over-arching fiscal policy of maintaining one year (365 days) of operating expenditures. As indicated in the tables below, absent any rate increases, the District would not meet this fiscal policy, and would experience a shortfall by FY 2023 of \$1.5 million and \$6.6 million in FY 2024. Under the rate increases assumed, the District is projected to meet its Policy goals in both Fiscal Years with a slight surplus of less than one "day" of operating expenses.

**Table 3-8 Projected Cash Reserves Prior To Rate Adjustments**

AMOUNTS	ACTUAL			ADDENDUM UPDATED	
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Minimum Reserves Required <sup>(1)</sup>	\$72,573	\$75,555	\$78,673	\$81,326	\$84,457
Projected Reserves Available <sup>(2)</sup>	\$90,454	\$101,668	\$103,496	\$79,861	\$77,856
<b>Surplus/(Shortfall)</b>	<b>\$17,881</b>	<b>\$26,113</b>	<b>\$24,823</b>	<b>(\$1,465)</b>	<b>(\$6,601)</b>

Notes:

- (1) Equal to total District expenses in each such year, or "365 days" of operating expenses.
- (2) Projected reserves include estimated connection fees revenues of \$1.1 million in FY 2023 and \$2.3 million in FY 2024.
  - Dollars shown in 1,000s.
  - Totals above may not sum due to rounding.

**Table 3-9 Projected Cash Reserves After Rate Adjustments**

AMOUNTS	ACTUAL			ADDENDUM UPDATED	
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Minimum Reserves Required <sup>(1)</sup>	\$72,573	\$75,555	\$78,673	\$81,314	\$84,445
Projected Reserves Available <sup>(2)</sup>	\$90,454	\$101,668	\$105,105	\$81,601	\$84,915
<b>Surplus/(Shortfall)</b>	<b>\$17,881</b>	<b>\$26,113</b>	<b>\$26,433</b>	<b>\$287</b>	<b>\$469</b>

Notes

- (1) Equal to total District expenses in each such year, or "365 days" of operating expenses.
- (2) Projected reserves include estimated connection revenues of \$1.1 million in FY 2023 and \$2.3 million in FY 2024.
  - Dollars shown in 1,000s.
  - Totals above may not sum due to rounding.

## 4 WATER SHORTAGE CONTINGENCY RATES

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*This section of the Addendum documents the District's development of water shortage contingency rates. This is a new section established by the Addendum and does not update any previous section in the 2019 Study.*

### Water Shortage Contingency Rates

Water shortage contingency rates ensure the District can continue to generate sufficient revenues to operate, manage, and maintain its facilities and services in times where potable water usage by its customers is significantly reduced due to voluntary or mandatory conservation. In such instances, the District expects to incur additional new costs for customer outreach, usage monitoring, and regulatory requirements. In addition, the District would not be able to recover certain fixed costs of service it otherwise would through normal levels of outdoor water usage.

Water shortage contingency rates are designed to recover these new costs and foregone revenues in an equitable way compliant with California constitution article XIII D, section 6, commonly referred to as Proposition 218. This section outlines the District's development of its potable water shortage contingency rates, which reduce the amount of water customers may use within existing commodity tiers, known as a "Tier Width Reduction" approach. Under the approach, customers who do not cut back their potable water usage as indicated will pay for such water at the higher price of the next tier.

Utilizing the water shortage contingency rates would be tied to the District's Urban Water Management Plan (UWMP), which includes a Water Supply Shortage Contingency Plan (Plan). The Plan identifies six increasing Stages of potable water usage reductions ranging from 10% to more than 50%. The Stages, which are numbered 1 through 6, are based on hypothetical increasing levels of water supply shortage severity. **The water shortage contingency rates would not go into effect unless expressly authorized. Implementation of the water shortage contingency rates would require a separate action by the Board of Directors if the District has also implemented a specific Stage under the Plan.**

## Reduced Tier Widths

The tier reduction approach is designed to recover lost revenues and new costs incurred related to implementing each Stage by appropriately allocating these amounts by customer class and usage tier. Any additional foregone revenues or costs would be covered from unrestricted District revenues or reserves. Based on the methodology and calculations outlined in the next section, the reduced potable water tier widths, for each Stage of the Plan, are identified in the Table below.

Table 1: Potable Water Tier Width Reductions

COMMODITY TIERS	TIERED RATES*	BASE USAGE / TIER WIDTHS	TIER WIDTH REDUCTIONS			
			STAGE 2 (10-20%)	STAGE 3 (20-30%)	STAGE 4 (30-40%)	STAGE 5 (40-50%)
<b>RESIDENTIAL</b>						
Tier 1	\$2.46	Indoor Budget	0%	0%	0%	-5%
Tier 2	\$2.86	Outdoor Budget	-5%	-20%	-30%	-40%
Tier 3	\$3.76	200% T1+T2	-20%	-40%	-40%	-50%
Tier 4	\$6.17	> 200%	NA	NA	NA	NA
<b>IRRIGATION</b>						
Tier 1	\$2.95	Total Budget	-10%	-20%	-40%	-70%
Tier 2	\$4.01	200% T1	-20%	-30%	-50%	-70%
Tier 3	\$6.59	> 200%	NA	NA	NA	NA
<b>COMMERCIAL</b>	\$2.51	NA	NA	NA	NA	NA

\*Based on recommended rates expected to be effective as of January 1, 2022.

Note that while the District lacks any tier width mechanism for Commercial customers, such customers do not impact the District's net revenues if they reduce usage. Further, such customers are not expected to be a significant part of the District's outreach on usage reductions.

## Water Shortage Contingency Rate Development Methodology

The District's approach to water shortage rates is to reduce the amount of potable water available at each tier, depending on the Stages of the Plan and anticipated reductions in customer demands. The percentage reductions in tiers are designed to generate additional revenues and recover a significant portion of the costs and foregone commodity revenues of each Stage. The approach incorporates tier reductions for Stages 2 through 5 of the District's Plan<sup>3</sup>. Customers that reduce their usage as indicated would not face any increase to their bills. Customers that do not reduce their usage as indicated would pay for that usage at the next highest tier's pricing level.

First, the District identified estimated demand reductions, by each customer class and tier, under Stages 2 through 5 of the Plan. Demands were reduced to meet the lower bound of each Stage, for example, 20%

<sup>3</sup> Stage 1 is not included as the District does not anticipate this Stage to result in material costs to recover. Stage 6, which involves usage reductions greater than 50%, is not included given the wide range it covers and greater uncertainty on approach and potential cost impacts.

for Stage 2, which has a range of 20-30%. The estimated reduced demands were based on several factors, including data from the District’s experience with customer usage reductions in previous drought period of 2014-2016. The District also incorporated expected reductions based on its plans for customer outreach, messaging, and use restrictions identified in each Stage of the District’s Plan. For example, the Plan emphasizes reductions from domestic irrigation accounts and residential customers with higher outdoor usage. The Plan outreach and restrictions also focus in particular on customers who are out of budget (residential Tiers 3 and 4; irrigation customers Tiers 2 and 3).

Table 2: Estimated Customer Demand Reductions

POTABLE WATER CUSTOMER TYPES AND TIERS	STATUS QUO DEMAND (AF)	STAGE 2 REDUCTION %	STAGE 3 REDUCTION %	STAGE 4 REDUCTION %	STAGE 5 REDUCTION %
<b>RESIDENTIAL</b>					
Tier 1	10,303	0%	5%	10%	10%
Tier 2	4,104	15%	20%	30%	55%
Tier 3	2,052	30%	70%	75%	90%
Tier 4	275	30%	80%	85%	90%
<b>IRRIGATION</b>					
Tier 1	3,092	15%	25%	50%	75%
Tier 2	656	30%	50%	90%	90%
Tier 3	248	35%	80%	90%	95%
<b>COMMERCIAL</b>					
	890	5%	10%	20%	20%
Total Demands (AF)	21,620	19,514	17,239	15,048	12,915
<b>Demand Reduction %</b>	<b>NA</b>	<b>10%</b>	<b>20%</b>	<b>30%</b>	<b>40%</b>

Next, the District identified the total potential costs to be recovered under each Stage of the Plan by customer class and potable water commodity tier. This includes a portion of certain costs recovered by potable commodity rates under normal customer usage which would not be recovered at lower levels of usage. These are reflected as “net revenues” in the table below.

**Table 3: Net Commodity Revenues by Customer and Tier**

CUSTOMER TYPE / TIERS	DEMANDS (CCF)	RATE (PER CCF)	REVENUES	COST (PER CCF)*	COSTS	NET REVENUES BY TIER
<b>RESIDENTIAL</b>						
Tier 1	4,487,781	\$2.46	\$11,039,941	\$2.48	\$11,151,723	-\$111,782
Tier 2	1,787,666	\$2.86	\$5,112,726	\$2.96	\$5,285,429	-\$172,703
Tier 3	893,925	\$3.76	\$3,361,160	\$2.96	\$2,642,987	\$718,173
Tier 4	119,757	\$6.17	\$738,904	\$2.96	\$354,076	\$384,828
<b>IRRIGATION DOMESTIC</b>						
Tier 1	1,346,807	\$2.95	\$3,973,080	\$2.96	\$3,981,980	-\$8,900
Tier 2	285,803	\$4.01	\$1,146,068	\$2.96	\$845,006	\$301,062
Tier 3	108,212	\$6.59	\$713,118	\$2.96	\$319,941	\$393,177
<b>COMMERCIAL</b>	<b>387,800</b>	<b>\$2.51</b>	<b>\$973,377</b>	<b>\$2.48</b>	<b>\$963,647</b>	<b>\$9,731</b>
<b>Totals</b>	<b>9,417,752</b>	<b>NA</b>	<b>27,058,374</b>	<b>NA</b>	<b>\$25,544,789</b>	<b>\$1,513,585</b>

\*Costs per ccf reflects the cost of fully treated water purchased through the Municipal Water District of Orange County, expected to be \$2.91 per ccf as of January 1, 2022, plus \$0.05 per ccf reflecting the District’s pumping and transmission costs. Lower cost per ccf for Tier 1 Residential and Commercial reflects approximately 84% of purchases at those Tiers from the Baker Treatment Plant (8,400 acre-feet), at fully treated cost of \$2.28 per ccf.

The costs of customer outreach, usage monitoring, and regulatory requirements were also identified under each Stage of its Plan. The District estimated its costs under each stage based on its cost experience during the prior significant water reductions implanted in 2014-2016, where the District incurred approximately \$700,000 of such costs over a 2-year period. It is estimated costs will range from \$350,000 per year in Stage 2 to up to \$500,000 per year in Stage 5. The total costs to be recovered, combining these costs, plus the foregone commodity net revenues, are shown in the table below.

Table 4: Total Costs to Recover from Water Shortage Contingency Rates

SHORTAGE CONTINGENCY STAGES	STAGE 2	STAGE 3	STAGE 4	STAGE 5
<b>CONTINGENCY STAGE REDUCTIONS</b>	<b>UP TO 20%</b>	<b>UP TO 30%</b>	<b>UP TO 40%</b>	<b>UP TO 50%</b>
<i>Demand % Decrease Modeled</i>	10%	20%	30%	40%
<b>NEW COSTS INCURRED / NOT RECOVERED:</b>				
New Costs for Public Outreach Efforts	\$350,000	\$400,000	\$450,000	\$500,000
Unrecovered Commodity Costs	\$532,077	\$1,234,274	\$1,425,055	\$1,526,281
<b>Total Estimated Costs Incurred</b>	<b>\$882,077</b>	<b>\$1,634,274</b>	<b>\$1,875,055</b>	<b>\$2,026,281</b>

The table below indicates the projected revenue recovery in total and by customer type under each Stage of the Plan. The District has designed the tier width reductions to be rounded figures to better align with its expected customer outreach and messaging, as opposed to utilizing specified percentages. Any foregone revenues or costs would be covered from unrestricted District revenues or reserves.

Table 5: Total New Revenues Generated from Water Shortage Contingency Rates

CUSTOMER TYPES	STAGE 2	STAGE 3	STAGE 4	STAGE 5
<b>RESIDENTIAL</b>				
Costs / Net Revenues to Recover	\$523,346	\$1,043,657	\$1,078,965	\$1,195,648
<b>New Revenues from Tier Width Reduction</b>	<b>\$406,609</b>	<b>\$791,677</b>	<b>\$915,200</b>	<b>\$1,035,887</b>
<i>Recovered Ratio</i>	78%	76%	85%	87%
<b>DOMESTIC IRRIGATION</b>				
Costs / Net Revenues to Recover	\$350,846	\$581,515	\$781,953	\$818,460
<b>New Revenues from Tier Width Reduction</b>	<b>\$283,650</b>	<b>\$481,112</b>	<b>\$669,868</b>	<b>\$727,107</b>
<i>Recovered Ratio</i>	81%	83%	86%	89%
<b>COMMERCIAL</b>				
Costs / Net Revenues to Recover	\$7,885	\$9,101	\$14,137	\$12,173
<b>New Revenues from Tier Width Reduction</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<i>Recovered Ratio</i>	0%	0%	0%	0%



## 5 LIST OF APPENDICES

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### APPENDIX A — GENERAL ASSUMPTIONS, OPERATION AND MAINTENANCE (O&M) COSTS, REVENUES, CAPITAL COSTS, FUNDING

*Appendix A includes detailed calculations for the subsequent items:*

- *Assumptions (Escalation Factors)*
- *Service Line Allocation*
- *Revenue Requirement*
- *Capital Funding Summary*
- *Capital Projects*
- *Debt*
- *Water Purchases*

## APPENDIX B — POTABLE AND RECYCLED WATER CUSTOMER AND DEMAND FORECAST, FUNCTIONAL AND CUSTOMER ALLOCATIONS

*Appendix B includes detailed calculations for the subsequent items:*

- *Customer Forecast – Potable and Recycled Water*
- *Customer Data*
- *Functional Allocation – Potable Water*
- *Customer Allocation – Potable Water*
- *Function Allocation – Recycled Water*
- *Customer Allocation – Recycled Water*

## APPENDIX C – POTABLE AND RECYCLED WATER FIXED AND COMMODITY CHARGES AND POWER SURCHARGE

*Appendix C includes detailed calculations for the subsequent items:*

- *Water and Recycled Water Fixed Charges*
- *Water Commodity Rate Design*
- *Recycled Water Commodity Rate Design*
- *Power Surcharge Rate Design*

## APPENDIX D – WASTEWATER SYSTEM FORECAST, FUNCTIONAL AND CUSTOMER ALLOCATIONS, FIXED AND COMMODITY CHARGES

*Appendix includes detailed calculations for the subsequent items:*

- *Wastewater Customer Forecast*
- *Wastewater Customer Data*
- *Functional Allocation – Wastewater*
- *Customer Allocation – Wastewater*
- *Wastewater Rates*