



# WESTERN MUNICIPAL WATER DISTRICT COST OF SERVICE STUDY REPORT

Murrieta Wastewater Service Area

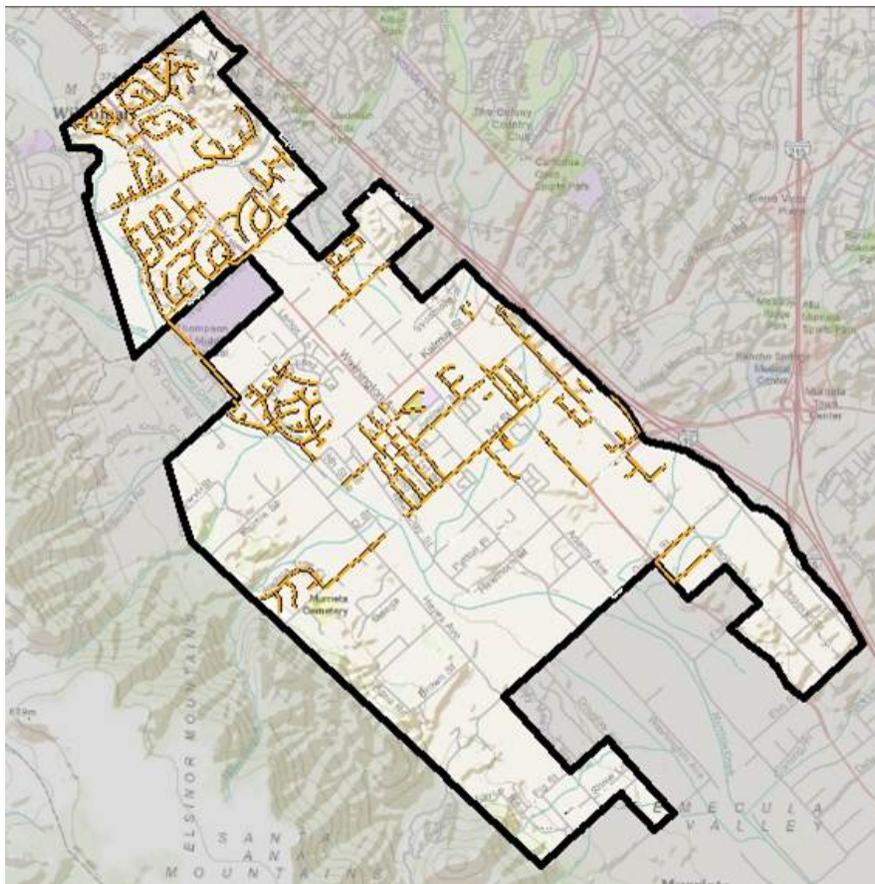
For rates effective July 1, 2021, July 1, 2022, July 1, 2023, July 1, 2024  
Version 2 – May 13, 2021

# Murrieta Wastewater Service Area

## Service Area Description

Western Municipal Water District (Western or District) provides wastewater (sewer) service to properties in its Murrieta Wastewater Service Area. Within this service area, there are 76 commercial accounts along the Madison Avenue corridor that discharge to Eastern Municipal Water District's (Eastern) treatment facility. Western contracts with Eastern to provide this treatment service. There are additional customers in this service area that discharge to the Santa Rosa Regional Resources Authority (SRRRA) treatment facility, likewise under contract with Western.

## Service Area Map



# Treated by Eastern Municipal Water District (Eastern)

## Inputs into the District’s Wastewater Rate Model

Charges from Eastern. An input into the rate model is the per-EDU rate that Eastern charges to treat and dispose of the wastewater generated by Western’s customers. “EDU” stands for “equivalent dwelling unit” and means a unit of measurement equal to an approximation of the amount of sewage generated by an average single-family residence and is expressed in gallons per day (gpd). In determining the rate charged to its customers, Western passes through the EDU rate from Eastern, as well as adds an amount per EDU to cover the District’s administrative costs and collection system maintenance costs (“Western Costs”). Eastern’s rate is a calendar year rate, in order to calculate a fiscal year rate, an average of both calendar year rates is used. For example, for Fiscal Year 2021-2022, Western takes the calendar year 2021 rate for the first half of the fiscal year and then projects an increase for the second half. For the rates, Western is projecting an annual 4% increase in the rates from Eastern based on historical increases. The EDU rate used for Eastern in the rate models is presented in Table 1 below for all four years.

**Table 1 – Eastern’s Rate per EDU rate**

Rate per EDU per Month	FY 2021-2022	FY 2022-2023	FY 2023-2024	FY 2024-2025
Eastern’s Service Area No. 34 Rate: [(\$ Daily Service Charge Rate Per Day x 365 days) / 12 Months]	\$ 35.37	\$ 36.79	\$ 38.26	\$ 39.79
Eastern’s Monthly Capital Charge	\$ 2.81	\$ 2.92	\$ 3.03	\$ 3.16
<b>Total Rate per EDU per Month</b>	<b>\$ 38.18</b>	<b>\$ 39.71</b>	<b>\$ 41.29</b>	<b>\$ 42.95</b>

Number of EDUs. Another input into the rate model is the number of EDUs assigned to Western customers within the service area. All single-family residential customers are assigned one EDU, whereas commercial customers are assigned multiple EDUs depending on industry-determined standards for various types of businesses. Factors considered in the assignment of EDUs for commercial customers include, for example, facility square footage, number of restrooms, kitchen facilities, seating capacity, among others. EDU billing reflects the capacity and peak demand that a customer places on the wastewater system. Please refer to Ordinance 393 for more information on how Western assigns EDUs. Table 2 below shows the number of EDUs from customers with flows going to the Eastern plant based on a 1% annual customer growth escalator.

**Table 2 – Equivalent Dwelling Units (EDUs)**

	FY 2021-2022 A	FY 2022-2023 B = A + (1 X 1%)	FY 2023-2024 C = B + (1 X 1%)	FY 2024-2025 D = C + (1 X 1%)
EDUs	698.96	705.95	713.01	720.14

**Western Costs.** The final input into the rate model is the calculation of Western Costs that are allocated to its Murrieta Wastewater Service Area customers. The Board-adopted operating budget for Fiscal Year 2021-2022 was the basis for calculating the Western Costs. The operating budget includes all expenses associated with operating and maintaining the conveyance facilities such as labor, vehicle use, system maintenance and supplies, debt service obligations, as well as reserve funding such as asset replacement reserves and operating reserves. For Fiscal Years 2022-2023, 2023-2024, and 2024-2025 expenses were projected to increase based on historical trends. The operating budget is for the entire Murrieta Wastewater Service Area, which includes customers served by both Eastern and the Santa Rosa Regional Resources Authority (SRRRA). The operating budget is used to calculate the Western Costs rate per EDU per month for all customers in the service area. This calculation is presented in Table 3 below.

**Table 3 – Summarized Operating Budget**

<b>Expense Category</b>	<b>FY 2021-2022</b>	<b>FY 2022-2023</b>	<b>FY 2023-2024</b>	<b>FY 2024-2025</b>
Labor and Benefits	\$ 59,331	\$ 63,241	\$ 67,413	\$ 71,866
Maintenance and Supplies	12,832	13,409	14,013	14,643
Administrative	434,520	349,573	365,304	381,743
Other Operating Expenses	7,058	7,376	7,708	8,054
Asset Replacement Reserve Funding	108,000	113,400	119,070	125,024
Less Standby Charge Revenue	(131,000)	(131,000)	(131,000)	(131,000)
Less Use of Operating Reserve Funding	(100,000)			
<b>Total Western Costs</b>	<b>\$ 390,741</b>	<b>\$ 415,999</b>	<b>\$ 442,507</b>	<b>\$ 470,330</b>
Total EDUs in the Murrieta Wastewater Service Area (Treated by Eastern & SRRRA)	4,717	4,764	4,811	4,860
<b>Western Costs per EDU per Month (Expenses ÷ EDUs ÷ 12 Months)</b>	<b>\$ 6.90</b>	<b>\$ 7.28</b>	<b>\$ 7.66</b>	<b>\$ 8.07</b>

**Revenue Requirement**

To determine the proposed rates for wastewater service, the amount of revenue required to provide reliable wastewater service is determined. This “Revenue Requirement” is the total of (1) Eastern’s rate per EDU per month multiplied by 12 months and multiplied by the number of EDUs, plus (2) Western’s costs from Table 3. All sources of revenue in the service area are then applied against the revenue requirement, including revenue anticipated from current rates for the fiscal year 2021-2022 column and prior year proposed rates for the subsequent fiscal years are deducted from the revenue requirement. The resulting unfunded revenue requirement (shortfall) is the amount that is needed to be received from a rate increase. This calculation is presented in Table 4 below.

**Table 4 – Revenue Requirement & Shortfall Determination**

	<b>FY 2021-2022</b>	<b>FY 2022-2023</b>	<b>FY 2023-2024</b>	<b>FY 2024-2025</b>
Eastern Rate from Table 1 x EDUs from Table 2 x 12 months	\$ 320,242	\$ 363,387	\$ 353,311	\$ 371,051
Western Cost from Table 3 x EDUs from Table 2 x 12 months	57,877	61,676	65,539	69,725
<b>Total Revenue Requirement</b>	<b>\$ 378,119</b>	<b>\$ 398,063</b>	<b>\$ 418,850</b>	<b>\$ 440,776</b>
Less Revenue from Existing Rates EDUs x the current/previous monthly rate x 12 months	- 363,871	- 381,918	- 402,047	- 422,928
<b>Revenue Shortfall (amount needed from rate increase)</b>	<b>\$ 14,248</b>	<b>\$ 16,145</b>	<b>\$ 16,803</b>	<b>\$ 17,848</b>

**Proposed EDU Rates**

The proposed EDU rates needed to meet the Revenue Shortfall as presented in Tables 4 above are shown in Tables 5 below.

**Table 5 – EDU Rate Increase Needed to Meet Revenue Shortfall (Per EDU, per month)**

	<b>FY 2021-2022</b>	<b>FY 2022-2023</b>	<b>FY 2023-2024</b>	<b>FY 2024-2025</b>
Revenue Shortfall from Table 4 ÷ EDUs from Table 2 ÷ 12 months	\$ 1.70	\$ 1.91	\$ 1.97	\$ 2.06

**Proposed Rates**

Tables 6 below summarizes current and proposed rates needed to meet the revenue requirement for providing wastewater service.

**Table 6 – Current and Proposed Monthly EDU Rates**

<b>Current</b>	<b>FY 2021-2022</b>	<b>FY 2022-2023</b>	<b>FY 2023-2024</b>	<b>FY 2024-2025</b>
\$ 43.38	\$ 45.08	\$ 46.99	\$ 48.95	\$ 51.02

# Treated by Santa Rosa Regional Resources Authority (SRRRA)

## Inputs into the District’s Wastewater Rate Model

Charges from SRRRA. An input into the rate model is the primary/secondary treatment expense, capital replacement expense, and debt service obligation to SRRRA based on the annual flow allocation to Western. These obligations to SRRRA are divided by an annual EDU count, discussed further below, to come up with a per-EDU rate from SRRRA. “EDU” stands for “equivalent dwelling unit” and means a unit of measurement equal to an approximation of the amount of sewage generated by an average single-family residence and is expressed in gallons per day (gpd). In determining the rate charged to its customers, Western passes through the calculated EDU rate from SRRRA, as well as adds an amount per EDU to cover the District’s administrative costs and collection system maintenance costs (“Western Costs”). For the SRRRA EDU rates, Western is projecting an annual 1% increase in the obligation. The EDU rates used for SRRRA in the rate model are presented in Table 7 below for all four years.

**Table 7 – SRRRA’s Rate per EDU rate**

<b>Rate per EDU per Month</b>	<b>FY 2021-2022</b>	<b>FY 2022-2023</b>	<b>FY 2023-2024</b>	<b>FY 2024-2025</b>
SRRRA’s Monthly Rate (Treatment, Capital Replacement and Debt Service Obligations combined)	\$ 35.68	\$ 35.86	\$ 36.35	\$ 36.84

Number of EDUs. Another input into the rate model is the number of EDUs assigned to Western customers within the service area. All single-family residential customers are assigned one EDU, whereas commercial customers are assigned multiple EDUs depending on industry-determined standards for various types of businesses. Factors considered in the assignment of EDUs for commercial customers include, for example, facility square footage, number of restrooms, kitchen facilities, seating capacity, among others. EDU billing reflects the capacity and peak demand that a customer places on the wastewater system. Please refer to Ordinance 393 for more information on how Western assigns EDUs. Table 8 below shows the number of EDUs.

**Table 8 – Equivalent Dwelling Units (EDUs)**

	<b>FY 2021-2022</b>	<b>FY 2022-2023</b>	<b>FY 2023-2024</b>	<b>FY 2024-2025</b>
	<b>A</b>	<b>B = A + (1 X 1%)</b>	<b>C = B + (1 X 1%)</b>	<b>D = C + (1 X 1%)</b>
EDUs	4,017.72	4,057.90	4,098.47	4,139.46

Western Costs. The final input into the rate model is the calculation of Western Costs that are allocated to its Murrieta Wastewater Service Area customers. The Board-adopted operating budget for Fiscal Year 2021-2022 was the basis for calculating the Western Costs. The operating budget includes all expenses associated with operating and maintaining the conveyance facilities such as labor, vehicle use, system maintenance and supplies, debt service obligations, as well as reserve funding such as asset replacement reserves and operating reserves. For Fiscal

Years 2022-2023, 2023-2024, and 2024-2025 expenses were projected to increase based on historical trends. The operating budget is for the entire Murrieta Wastewater Service Area, which includes customers served by both Eastern and SRRRA. The operating budget is used to calculate the Western Costs rate per EDU per month for all customers in the service area. This calculation is presented in Table 9 below.

**Table 9 – Summarized Operating Budget**

<b>Expense Category</b>	<b>FY 2021-2022</b>	<b>FY 2022-2023</b>	<b>FY 2023-2024</b>	<b>FY 2024-2025</b>
Labor and Benefits	\$ 59,331	\$ 63,241	\$ 67,413	\$ 71,866
Maintenance and Supplies	12,832	13,409	14,013	14,643
Administrative	434,520	349,573	365,304	381,743
Other Operating Expenses	7,058	7,376	7,708	8,054
Asset Replacement Reserve Funding	108,000	113,400	119,070	125,024
Less Standby Charge Revenue	(131,000)	(131,000)	(131,000)	(131,000)
Less Use of Operating Reserve Funding	(100,000)			
<b>Total Western Costs</b>	<b>\$ 390,741</b>	<b>\$ 415,999</b>	<b>\$ 442,507</b>	<b>\$ 470,330</b>
Total EDUs in the Murrieta Wastewater Service Area (Treated by Eastern & SRRRA)	4,717	4,764	4,811	4,860
<b>Western Costs per EDU per Month (Expenses ÷ EDUs ÷ 12 Months)</b>	<b>\$ 6.90</b>	<b>\$ 7.28</b>	<b>\$ 7.66</b>	<b>\$ 8.07</b>

**Revenue Requirement**

To determine the proposed rates for wastewater service, the amount of revenue required to provide reliable wastewater service is determined. This “Revenue Requirement” is the total of (1) SRRRA’s rate per EDU per month multiplied by 12 months and multiplied by the number of EDUs, plus (2) Western’s costs from Table 9. All sources of revenue in the service area are then applied against the revenue requirement, including revenue anticipated from current rates for the fiscal year 2021-2022 column and prior year proposed rates for the subsequent fiscal years are deducted from the revenue requirement. The resulting unfunded revenue requirement (shortfall) is the amount that is needed to be received from a rate increase. The revenue requirement and the subsequent revenue shortfall are calculated in Table 10 below.

**Table 10 – Revenue Requirement & Shortfall Determination**

	<b>FY 2021-2022</b>	<b>FY 2022-2023</b>	<b>FY 2023-2024</b>	<b>FY 2024-2025</b>
SRRRA Rate per EDU from Table 7 x EDUs from Table 8 x 12 months	\$ 1,720,347	\$ 1,746,239	\$ 1,787,548	\$ 1,829,769
Western Costs from Table 9 x EDUs from Table 8 x 12 months	332,690	354,506	376,688	400,821
<b>Total Revenue Requirement</b>	<b>\$ 2,053,037</b>	<b>\$ 2,100,745</b>	<b>\$ 2,164,236</b>	<b>\$ 2,230,590</b>
Less Revenue from Existing Rates EDUs x the current/previous monthly rate x 12 months	- 2,053,037	- 2,073,476	- 2,121,453	- 2,185,889
<b>Revenue Shortfall (amount needed from rate increase)</b>	<b>\$ 0</b>	<b>\$ 27,269</b>	<b>\$ 42,783</b>	<b>\$ 44,701</b>

**Proposed EDU Rates**

The proposed EDU rates needed to meet the Revenue Shortfall as presented in Table 10 above are shown in Table 11 below.

**Table 11 – EDU Rate Increase Needed to Meet Revenue Shortfall (Per EDU, per month)**

	<b>FY 2021-2022</b>	<b>FY 2022-2023</b>	<b>FY 2023-2024</b>	<b>FY 2024-2025</b>
Revenue Shortfall from Table 10 ÷ EDUs from table 8 ÷ 12 months	\$ 0	\$ 0.56	\$ 0.87	\$ 0.90

**Proposed Rates**

Table 12 below summarizes current and proposed rates needed to meet the revenue requirement for providing wastewater service.

**Table 12 – Current and Proposed Monthly EDU Rates**

<b>Current</b>	<b>FY 2021-2022</b>	<b>FY 2022-2023</b>	<b>FY 2023-2024</b>	<b>FY 2024-2025</b>
\$ 42.58	\$ 42.58	\$ 43.14	\$ 44.01	\$ 44.91

**Effective Date of Rates**

Rates are effective with all wastewater charges appearing on billing statements issued on or after July 1 dates.