

Public Hearing  
October 18, 2023

*City of Escondido*  
*2023 Cost-of-Service Utility Rate Study*



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# City of Escondido – 2023 Cost-of-Service Utility Rate Study

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## Executive Summary

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The City of Escondido (City) provides water, wastewater, and recycled water services to most customers within City limits and portions of the unincorporated areas of the County of San Diego. The City serves water to approximately 22 square miles within the 33 square mile incorporated area, plus approximately 9 square miles outside of the incorporated area. Rincon Municipal Water District provides water service to approximately 11 square miles within the City limits. The City must collect sufficient revenues from its customers to pay the costs to (1) prudently operate and maintain its water and wastewater enterprise systems or “utilities”; (2) build, renew, replace, and upgrade its infrastructure, which includes pipelines, treatment plants, reservoirs, and pumps, as well as administration buildings and related facilities; and (3) ensure a prudent reserve of funds. The City has existing and pending debt obligations, including Certificates of Participation (COPs), revenue bonds, I-Bank Loans, and state/federal low-interest loans. The pending debts are state/federal loans that have been secured, but the debt amortization schedules may adjust based on the final cost of the projects currently being funded. Once the projects are completed and final costs confirmed, the amortization schedules will be adjusted and set for the entire term. In addition to funding the utility’s operations, capital needs and reserves, the City must maintain 120% coverage over the annual debt payments. This debt coverage requirements were accounted for within this Study.

The City collects revenues primarily through user fees (rates and charges) that are designed to ensure that each customer pays their fair share of their total use of the water and wastewater systems. This Cost-of-Service Study is intended to (1) project the cost of operating each utility over a five-year period (the financial plan); (2) allocate those costs among customers in a way that ensures that each customer pays its fair share of those costs in compliance with California Constitution Article XIII D, section 6, also known as Proposition 218 (the rate structure).

The City’s most recent 5-year rate schedule was adopted in January 2017 and set rates through Fiscal Year 2020-2021 (FY 2021). As such, **the City has not increased the City’s portion of the utility rates for more than two years**. The only increases since FY 2021 were pass through increases for purchased water from San Diego County Water Authority (SDCWA). The City has experienced and absorbed significant operating and capital expense increases due to the recent hyper-inflationary climate over the past two years. These increases continue to grow, and the City determined that its utility financial plans required updating to identify its revenue needs over the short-term and long-term. The City hired IB Consulting to conduct a comprehensive cost-of-service analysis to establish rates for the utility systems for the 5-year period from FY 2024 through FY 2028 (Rate Setting Period). That analysis is set forth below.

## Water Utility Summary

### Financial Plan

Updating the water utility’s long-term financial plan and performing a comprehensive cost-of-service analysis is a prudent business practice to ensure the City can fully fund its revenue needs through FY 2028 and beyond. In reviewing and updating water rates, the first step is to thoroughly check the financial health of the water utility. Based on a financial review of the water utility at current rates, the City has a healthy reserve balance that meets its reserve policies. The water utility is projected to generate approximately \$7M in net operating income in FY 2024 due to an influx of local surface water from the recent historic wet winter. The available local surface water will offset approximately 8,000 Acre Foot (AF<sup>1</sup>) of imported water from SDCWA. Historically, the City only yields 1,000 – 2,000 AF of local surface water annually. In FY 2025, the City is projecting to utilize 4,000 AF to offset imported water. The reduction in available local water will require more

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<sup>1</sup> One Acre Foot of water equals 325,851 gallons

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expensive imported water to serve total water demand. In subsequent years (FY 2026 – FY 2028), local surface water is reduced to 1,000 AF, which is the amount that is typically budgeted. The water utility's net operating income is projected to be less than \$250k in FY 2025 as local surface water reduces and becomes an operating deficit by FY 2026. Separate from operating expenses, the water utility also has significant capital projects over the next five years totaling \$156M, including the Lake Wohlford Dam Project (\$103M), the Emergency Treated Water Connection (\$7M), and Alley Utility Replacement (\$4M). The City recently completed the San Pasqual Undergrounding, totaling \$45M, which undergrounds a portion of the City's canal that conveys water from Lake Henshaw to the water treatment plant. With these significant capital projects, the City secured several grants and state/federal low-interest loans, including a Water Infrastructure Finance Initiative Act (WIFIA) loan to fund \$65M of the Lake Wohlford Dam Project. In total, the City has secured \$124M in grants, state/federal low-interest loans, and cost-sharing with the Vista Irrigation District (VID) for half of the San Pasqual Undergrounding (\$20M).

Even with the City's superb job securing grants and low-interest state/federal loans, the Capital Improvement Plan (CIP) still requires approximately \$80M in funding from rates/reserves over the Rate Setting Period. However, without rate increases, reserves would be below the minimum requirement in FY 2026 and depleted by FY 2027. The proposed financial plan generates an additional \$96M in rate revenue, phased in over the Rate Setting Period to cover increased operational costs, fully fund the water CIP, and maintain healthy reserves.

### Rate Structure

The water rate structure has both fixed and variable components. The fixed components include a City base fixed charge and two separate pass-through fixed charges, (Readiness-to-Serve charge and Infrastructure Access charge). Variable rates differ by customer class due to variations in their use of the system and, therefore, the costs to serve those customer classes. Residential customers (Single-Family, Multi-Family, and Residential/Agricultural) are subject to tiered rates, charged in thousand-gallon (kgal) increments. All other customer classes pay their proportionate share of costs through uniform rates per kgal.

The proposed fixed charges will consist of a base charge for City operations and purchased water fixed charges incurred by the City from Metropolitan Water District (MWD) and SDCWA. Two SDCWA fixed charges, Emergency Storage (ES) and Supply Reliability (SR), will be separated from the wholesale fixed charges. The City has customers that are part of SDCWA's Permanent Special Agricultural Water Rate Program (PSAWR). PSAWR customers may have their water supply interrupted during water shortage conditions as part of the program. Therefore, PSAWR customers do not pay for ES or SR. As such, the proposed fixed charges differ between PSAWR customers and all other potable customers.

Variable rates vary by customer class, with Single-Family tiered allotments adjusted to reflect updated usage characteristics throughout the year (Tier 1 = winter average, Tier 2 = summer average, and Tier 3 = greater than Tier 2). The differentials between the proposed tiered rates have been recalibrated to reflect the updated three tiers based on the cost-of-service analysis. Multi-Family customers will adjust from three-tiers to a two-tiered rate structure based on usage characteristics (Tier 1 = winter average and Tier 2 = usage above Tier 1). Multi-Family complexes may vary significantly from each other due to density factors, landscaping needs, onsite laundry facilities, and recreational facilities such as pools. Therefore, determining an equitable breakpoint between Tier 2 and Tier 3 to apply to all Multi-Family accounts would be difficult to achieve. The City also has Residential/Agricultural accounts for properties that may grow crops and meet certain City requirements. The Residential/Agricultural variable rates will maintain a two-tiered rate structure because their outdoor usage includes serving agricultural needs that may vary drastically between accounts.

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Due to the broad spectrum of land uses of non-residential accounts (Commercial, Irrigation, SD Zoo Safari Park, Special Unfiltered, and PSAWR), these customer classes rate structures will maintain a uniform rate to ensure equity between accounts within the corresponding customer classes. Customer classes with a uniform rate are still paying their fair share of costs as each cost component that makes up the variable rates are first allocated to each customer class based on the demand placed on the system. Doing so ensures no subsidies occur between customer classes when designing variable rates. For example, the Commercial customer class’s proportional share of total variable costs in FY 2024 equals \$6.6M. Whether that total variable cost is recovered through a uniform rate or proposed tiers, the total cost to recover from Commercial would not change.

PSAWR customers also receive a credit from the authority for water usage over what is needed for indoor residential use (the credit is applied to usage over 17 kgals per SDCWA guidelines). PSAWR customers are charged a uniform rate, however, the Study identifies a second tier to track the amount of monthly usage over 17 kgals to be reported to SDCWA for the variable credit.

The City has Recycled customers and are charged the same fixed meter charges as potable. The remaining cost allocated to Recycled customers is recovered through a uniform rate. Recycled revenues are reported under the wastewater utility.

Lastly, the City has contract customers identified as Interim Potable Water Rate (IPWR). IPWR contract customers are those customers that agreed to convert to recycled water once (and if) the recycled system’s expansion reaches their property. The total revenue generated by these contract customers are shown as a revenue offset towards purchased water costs.

By adopting the proposed financial plan and approving rates through FY 2028, the water utility will generate positive net income above operating expenses, cover its system reinvestments, and exceed its minimum reserve requirement for each year over the Rate Setting Period. The proposed rates have been incorporated into a Proposition 218 Notice and mailed to each customer.

A Public Hearing is scheduled for October 18, 2023, on the proposed rates identified in Table 1 through Table 4. If there is no majority protest, and the City Council approves this Cost-of-Service study and proposed rates, then the proposed rates for FY 2024 will go into effect on January 1, 2024, with subsequent adjustments occurring each July 1st thereafter. In addition to the proposed fixed charges and variable rates, the City will pass through any increases in fixed charges and variable rates from MWD and SDCWA through the provisions of Government Code section 53756.

*Table 1: Proposed Monthly Water Fixed Charges (Potable and Recycled)*

Potable Fixed Meter Charges (\$/Month)					
Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8" and 3/4"	\$52.53	\$57.26	\$62.42	\$68.04	\$74.17
1"	\$77.72	\$84.72	\$92.35	\$100.67	\$109.74
1 1/2"	\$140.67	\$153.34	\$167.15	\$182.20	\$198.60
2"	\$253.98	\$276.84	\$301.76	\$328.92	\$358.53
3"	\$562.43	\$613.05	\$668.23	\$728.38	\$793.94
4"	\$959.01	\$1,045.33	\$1,139.41	\$1,241.96	\$1,353.74
6"	\$2,029.17	\$2,211.80	\$2,410.87	\$2,627.85	\$2,864.36
8"	\$3,539.97	\$3,858.57	\$4,205.85	\$4,584.38	\$4,996.98

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Table 2: Proposed Monthly PSAWR Fixed Charges

PSAWR Fixed Meter Charges (\$/Month)					
Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8" and 3/4"	\$43.27	\$47.17	\$51.42	\$56.05	\$61.10
1"	\$62.28	\$67.89	\$74.01	\$80.68	\$87.95
1 1/2"	\$109.80	\$119.69	\$130.47	\$142.22	\$155.02
2"	\$195.33	\$212.91	\$232.08	\$252.97	\$275.74
3"	\$428.16	\$466.70	\$508.71	\$554.50	\$604.41
4"	\$727.51	\$792.99	\$864.36	\$942.16	\$1,026.96
6"	\$1,535.30	\$1,673.48	\$1,824.10	\$1,988.27	\$2,167.22
8"	\$2,675.70	\$2,916.52	\$3,179.01	\$3,465.13	\$3,777.00

Table 3: Proposed Monthly Detector Fixed Charges

Detector Fixed Charges (\$/Month)					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8" and 3/4"	\$34.47	\$37.58	\$40.97	\$44.66	\$48.68
1"	\$47.61	\$51.90	\$56.58	\$61.68	\$67.24
1 1/2"	\$80.46	\$87.71	\$95.61	\$104.22	\$113.60
2"	\$139.59	\$152.16	\$165.86	\$180.79	\$197.07
3"	\$300.56	\$327.62	\$357.11	\$389.25	\$424.29
4"	\$507.51	\$553.19	\$602.98	\$657.25	\$716.41
6"	\$1,065.96	\$1,161.90	\$1,266.48	\$1,380.47	\$1,504.72
8"	\$1,854.36	\$2,021.26	\$2,203.18	\$2,401.47	\$2,617.61

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Table 4: Proposed Potable Variable Rates (\$/kgal)

Potable Variable Rates (\$/kgal)						
Customer Class	Tiers (kgals)	2024	2025	2026	2027	2028
<b>Single-Family</b>						
Tier 1	7	\$9.03	\$9.85	\$10.74	\$11.71	\$12.77
Tier 2	7-14	\$9.76	\$10.64	\$11.60	\$12.65	\$13.79
Tier 3	> 14	\$10.40	\$11.34	\$12.37	\$13.49	\$14.71
<b>Residential/Agricultural</b>						
Tier 1	7	\$9.03	\$9.85	\$10.74	\$11.71	\$12.77
Tier 2	> 7	\$9.92	\$10.82	\$11.80	\$12.87	\$14.03
<b>Multi-Family</b>						
Tier 1	5	\$9.22	\$10.05	\$10.96	\$11.95	\$13.03
Tier 2	> 5	\$9.78	\$10.67	\$11.64	\$12.69	\$13.84
<b>Commercial</b>						
		\$9.47	\$10.33	\$11.26	\$12.28	\$13.39
<b>Irrigation</b>						
		\$9.85	\$10.74	\$11.71	\$12.77	\$13.92
<b>SD Zoo Safari Park</b>						
		\$9.48	\$10.34	\$11.28	\$12.30	\$13.41
<b>Special Unfiltered</b>						
		\$8.25	\$9.00	\$9.81	\$10.70	\$11.67
<b>PSAWR</b>						
Tier 1	17	\$7.58	\$8.27	\$9.02	\$9.84	\$10.73
Tier 2	> 17	\$6.87	\$7.49	\$8.17	\$8.91	\$9.72

## Wastewater Utility Summary

### Financial Plan

The City operates and maintains a sewer collection system and treats wastewater discharge at the Hale Avenue Resources Recovery Facility (HARRF). Based on a financial review of the wastewater utility at current rates, the City will cover operating expenses and generate positive net income for each fiscal year through FY 2027, with a slight deficit in FY 2028. However, the wastewater CIP significantly exceeds the net operating income available for capital spending. The wastewater utility would need to use reserves to fund the wastewater CIP. The wastewater CIP is approximately \$93M over the Rate Setting Period. Like Water, the City has secured grants and state/federal low-interest loans for the Membrane Filtration Reverse Osmosis (MFRO) facility, which started construction in FY 2022. In total, the City has secured over \$50M in grants and state/federal low-interest loans for these projects. The MFRO will treat up to 4 million gallons per day of recycled water through membrane filtration and reverse osmosis technology. The facility will expand the City's recycled water footprint for irrigation and agricultural needs while reducing its dependence on imported water from SDCWA.

The wastewater utility currently has healthy reserves. However, \$62.5M of the CIP will be funded through rates and reserves. With limited net income generated at existing rates, reserves would be needed to cover the capital spending. By FY 2025, reserves will be below the minimum requirement and depleted by FY 2027. Therefore, additional rate revenue is needed to fund system reinvestment and maintain healthy reserves.

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above the utility’s minimum reserve requirements. The proposed financial plan and recommended adjustments would generate an additional \$43M over the Rate Setting Period to cover increases in operating costs, fully fund the wastewater CIP, and maintain healthy reserves.

## Rate Structure

The existing wastewater rate structure consists of flat monthly fixed charges to all customers and variable rates that vary by customer class. Residential customers (Single-Family, Multi-Family, and Mobile Homes) are charged variable rates that are applied to each customer’s average winter water usage with return factors. The winter average is used as a proxy for indoor usage as outdoor water needs are at their lowest during the winter. Commercial customers are charged variable rates that vary based on the type of business to capture the various strength concentrations of influent produced by each commercial use. The City has eleven different commercial customer classes. The “All Other Commercial” category captures commercial uses that don’t connect directly to one of the other ten specific types of commercial use. The wastewater rates include institutional customer classes for schools and churches. In addition, a separate category for High Strength Use (Metered) accounts are charged a variable rate based on metered flow and charges in pounds (lbs) for Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) in excess of the City’s discharge guidelines.

The proposed wastewater rates derived within this report include a restructuring of wastewater rates. All residential customers will be charged based on their FY 2023 winter water usage without any return factor, as last winter was a very wet year where outdoor watering was negligible. Commercial accounts will be consolidated from the eleven distinct customer classes to three general classes based on strength concentration of influent generated (Low Strength, Medium Strength, and High Strength). This reconfiguration of commercial variable rates will tie more closely to the discharge requirements with Low Strength considered normal loading on the system. Institutional customers (schools and churches) will maintain the same rate structure with charges based on student enrollment and number of seats, respectively. The recommended wastewater rates and recycled variable rates are included within the Proposition 218 Notice, and a Public Hearing is scheduled for October 18, 2023, on the proposed rates identified in Table 5 through Table 7. If there’s not a majority protest, proposed rates for FY 2024 will go into effect on January 1, 2024, with subsequent adjustments occurring each July 1st thereafter.

*Table 5: Proposed Monthly Wastewater Fixed Charges*

Fixed Charges (\$/Month) and Institutional Flat Charges		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Customer Class						
<b>Residential</b>						
Single-Family		\$6.73	\$7.21	\$7.72	\$8.27	\$8.69
Multi-Family		\$6.73	\$7.21	\$7.72	\$8.27	\$8.69
Mobile Homes		\$6.73	\$7.21	\$7.72	\$8.27	\$8.69
<b>All Commercial</b>		\$6.73	\$7.21	\$7.72	\$8.27	\$8.69
<b>Institutional</b>						
Senior High Schools (Students)	per student/year	\$26.28	\$28.20	\$30.24	\$32.40	\$34.08
Elementary & Middle Schools (Students)	per student/year	\$13.20	\$14.16	\$15.24	\$16.32	\$17.16
Churches (Seats)	per 100 seats/month	\$35.00	\$38.00	\$41.00	\$44.00	\$47.00

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Table 6: Proposed Wastewater Variable Rates (\$/kgal)

Variable Rates (\$/kgal) and (\$/Lb)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Residential</b>					
Single-Family	\$8.95	\$9.58	\$10.26	\$10.98	\$11.53
Multi-Family	\$8.95	\$9.58	\$10.26	\$10.98	\$11.53
Mobile Homes	\$8.95	\$9.58	\$10.26	\$10.98	\$11.53
<b>Commercial</b>					
Low	\$7.55	\$8.08	\$8.65	\$9.26	\$9.73
Medium	\$13.24	\$14.17	\$15.17	\$16.24	\$17.06
High	\$18.92	\$20.25	\$21.67	\$23.19	\$24.35
<b>High Strength Use (Metered)</b>					
Flow (kgals)	\$22.47	\$24.05	\$25.74	\$27.55	\$28.93
Excess BOD (\$/Lb)	\$1.16	\$1.24	\$1.33	\$1.43	\$1.51
Excess TSS (\$/Lb)	\$1.16	\$1.25	\$1.34	\$1.44	\$1.52

Table 7: Proposed Recycled Variable Rates (\$/kgal)

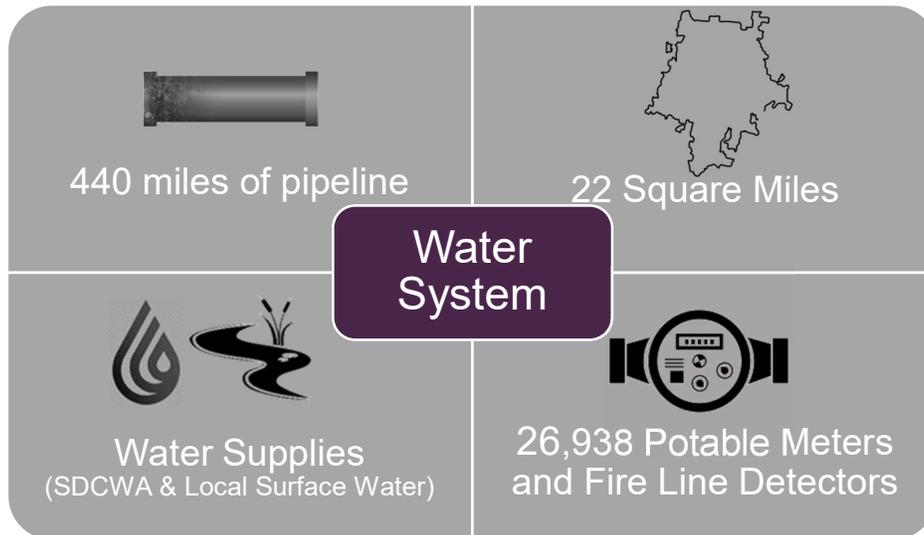
Recycled Variable Rates (\$/kgal)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Recycled	\$5.91	\$6.29	\$6.71	\$7.14	\$7.43

## Water Utility

### Water System

The City provides water services to most customers within City limits and portions of the unincorporated areas of the County of San Diego. The City of Escondido serves water to approximately 22 square miles within the 33 square mile incorporated area, plus approximately 9 square miles outside of the incorporated area. The City's primary water source is imported water from the SDCWA and has local surface water that varies based on the weather and amount of precipitation received each year. FY 2023 was a very wet winter, and the City's local lakes of Wohlford and Dixon benefited from the rain and increased its available capacity of surface water for the City. Typically, the City budgets 1,000 AF of local surface water, however, for FY 2024 and FY 2025, the City will have access to 8,000 AF and 4,000 AF of surface water, respectively. In FY 2026 and beyond, projected surface water is reduced to 1,000 AF based on historical yields.

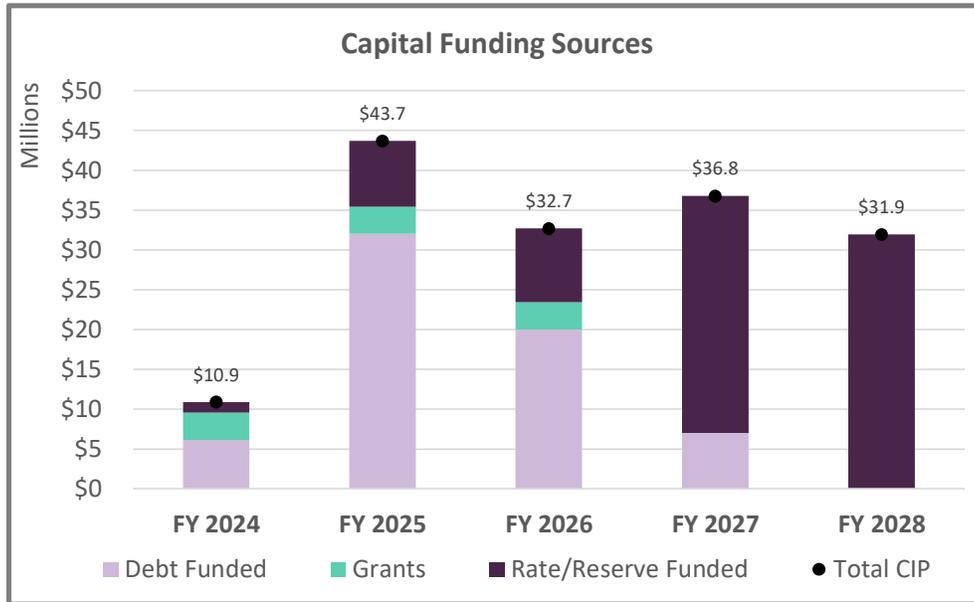
Figure 1: City Water System



The detailed water CIP plan identified capital projects over the Rate Study Period of \$156M. The water CIP includes a few significant projects, including the Lake Wohlford Dam Project (\$103M), the Emergency Treated Water Connection (\$7M), and Alley Utility Replacement (\$4M). The City also recently completed the San Pasqual Undergrounding, which totaled \$45M with half the funding coming from Vista Irrigation District. Figure 2 shows the water CIP through FY 2028 with current funding sources that includes grants, state/federal low-interest loans, and rates/reserves.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Figure 2: Water Capital Improvement Plan



## Customers

The City serves 26,938 potable water meters (including fire lines detectors), with approximately 90% of accounts classified as residential. Table 8 provides a summary of meters by meter size.

Table 8: Water Accounts by Meter Size

Meter Size	Single-Family	Residential/Agricultural	Multi-Family	Commercial	Irrigation	SD Zoo Safari Park	PSAWR	Detector	Number of Accounts
5/8" and 3/4"	20,465	33	360	721	112	-	4	-	21,695
1"	2,204	67	221	336	123	-	29	381	3,361
1 1/2"	121	7	333	268	189	-	12	-	930
2"	16	7	382	287	146	-	4	-	842
3"	1	-	18	19	3	-	1	-	42
4"	-	1	8	15	2	-	1	-	27
6"	-	-	7	4	2	-	-	-	13
8"	-	-	3	1	-	1	-	-	5
3/4" x 3"	-	-	2	21	-	-	-	-	23
<b>Total</b>	<b>22,807</b>	<b>115</b>	<b>1,334</b>	<b>1,672</b>	<b>577</b>	<b>1</b>	<b>51</b>	<b>381</b>	<b>26,938</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

As previously mentioned, the existing rate structure consists of a base monthly fixed meter charge, Readiness-to-Serve monthly fixed charge, an Infrastructure Access monthly fixed charge, and variable rates that vary by customer class. Single-Family and Multi-Family are subject to three-tiered rate structures, Residential/Ag two-tiers, and non-residential customer classes are subject to uniform rates that vary by customer class. Current monthly fixed charges are identified in Table 9 and Table 10, followed by variable rates shown in Table 11.

Table 9: FY 2024 Monthly Fixed Water Charges

Fixed Charges (\$/Month)				
Meter Size	City of Escondido Base Charge	MWD Readiness-to-Serve	SDCWA Infrastructure Access	Total Existing Fixed Charge
5/8" and 3/4"	\$41.29	\$1.81	\$4.24	\$47.34
1"	\$64.69	\$2.90	\$6.78	\$74.37
1 1/2"	\$122.71	\$5.43	\$12.72	\$140.86
2"	\$192.58	\$9.42	\$22.05	\$224.05
3"	\$414.13	\$17.39	\$40.70	\$472.22
4"	\$740.17	\$29.70	\$69.54	\$839.41
6"	\$1,637.19	\$54.33	\$127.20	\$1,818.72
8"	\$2,801.87	\$94.19	\$220.48	\$3,116.54
3/4" x 3"	\$414.13	\$18.66	\$69.58	\$502.37

Table 10: FY 2024 Monthly Detector Charges

Fixed Charges (\$/Month)	
Meter Size	Existing Fixed Charge
All Dectectors	\$67.01

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 11: FY 2024 Potable Variable Rates (\$/kgal)

Potable Variable Rates (\$/kgal)		
Customer Classes	kgal	Existing
<b>Single-Family</b>		
Tier 1	(0-7 kgal)	\$7.61
Tier 2	(7-15 kgal)	\$9.87
Tier 3	(>15 kgal)	\$11.22
<b>Residential/Agricultural</b>		
Tier 1	(0-7 kgal)	\$7.44
Tier 2	(> 7 kgal)	\$10.11
<b>Multi-Family</b>		
Tier 1	(0-5 kgal)	\$7.52
Tier 2	(5-7 kgal)	\$9.48
Tier 3	(> 7 kgal)	\$10.50
Commercial	(uniform)	\$9.24
Irrigation	(uniform)	\$9.73
SD Zoo Safari Park	(uniform)	\$10.00
Special Unfiltered	(uniform)	\$8.18
PSAWR	(uniform)	\$5.58

## Financial Plan Overview – Water Utility

### Financial Planning

Financial planning incorporates numerous considerations, including projecting revenues and forecasting expected costs using various inflationary adjustments. Utilities also need to account for changes in water demand driven by variations in weather, changes to water supplies and water availability, state mandates, growth, and economic factors. In addition, system maintenance and reinvestment, reserves, and debt service requirements all influence the revenues needed in future years. Therefore, a comprehensive financial plan reviews the following:

- 1) Historical water sales and consumption patterns to determine an appropriate usage level for projecting future water demands.
- 2) Operational costs that may change over the planning period because of inflation, unique circumstances of the agency, new expenditures added to meet strategic goals, state mandates, or changes in operations.
- 3) Multi-year system improvement needs, and scheduling based on priority. This review also considers available funding sources to complete projects such as PAYGO, grants, loans, and debt financing.
- 4) Satisfy debt service coverage ratio requirements based on bond covenants (120%).
- 5) Reserve funding to meet adopted reserve policies. The goal is to generate adequate cash on hand to mitigate financial risks related to operating cashflow needs, unexpected increases in expenses, shortages in system reinvestment, and mitigating potential system failures.

Figure 3 illustrates the key elements when developing a long-term financial plan.

Figure 3: Financial Plan Key Elements



# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Financial Planning Assumptions

Developing a long-term financial plan requires an understanding of the water utility’s financial position by evaluating existing revenue streams, ongoing expenses, how those expenses will change over time, existing debt requirements, and reserve policies. With these considerations, certain assumptions are required for projecting revenues, expenses, and expected ending fund balances. Through discussions with staff and their understanding of historical budget data and future obligations, **Table 12** identifies assumptions used for forecasting revenues. **Table 13** identifies projected usage by customer class and tier. For forecasting revenues, our analysis assumes no growth in accounts as a conservative assumption so projected revenues do not rely on growth to occur. In addition, water sales assume a rebound from FY 2023, due to the very wet winter, but reflects a slight reduction in sales from what occurred in FY 2022. to 19,227 AF<sup>2</sup> for FY 2024 and beyond.

*Table 12: Water Assumptions for Forecasting Revenues*

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue Escalation					
Non-Rate Revenues	0%	0%	0%	0%	0%
Reserve Interest	1.5%	1.5%	1.5%	1.5%	1.5%
Account Growth	0%	0%	0%	0%	0%
Total Meters	26,938	26,938	26,938	26,938	26,938
Total Consumption (kgals)	5,218,669	5,218,669	5,218,669	5,218,669	5,218,669

<sup>2</sup> FY 2022 sales equaled 19,353 AF

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 13: Projected Consumption (kgals) – FY 2024 through FY 2028

Consumption by Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Single-Family</b>					
Tier 1	1,595,468	1,595,468	1,595,468	1,595,468	1,595,468
Tier 2	574,719	574,719	574,719	574,719	574,719
Tier 3	364,929	364,929	364,929	364,929	364,929
Subtotal Single-Family Consumption (kgal)	2,535,116	2,535,116	2,535,116	2,535,116	2,535,116
<b>Residential/Agricultural</b>					
Tier 1	17,198	17,198	17,198	17,198	17,198
Tier 2	42,611	42,611	42,611	42,611	42,611
Subtotal Residential/Agricultural Consumption (kgal)	59,809	59,809	59,809	59,809	59,809
<b>Multi-Family</b>					
Tier 1	986,681	986,681	986,681	986,681	986,681
Tier 2	158,301	158,301	158,301	158,301	158,301
Tier 3	90,454	90,454	90,454	90,454	90,454
Subtotal Multi-Family Consumption (kgal)	1,235,436	1,235,436	1,235,436	1,235,436	1,235,436
<b>Commercial</b>	701,337	701,337	701,337	701,337	701,337
<b>Irrigation</b>	463,125	463,125	463,125	463,125	463,125
<b>SD Zoo Safari Park</b>	159,410	159,410	159,410	159,410	159,410
<b>Special Unfiltered</b>	7,647	7,647	7,647	7,647	7,647
<b>PSAWR</b>					
Tier 1	8,924	8,924	8,924	8,924	8,924
Tier 2	47,865	47,865	47,865	47,865	47,865
Subtotal PSAWR Consumption (kgal)	56,789	56,789	56,789	56,789	56,789
<b>Total Consumption</b>	<b>5,218,669</b>	<b>5,218,669</b>	<b>5,218,669</b>	<b>5,218,669</b>	<b>5,218,669</b>

Table 14 identifies assumptions used for forecasting increases in expenses over the Rate Setting Period. Purchased water costs are held constant and any increases will be captured through the pass-through provisions of Government Code section 53756.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 14: Water Assumptions for Forecasting Expense Requirements<sup>3</sup>

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Expenditure Escalation</b>					
Benefits	3.0%	3.0%	3.0%	3.0%	3.0%
Capital Construction	7.2%	3.8%	3.8%	3.8%	3.8%
Energy Costs	5.0%	5.0%	5.0%	5.0%	5.0%
General Costs	7.7%	3.8%	3.8%	3.8%	3.8%
PERS	5.0%	5.0%	5.0%	5.0%	5.0%
Salaries	5.0%	5.0%	5.0%	5.0%	5.0%
Local Water	5.0%	5.0%	5.0%	5.0%	5.0%
Imported Water Costs	<i>Pass-Through</i>	<i>Pass-Through</i>	<i>Pass-Through</i>	<i>Pass-Through</i>	<i>Pass-Through</i>

## Current Financial Position

### Revenues

Based on the forecasting assumptions, fixed revenues were calculated by multiplying the accounts by meter size (Table 8) by existing fixed charges (Table 9 and Table 10) and factoring in the number of months the rate was in effect. Variable revenues were calculated using existing variable rates (Table 11) and projected total water sales by customer class (Table 13). Table 15 shows the calculated rate revenues through the Rate Setting Period. Table 16 summarizes calculated rate revenues from Table 15 and other operating and non-rate revenues available through the Rate Setting Period with projections rounded to the nearest thousands.

<sup>3</sup> Capital Construction inflation and General Costs for FY 2024 were increased to 7.2% and 7.7%, respectively, to account for recent increases due to inflation. Outer years reduced to 3.8% for both, reflecting the 5-year average of the Engineering News-Record – Construction Cost index and the Los Angeles Area Consumer Price Index, respectively.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 15: Water Calculated Rate Revenues

Fixed Revenues	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>City of Escondido Base Charge</b>					
Single-Family	\$12,071,039	\$12,071,039	\$12,071,039	\$12,071,039	\$12,071,039
Residential/Agricultural	\$103,728	\$103,728	\$103,728	\$103,728	\$103,728
Multi-Family	\$2,131,905	\$2,131,905	\$2,131,905	\$2,131,905	\$2,131,905
Commercial	\$2,120,173	\$2,120,173	\$2,120,173	\$2,120,173	\$2,120,173
Irrigation	\$838,648	\$838,648	\$838,648	\$838,648	\$838,648
SD Zoo Safari Park	\$33,622	\$33,622	\$33,622	\$33,622	\$33,622
PSAWR	\$65,260	\$65,260	\$65,260	\$65,260	\$65,260
Detector	\$306,370	\$306,370	\$306,370	\$306,370	\$306,370
<b>Total City of Escondido Base Charge</b>	<b>\$17,670,745</b>	<b>\$17,670,745</b>	<b>\$17,670,745</b>	<b>\$17,670,745</b>	<b>\$17,670,745</b>
<b>MWD Readiness-to-Serve</b>					
Single-Family	\$530,234	\$531,211	\$531,211	\$531,211	\$531,211
Residential/Agricultural	\$4,647	\$4,656	\$4,656	\$4,656	\$4,656
Multi-Family	\$95,242	\$95,410	\$95,410	\$95,410	\$95,410
Commercial	\$94,858	\$95,026	\$95,026	\$95,026	\$95,026
Irrigation	\$38,114	\$38,181	\$38,181	\$38,181	\$38,181
SD Zoo Safari Park	\$1,128	\$1,130	\$1,130	\$1,130	\$1,130
PSAWR	\$2,892	\$2,897	\$2,897	\$2,897	\$2,897
<b>Total MWD Readiness-to-Serve</b>	<b>\$767,115</b>	<b>\$768,512</b>	<b>\$768,512</b>	<b>\$768,512</b>	<b>\$768,512</b>
<b>SDCWA Infrastructure Access</b>					
Single-Family	\$1,243,768	\$1,243,768	\$1,243,768	\$1,243,768	\$1,243,768
Residential/Agricultural	\$10,885	\$10,885	\$10,885	\$10,885	\$10,885
Multi-Family	\$223,963	\$223,963	\$223,963	\$223,963	\$223,963
Commercial	\$228,951	\$228,951	\$228,951	\$228,951	\$228,951
Irrigation	\$89,373	\$89,373	\$89,373	\$89,373	\$89,373
SD Zoo Safari Park	\$2,646	\$2,646	\$2,646	\$2,646	\$2,646
PSAWR	\$6,776	\$6,776	\$6,776	\$6,776	\$6,776
<b>Total SDCWA Infrastructure Access</b>	<b>\$1,806,363</b>	<b>\$1,806,363</b>	<b>\$1,806,363</b>	<b>\$1,806,363</b>	<b>\$1,806,363</b>
<b>Total Fixed Revenue</b>	<b>\$20,244,223</b>	<b>\$20,245,619</b>	<b>\$20,245,619</b>	<b>\$20,245,619</b>	<b>\$20,245,619</b>
Variable Revenues	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Single-Family</b>					
Tier 1	\$12,141,511	\$12,141,511	\$12,141,511	\$12,141,511	\$12,141,511
Tier 2	\$5,672,477	\$5,672,477	\$5,672,477	\$5,672,477	\$5,672,477
Tier 3	\$4,094,503	\$4,094,503	\$4,094,503	\$4,094,503	\$4,094,503
Single-Family Variable Revenue	\$21,908,491	\$21,908,491	\$21,908,491	\$21,908,491	\$21,908,491
<b>Residential/Agricultural</b>					
Tier 1	\$127,953	\$127,953	\$127,953	\$127,953	\$127,953
Tier 2	\$430,797	\$430,797	\$430,797	\$430,797	\$430,797
Residential/Agricultural Variable Revenue	\$558,750	\$558,750	\$558,750	\$558,750	\$558,750
<b>Multi-Family</b>					
Tier 1	\$7,419,841	\$7,419,841	\$7,419,841	\$7,419,841	\$7,419,841
Tier 2	\$1,500,693	\$1,500,693	\$1,500,693	\$1,500,693	\$1,500,693
Tier 3	\$949,767	\$949,767	\$949,767	\$949,767	\$949,767
Multi-Family Variable Revenue	\$9,870,302	\$9,870,302	\$9,870,302	\$9,870,302	\$9,870,302
Commercial	\$6,480,354	\$6,480,354	\$6,480,354	\$6,480,354	\$6,480,354
Irrigation	\$4,506,206	\$4,506,206	\$4,506,206	\$4,506,206	\$4,506,206
SD Zoo Safari Park	\$1,594,100	\$1,594,100	\$1,594,100	\$1,594,100	\$1,594,100
Special Unfiltered	\$62,552	\$62,552	\$62,552	\$62,552	\$62,552
PSAWR	\$316,883	\$316,883	\$316,883	\$316,883	\$316,883
<b>Total Variable Rate Revenue</b>	<b>\$45,297,639</b>	<b>\$45,297,639</b>	<b>\$45,297,639</b>	<b>\$45,297,639</b>	<b>\$45,297,639</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 16: Water Projected Revenues

Revenue Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>					
Total Fixed Revenue	\$20,246,000	\$20,246,000	\$20,246,000	\$20,246,000	\$20,246,000
Variable Revenues	\$45,298,000	\$45,298,000	\$45,298,000	\$45,298,000	\$45,298,000
Subtotal Rate Revenues	\$65,544,000	\$65,544,000	\$65,544,000	\$65,544,000	\$65,544,000
<b>Contract Customers</b>					
IPWR Fixed	\$201,000	\$201,000	\$201,000	\$201,000	\$201,000
IPWR Variable Revenue	\$2,894,000	\$2,962,000	\$2,962,000	\$2,962,000	\$2,962,000
Subtotal Contract Customers	\$3,095,000	\$3,163,000	\$3,163,000	\$3,163,000	\$3,163,000
<b>Lake Revenue</b>					
Concessions - Lake Dixon	\$85,000	\$85,000	\$85,000	\$85,000	\$85,000
Fishing - Lake Dixon	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Camping - Lake Dixon	\$420,000	\$420,000	\$420,000	\$420,000	\$420,000
Entry Fees - Lake Dixon	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000
Boat Rentals - Lake Dixon	\$185,000	\$185,000	\$185,000	\$185,000	\$185,000
Fishing - Lake Wohlford	\$103,000	\$103,000	\$103,000	\$103,000	\$103,000
Subtotal Lake Revenue	\$1,158,000	\$1,158,000	\$1,158,000	\$1,158,000	\$1,158,000
<b>Operating Revenue</b>					
Penalties	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
VID Rincon Filtration Charge	\$2,625,000	\$2,625,000	\$2,625,000	\$2,625,000	\$2,625,000
VID - Canal Rembursement	\$539,000	\$562,000	\$587,000	\$613,000	\$638,000
Electrical Energy	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Temporaty Meter Installations	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000
CIP Reimbursement	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Reimbursement from LS&S	\$51,000	\$51,000	\$51,000	\$51,000	\$51,000
Subtotal Meter Installation	\$3,901,000	\$3,924,000	\$3,949,000	\$3,975,000	\$4,000,000
<b>Non-Operating Revenue</b>					
Other Interest-Non Investment	(\$2,000)	(\$2,000)	(\$2,000)	(\$2,000)	(\$2,000)
Interest-Trustee	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
Investment Earnings	\$206,000	\$115,000	\$114,000	\$120,000	\$97,000
Rent	\$110,000	\$110,000	\$110,000	\$110,000	\$110,000
Bank Acct Analysis Fees-Contra	(\$30,000)	(\$30,000)	(\$30,000)	(\$30,000)	(\$30,000)
Cr. Card Merchant Fees-Contra	(\$315,000)	(\$315,000)	(\$315,000)	(\$315,000)	(\$315,000)
Interest-UAL Prepayment	\$74,000	\$74,000	\$74,000	\$74,000	\$74,000
Other Revenue	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
Subtotal Non-Operating Revenue	\$131,000	\$40,000	\$39,000	\$45,000	\$22,000
<b>Total Revenue</b>	<b>\$73,829,000</b>	<b>\$73,829,000</b>	<b>\$73,853,000</b>	<b>\$73,885,000</b>	<b>\$73,887,000</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Expenses

The projected price of purchased water is held constant for all years because any increase will be captured through the pass-through provisions of Government Code section 53756 and will be identified within the Proposition 218 notice. The cost of purchased water, net of local water, is included within Appendix A – “Water Supply Cost Analysis.” The FY 2023 budget was used as the baseline expenses of the utility and adjusted in subsequent years based on the escalation factors shown in Table 14. Table 17 provides projected Operational & Maintenance (O&M) costs through the Rate Setting Period, with future projections (except for debt) rounded to the nearest thousands. Each O&M expense category includes detailed line-item expenditures that were discussed with staff to determine the appropriate escalation factor for forecasting how costs will increase over time.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 17: Water Projected O&M Expenses

O&M Expenses	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Fixed Purchased Water Costs</b>					
MWD Readiness-to-Serve Charge	\$773,000	\$773,000	\$773,000	\$773,000	\$773,000
MWD Capacity Charge	\$304,000	\$304,000	\$304,000	\$304,000	\$304,000
Supply Reliability Charge	\$1,699,000	\$1,699,000	\$1,699,000	\$1,699,000	\$1,699,000
Customer Service Charge	\$1,101,000	\$1,101,000	\$1,101,000	\$1,101,000	\$1,101,000
Emergency Storage Charge	\$2,488,000	\$2,488,000	\$2,488,000	\$2,488,000	\$2,488,000
Infrastructure Access Charge	\$1,818,000	\$1,818,000	\$1,818,000	\$1,818,000	\$1,818,000
<b>Subtotal Fixed Purchased Water Costs</b>	<b>\$8,183,000</b>	<b>\$8,183,000</b>	<b>\$8,183,000</b>	<b>\$8,183,000</b>	<b>\$8,183,000</b>
<b>Variable Purchased Water Costs</b>					
Purchased Water (Variable Costs)	\$15,668,000	\$20,700,000	\$24,474,000	\$24,474,000	\$24,474,000
PSAWR Credit/Discount	(\$34,000)	(\$34,000)	(\$34,000)	(\$34,000)	(\$34,000)
IPWR Credit/Discount	(\$731,000)	(\$731,000)	(\$731,000)	(\$731,000)	(\$731,000)
<b>Subtotal Variable Purchased Water Costs</b>	<b>\$14,903,000</b>	<b>\$19,935,000</b>	<b>\$23,709,000</b>	<b>\$23,709,000</b>	<b>\$23,709,000</b>
<b>Subtotal Purchased Water Costs</b>	<b>\$23,086,000</b>	<b>\$28,118,000</b>	<b>\$31,892,000</b>	<b>\$31,892,000</b>	<b>\$31,892,000</b>
<b>Department 410 - Water</b>					
Employee Services	\$11,578,000	\$12,128,000	\$12,705,000	\$13,310,000	\$13,944,000
Maintenance & Operations	\$7,450,000	\$7,756,000	\$8,074,000	\$8,406,000	\$8,752,000
Treatment	\$4,214,000	\$4,425,000	\$4,646,000	\$4,879,000	\$5,122,000
Capital Outlay	\$100,000	\$104,000	\$108,000	\$112,000	\$116,000
Internal Service	\$2,785,000	\$2,890,000	\$2,998,000	\$3,111,000	\$3,228,000
Allocations	\$5,670,000	\$5,883,000	\$6,103,000	\$6,332,000	\$6,570,000
<b>Subtotal Department 410 - Water</b>	<b>\$31,797,000</b>	<b>\$33,186,000</b>	<b>\$34,634,000</b>	<b>\$36,150,000</b>	<b>\$37,732,000</b>
<b>Department 412 - Canal</b>					
Employee Services	\$647,000	\$678,000	\$709,000	\$743,000	\$777,000
Maintenance & Operations	\$205,000	\$212,000	\$220,000	\$229,000	\$237,000
Capital Outlay	\$28,000	\$29,000	\$31,000	\$32,000	\$33,000
Internal Service	\$180,000	\$186,000	\$193,000	\$201,000	\$208,000
Allocations	\$18,000	\$19,000	\$20,000	\$20,000	\$21,000
<b>Subtotal Department 412 - Canal</b>	<b>\$1,078,000</b>	<b>\$1,124,000</b>	<b>\$1,173,000</b>	<b>\$1,225,000</b>	<b>\$1,276,000</b>
<b>Department 414 - Lakes</b>					
Employee Services	\$2,621,000	\$2,747,000	\$2,879,000	\$3,017,000	\$3,162,000
Maintenance & Operations	\$748,000	\$777,000	\$807,000	\$839,000	\$872,000
Capital Outlay	\$27,000	\$28,000	\$29,000	\$30,000	\$31,000
Internal Service	\$663,000	\$688,000	\$714,000	\$741,000	\$769,000
Allocations	\$34,000	\$35,000	\$36,000	\$37,000	\$39,000
Uncategorized	\$6,000	\$6,000	\$7,000	\$7,000	\$7,000
<b>Subtotal Department 414 - Lakes</b>	<b>\$4,099,000</b>	<b>\$4,281,000</b>	<b>\$4,472,000</b>	<b>\$4,671,000</b>	<b>\$4,880,000</b>
<b>Debt Service</b>					
Existing Debt	\$5,409,927	\$5,438,372	\$5,496,031	\$5,497,808	\$5,495,476
Pending Debt	\$1,282,588	\$1,465,815	\$1,465,815	\$3,009,765	\$3,009,765
<b>Subtotal Debt Service</b>	<b>\$6,692,515</b>	<b>\$6,904,188</b>	<b>\$6,961,846</b>	<b>\$8,507,572</b>	<b>\$8,505,241</b>
<b>Total Expenses</b>	<b>\$66,752,515</b>	<b>\$73,613,188</b>	<b>\$79,132,846</b>	<b>\$82,445,572</b>	<b>\$84,285,241</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Reserves

Figure 4: Water Utility Reserves



Established reserves include Operating, Capital, Rate Stabilization, and Debt. These reserves help mitigate risks to the utility by ensuring sufficient cash is on hand for daily operations, cover funding for annual system improvements, and secure outstanding debt obligations. In addition, these reserves help smooth rates and mitigate rate spikes due to emergencies or above-average system costs. Table 18 summarizes the minimum reserve requirements and ideal targets of each reserve.

Table 18: Water Reserve Requirements and Targets

Reserve	Minimum Requirement	Reserve Target
Operating	60 Days of Operating	90 Days of Operating
Capital	Annual Depreciation	2x Annual Depreciation
Rate Stabilization	5% of Purchased Water Costs	10% of Purchased Water Costs
Debt	50% Annual Debt Payments	100% Annual Debt Payments

The unaudited starting reserve balance as of July 1, 2023, equaled approximately \$29.8M.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. With the influx of available local water, the City will cover its operating expenses for FY 2024 and FY 2025, due to the reduction of purchased water costs for those two years. However, by FY 2026, the water utility is projected to experience an operating deficit that increases to \$10.4M by FY 2028. In addition, capital spending would require the use of reserves to cover the costs not funded by grants or debt. This approach is not sustainable long-term. Table 19 forecasts existing revenues and expenses through the Rate Setting Period. Table 20 identifies reserve transfers and reserve activity, with projected FY 2024 starting reserve balances shown for each reserve. The City received a grant and secured a WIFIA loan for the Wohlford project and has approximately \$10.2M of grant funding remaining to go towards the project. The WIFIA loan will provide \$65M in funding towards the project, which is scheduled to be completed by FY 2028.

*Table 19: Water Financial Plan at Existing Rates*

Revenue	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>	<b>Table 16</b>					
Total Fixed Revenue		\$20,246,000	\$20,246,000	\$20,246,000	\$20,246,000	\$20,246,000
Variable Revenues		\$45,298,000	\$45,298,000	\$45,298,000	\$45,298,000	\$45,298,000
<b>Total Rate Revenues</b>		<b>\$65,544,000</b>	<b>\$65,544,000</b>	<b>\$65,544,000</b>	<b>\$65,544,000</b>	<b>\$65,544,000</b>
<b>Contract Revenue</b>	<b>Table 16</b>					
IPWR Fixed		\$201,000	\$201,000	\$201,000	\$201,000	\$201,000
IPWR Variable Revenue		\$2,894,000	\$2,962,000	\$2,962,000	\$2,962,000	\$2,962,000
<b>Subtotal Contract Revenue</b>		<b>\$3,095,000</b>	<b>\$3,163,000</b>	<b>\$3,163,000</b>	<b>\$3,163,000</b>	<b>\$3,163,000</b>
<b>Projected Rate Revenues</b>		<b>\$68,639,000</b>	<b>\$68,707,000</b>	<b>\$68,707,000</b>	<b>\$68,707,000</b>	<b>\$68,707,000</b>
<b>Lake Revenue</b>	<b>Table 16</b>					
Concessions - Lake Dixon		\$85,000	\$85,000	\$85,000	\$85,000	\$85,000
Fishing - Lake Dixon		\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Camping - Lake Dixon		\$420,000	\$420,000	\$420,000	\$420,000	\$420,000
Entry Fees - Lake Dixon		\$115,000	\$115,000	\$115,000	\$115,000	\$115,000
Boat Rentals - Lake Dixon		\$185,000	\$185,000	\$185,000	\$185,000	\$185,000
Fishing - Lake Wohlford		\$103,000	\$103,000	\$103,000	\$103,000	\$103,000
<b>Subtotal Lake Revenue</b>		<b>\$1,158,000</b>	<b>\$1,158,000</b>	<b>\$1,158,000</b>	<b>\$1,158,000</b>	<b>\$1,158,000</b>
<b>Operating Revenue</b>	<b>Table 16</b>					
Penalties		\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
VID Rincon Filtration Charge		\$2,625,000	\$2,625,000	\$2,625,000	\$2,625,000	\$2,625,000
VID - Canal Rembursement		\$539,000	\$562,000	\$587,000	\$613,000	\$638,000
Electrical Energy		\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Temporaty Meter Installations		\$11,000	\$11,000	\$11,000	\$11,000	\$11,000
CIP Reimbursement		\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Reimbursement from LS&S		\$51,000	\$51,000	\$51,000	\$51,000	\$51,000
<b>Subtotal Operating Revenue</b>		<b>\$3,901,000</b>	<b>\$3,924,000</b>	<b>\$3,949,000</b>	<b>\$3,975,000</b>	<b>\$4,000,000</b>
<b>Non-Operating Revenue</b>	<b>Table 16</b>					
Other Interest-Non Investment		(\$2,000)	(\$2,000)	(\$2,000)	(\$2,000)	(\$2,000)
Interest-Trustee		\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
Investment Earnings		\$206,000	\$136,000	\$189,000	\$152,000	\$22,000
Rent		\$110,000	\$110,000	\$110,000	\$110,000	\$110,000
Bank Acct Analysis Fees-Contra		(\$30,000)	(\$30,000)	(\$30,000)	(\$30,000)	(\$30,000)
Cr. Card Merchant Fees-Contra		(\$315,000)	(\$315,000)	(\$315,000)	(\$315,000)	(\$315,000)
Interest-UAL Prepayment		\$74,000	\$74,000	\$74,000	\$74,000	\$74,000
Other Revenue		\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
<b>Subtotal Non-Operating Revenue</b>		<b>\$131,000</b>	<b>\$61,000</b>	<b>\$114,000</b>	<b>\$77,000</b>	<b>(\$53,000)</b>
<b>Total Revenues</b>		<b>\$73,829,000</b>	<b>\$73,850,000</b>	<b>\$73,928,000</b>	<b>\$73,917,000</b>	<b>\$73,812,000</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 19: Water Financial Plan at Existing Rates (cont.)

O&M Expenses	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Fixed Purchased Water Costs</b>	<b>Table 17</b>					
MWD Readiness-to-Serve Charge		\$773,000	\$773,000	\$773,000	\$773,000	\$773,000
MWD Capacity Charge		\$304,000	\$304,000	\$304,000	\$304,000	\$304,000
Supply Reliability Charge		\$1,699,000	\$1,699,000	\$1,699,000	\$1,699,000	\$1,699,000
Customer Service Charge		\$1,101,000	\$1,101,000	\$1,101,000	\$1,101,000	\$1,101,000
Emergency Storage Charge		\$2,488,000	\$2,488,000	\$2,488,000	\$2,488,000	\$2,488,000
Infrastructure Access Charge		\$1,818,000	\$1,818,000	\$1,818,000	\$1,818,000	\$1,818,000
<b>Subtotal Fixed Purchased Water Costs</b>		<b>\$8,183,000</b>	<b>\$8,183,000</b>	<b>\$8,183,000</b>	<b>\$8,183,000</b>	<b>\$8,183,000</b>
<b>Variable Purchased Water Costs</b>	<b>Table 17</b>					
Purchased Water (Variable Costs)		\$15,668,000	\$20,700,000	\$24,474,000	\$24,474,000	\$24,474,000
PSAWR Credit/Discount		(\$34,000)	(\$34,000)	(\$34,000)	(\$34,000)	(\$34,000)
IPWR Credit/Discount		(\$731,000)	(\$731,000)	(\$731,000)	(\$731,000)	(\$731,000)
<b>Subtotal Variable Purchased Water Costs</b>		<b>\$14,903,000</b>	<b>\$19,935,000</b>	<b>\$23,709,000</b>	<b>\$23,709,000</b>	<b>\$23,709,000</b>
<b>Subtotal Purchased Water Costs</b>		<b>\$23,086,000</b>	<b>\$28,118,000</b>	<b>\$31,892,000</b>	<b>\$31,892,000</b>	<b>\$31,892,000</b>
<b>Department 410 - Water</b>	<b>Table 17</b>					
Employee Services		\$11,578,000	\$12,128,000	\$12,705,000	\$13,310,000	\$13,944,000
Maintenance & Operations		\$7,450,000	\$7,756,000	\$8,074,000	\$8,406,000	\$8,752,000
Treatment		\$4,214,000	\$4,425,000	\$4,646,000	\$4,879,000	\$5,122,000
Capital Outlay		\$100,000	\$104,000	\$108,000	\$112,000	\$116,000
Internal Service		\$2,785,000	\$2,890,000	\$2,998,000	\$3,111,000	\$3,228,000
Allocations		\$5,670,000	\$5,883,000	\$6,103,000	\$6,332,000	\$6,570,000
<b>Subtotal Department 410 - Water</b>		<b>\$31,797,000</b>	<b>\$33,186,000</b>	<b>\$34,634,000</b>	<b>\$36,150,000</b>	<b>\$37,732,000</b>
<b>Department 412 - Canal</b>	<b>Table 17</b>					
Employee Services		\$647,000	\$678,000	\$709,000	\$743,000	\$777,000
Maintenance & Operations		\$205,000	\$212,000	\$220,000	\$229,000	\$237,000
Capital Outlay		\$28,000	\$29,000	\$31,000	\$32,000	\$33,000
Internal Service		\$180,000	\$186,000	\$193,000	\$201,000	\$208,000
Allocations		\$18,000	\$19,000	\$20,000	\$20,000	\$21,000
<b>Subtotal Department 412 - Canal</b>		<b>\$1,078,000</b>	<b>\$1,124,000</b>	<b>\$1,173,000</b>	<b>\$1,225,000</b>	<b>\$1,276,000</b>
<b>Department 414 - Lakes</b>	<b>Table 17</b>					
Employee Services		\$2,621,000	\$2,747,000	\$2,879,000	\$3,017,000	\$3,162,000
Maintenance & Operations		\$748,000	\$777,000	\$807,000	\$839,000	\$872,000
Capital Outlay		\$27,000	\$28,000	\$29,000	\$30,000	\$31,000
Internal Service		\$663,000	\$688,000	\$714,000	\$741,000	\$769,000
Allocations		\$34,000	\$35,000	\$36,000	\$37,000	\$39,000
Uncategorized		\$6,000	\$6,000	\$7,000	\$7,000	\$7,000
<b>Subtotal Department 414 - Lakes</b>		<b>\$4,099,000</b>	<b>\$4,281,000</b>	<b>\$4,472,000</b>	<b>\$4,671,000</b>	<b>\$4,880,000</b>
<b>Debt Service</b>	<b>Table 17</b>					
Existing Debt		\$5,409,927	\$5,438,372	\$5,496,031	\$5,497,808	\$5,495,476
Pending Debt		\$1,282,588	\$1,465,815	\$1,465,815	\$3,009,765	\$3,009,765
<b>Subtotal Debt Service</b>		<b>\$6,692,515</b>	<b>\$6,904,188</b>	<b>\$6,961,846</b>	<b>\$8,507,572</b>	<b>\$8,505,241</b>
<b>Total Expenses</b>		<b>\$66,752,515</b>	<b>\$73,613,188</b>	<b>\$79,132,846</b>	<b>\$82,445,572</b>	<b>\$84,285,241</b>
<b>Net Operating Income</b>		<b>\$7,076,485</b>	<b>\$236,812</b>	<b>(\$5,204,846)</b>	<b>(\$8,528,572)</b>	<b>(\$10,473,241)</b>

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Table 20: Water Transfers and Reserve Activity at Existing Rates

Operating Fund	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$11,770,220	\$10,973,016	\$11,209,829	\$6,004,982	(\$2,523,590)
Transfers (Net Operating Income) Table 19	\$7,076,485	\$236,812	(\$5,204,846)	(\$8,528,572)	(\$10,473,241)
Transfers from/(to) Rate Stabilization Reserve	(\$7,873,689)	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$10,973,016</b>	<b>\$11,209,829</b>	<b>\$6,004,982</b>	<b>(\$2,523,590)</b>	<b>(\$12,996,831)</b>

Rate Stabilization Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$1,450,050	\$1,154,300	\$1,154,300	\$1,154,300	\$1,154,300
Transfers from/(to) Operating Fund	\$7,873,689	\$0	\$0	\$0	\$0
Transfers from/(to) Capital Reserve	(\$8,169,439)	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$1,154,300</b>	<b>\$1,154,300</b>	<b>\$1,154,300</b>	<b>\$1,154,300</b>	<b>\$1,154,300</b>

Capital Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$16,292,558	\$23,438,608	\$15,456,223	\$6,330,882	(\$23,439,149)
<u>Plus:</u>					
Other Sources/(Uses)					
Debt Proceeds	\$6,150,000	\$32,000,000	\$20,000,000	\$6,997,000	\$0
Grants	\$3,412,000	\$3,412,000	\$3,412,000	\$0	\$0
Transfers from/(to) Rate Stabilization Reserve	\$8,169,439	\$0	\$0	\$0	\$0
<u>Less:</u>					
CIP	(\$10,881,155)	(\$43,683,925)	(\$32,699,527)	(\$36,767,032)	(\$31,943,942)
Subtotal Capital Reserve	\$23,142,843	\$15,166,683	\$6,168,695	(\$23,439,149)	(\$55,383,091)
Interest Earnings	\$295,766	\$289,540	\$162,187	\$0	\$0
<b>Ending Balance</b>	<b>\$23,438,608</b>	<b>\$15,456,223</b>	<b>\$6,330,882</b>	<b>(\$23,439,149)</b>	<b>(\$55,383,091)</b>

Debt Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$338,471	\$338,471	\$338,471	\$338,471	\$338,471
<b>Ending Balance</b>	<b>\$338,471</b>	<b>\$338,471</b>	<b>\$338,471</b>	<b>\$338,471</b>	<b>\$338,471</b>
	\$5,077	\$5,077	\$5,077	\$5,077	\$5,077

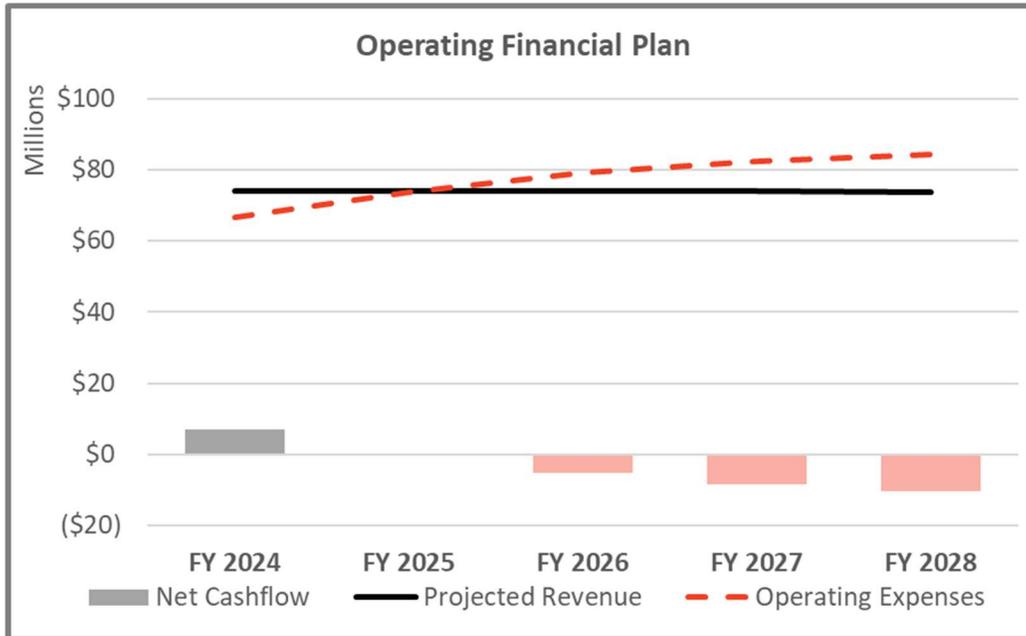
  

Summary Information	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$29,851,299	\$35,904,395	\$28,158,822	\$13,828,635	(\$24,469,969)
<b>Ending Balance</b>	<b>\$35,904,395</b>	<b>\$28,158,822</b>	<b>\$13,828,635</b>	<b>(\$24,469,969)</b>	<b>(\$66,887,151)</b>

Figure 5 illustrates the operating position of the utility, where O&M expenses are identified with the dashed red trendline, and the horizontal black trendline shows total revenues at existing rates. The bars represent the net operating income, with grey bars reflecting positive net income for capital spending and reserve funding and red bars reflecting an operating deficit absorbed by reserves.

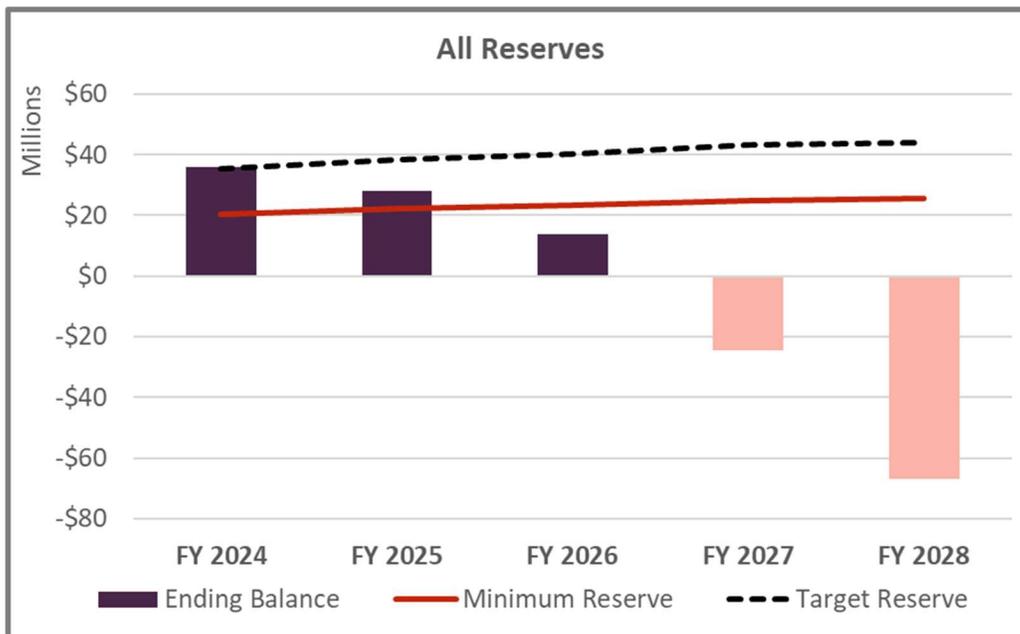
# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Figure 5: Current Operating Financial Position



Capital spending over the Rate Setting Period is approximately \$156M, as shown in Figure 2. Without increases in rate revenue, the water utility would not meet its minimum target in FY 2026. By FY 2027 reserves would be depleted and funding would not be available for the water CIP. In addition, the City would not meet its required debt service coverage ratio equal to 120% of annual debt payments. Figure 6 reflects the projected ending balances of reserves after funding operating and capital projects.

Figure 6: Projected Ending Reserves at Existing Rates



## Proposed Financial Plan – Water Utility

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From our review of the utility's financial outlook at existing rates, a proposed financial plan is developed to fund the multi-year revenue requirements. The proposed financial plan generates approximately \$95M in additional revenue over the Rate Setting Period. The additional revenue generates positive net operating income each year, satisfies the debt service coverage requirements, funds the water utility's capital spending needs, and replenishes reserves above the minimum requirements. Table 21 forecasts projected revenues, **with annual revenue adjustments**, and expenses through FY 2028. Table 22 identifies the projected FY 2024 total starting reserve balances, activity within each reserve (including net operating income transfer from Table 21, transfers between reserves, and annual CIP), and projected ending balances for each fiscal year of the Rate Setting Period.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 21: Proposed Water Financial Plan

Revenue	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>	<b>Table 16</b>					
Total Fixed Revenue		\$20,246,000	\$20,246,000	\$20,246,000	\$20,246,000	\$20,246,000
Variable Revenues		\$45,298,000	\$45,298,000	\$45,298,000	\$45,298,000	\$45,298,000
<b>Total Rate Revenues</b>		<b>\$65,544,000</b>	<b>\$65,544,000</b>	<b>\$65,544,000</b>	<b>\$65,544,000</b>	<b>\$65,544,000</b>
<b>Fiscal Year</b>	<b>Revenue Adjustment</b>	<b>Effective Month</b>				
FY 2024	8.5%	January	\$2,785,000	\$5,571,000	\$5,571,000	\$5,571,000
FY 2025	9.0%	July		\$6,400,000	\$6,400,000	\$6,400,000
FY 2026	9.0%	July			\$6,976,000	\$6,976,000
FY 2027	9.0%	July				\$7,604,000
FY 2028	9.0%	July				\$8,288,000
<b>Total Additional Revenue</b>		<b>\$2,785,000</b>	<b>\$11,971,000</b>	<b>\$18,947,000</b>	<b>\$26,551,000</b>	<b>\$34,839,000</b>
<b>Contract Revenue</b>	<b>Table 16</b>					
IPWR Fixed		\$201,000	\$201,000	\$201,000	\$201,000	\$201,000
IPWR Variable Revenue		\$2,894,000	\$2,962,000	\$2,962,000	\$2,962,000	\$2,962,000
<b>Subtotal Contract Revenue</b>		<b>\$3,095,000</b>	<b>\$3,163,000</b>	<b>\$3,163,000</b>	<b>\$3,163,000</b>	<b>\$3,163,000</b>
<b>Projected Rate Revenues</b>		<b>\$71,424,000</b>	<b>\$80,678,000</b>	<b>\$87,654,000</b>	<b>\$95,258,000</b>	<b>\$103,546,000</b>
<b>Lake Revenue</b>	<b>Table 16</b>					
Concessions - Lake Dixon		\$85,000	\$85,000	\$85,000	\$85,000	\$85,000
Fishing - Lake Dixon		\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Camping - Lake Dixon		\$420,000	\$420,000	\$420,000	\$420,000	\$420,000
Entry Fees - Lake Dixon		\$115,000	\$115,000	\$115,000	\$115,000	\$115,000
Boat Rentals - Lake Dixon		\$185,000	\$185,000	\$185,000	\$185,000	\$185,000
Fishing - Lake Wohlford		\$103,000	\$103,000	\$103,000	\$103,000	\$103,000
<b>Subtotal Lake Revenue</b>		<b>\$1,158,000</b>	<b>\$1,158,000</b>	<b>\$1,158,000</b>	<b>\$1,158,000</b>	<b>\$1,158,000</b>
<b>Operating Revenue</b>	<b>Table 16</b>					
Penalties		\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
VID Rincon Filtration Charge		\$2,625,000	\$2,625,000	\$2,625,000	\$2,625,000	\$2,625,000
VID - Canal Rembursement		\$539,000	\$562,000	\$587,000	\$613,000	\$638,000
Electrical Energy		\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Temporaty Meter Installations		\$11,000	\$11,000	\$11,000	\$11,000	\$11,000
CIP Reimbursement		\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Reimbursement from LS&S		\$51,000	\$51,000	\$51,000	\$51,000	\$51,000
<b>Subtotal Operating Revenue</b>		<b>\$3,901,000</b>	<b>\$3,924,000</b>	<b>\$3,949,000</b>	<b>\$3,975,000</b>	<b>\$4,000,000</b>
<b>Non-Operating Revenue</b>	<b>Table 16</b>					
Other Interest-Non Investment		(\$2,000)	(\$2,000)	(\$2,000)	(\$2,000)	(\$2,000)
Interest-Trustee		\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
Investment Earnings		\$206,000	\$115,000	\$114,000	\$120,000	\$97,000
Rent		\$110,000	\$110,000	\$110,000	\$110,000	\$110,000
Bank Acct Analysis Fees-Contra		(\$30,000)	(\$30,000)	(\$30,000)	(\$30,000)	(\$30,000)
Cr. Card Merchant Fees-Contra		(\$315,000)	(\$315,000)	(\$315,000)	(\$315,000)	(\$315,000)
Interest-UAL Prepayment		\$74,000	\$74,000	\$74,000	\$74,000	\$74,000
Other Revenue		\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
<b>Subtotal Non-Operating Revenue</b>		<b>\$131,000</b>	<b>\$40,000</b>	<b>\$39,000</b>	<b>\$45,000</b>	<b>\$22,000</b>
<b>Total Revenues</b>		<b>\$76,614,000</b>	<b>\$85,800,000</b>	<b>\$92,800,000</b>	<b>\$100,436,000</b>	<b>\$108,726,000</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 21: Proposed Water Financial Plan (Cont.)

O&M Expenses	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Fixed Purchased Water Costs</b>	<b>Table 17</b>					
MWD Readiness-to-Serve Charge		\$773,000	\$773,000	\$773,000	\$773,000	\$773,000
MWD Capacity Charge		\$304,000	\$304,000	\$304,000	\$304,000	\$304,000
Supply Reliability Charge		\$1,699,000	\$1,699,000	\$1,699,000	\$1,699,000	\$1,699,000
Customer Service Charge		\$1,101,000	\$1,101,000	\$1,101,000	\$1,101,000	\$1,101,000
Emergency Storage Charge		\$2,488,000	\$2,488,000	\$2,488,000	\$2,488,000	\$2,488,000
Infrastructure Access Charge		\$1,818,000	\$1,818,000	\$1,818,000	\$1,818,000	\$1,818,000
<b>Subtotal Fixed Purchased Water Costs</b>		<b>\$8,183,000</b>	<b>\$8,183,000</b>	<b>\$8,183,000</b>	<b>\$8,183,000</b>	<b>\$8,183,000</b>
<b>Variable Purchased Water Cost:</b>	<b>Table 17</b>					
Purchased Water (Variable Costs)		\$15,668,000	\$20,700,000	\$24,474,000	\$24,474,000	\$24,474,000
PSAWR Credit/Discount		(\$34,000)	(\$34,000)	(\$34,000)	(\$34,000)	(\$34,000)
IPWR Credit/Discount		(\$731,000)	(\$731,000)	(\$731,000)	(\$731,000)	(\$731,000)
<b>Subtotal Variable Purchased Water Costs</b>		<b>\$14,903,000</b>	<b>\$19,935,000</b>	<b>\$23,709,000</b>	<b>\$23,709,000</b>	<b>\$23,709,000</b>
<b>Subtotal Purchased Water Costs</b>		<b>\$23,086,000</b>	<b>\$28,118,000</b>	<b>\$31,892,000</b>	<b>\$31,892,000</b>	<b>\$31,892,000</b>
<b>Department 410 - Water</b>	<b>Table 17</b>					
Employee Services		\$11,578,000	\$12,128,000	\$12,705,000	\$13,310,000	\$13,944,000
Maintenance & Operations		\$7,450,000	\$7,756,000	\$8,074,000	\$8,406,000	\$8,752,000
Treatment		\$4,214,000	\$4,425,000	\$4,646,000	\$4,879,000	\$5,122,000
Capital Outlay		\$100,000	\$104,000	\$108,000	\$112,000	\$116,000
Internal Service		\$2,785,000	\$2,890,000	\$2,998,000	\$3,111,000	\$3,228,000
Allocations		\$5,670,000	\$5,883,000	\$6,103,000	\$6,332,000	\$6,570,000
<b>Subtotal Department 410 - Water</b>		<b>\$31,797,000</b>	<b>\$33,186,000</b>	<b>\$34,634,000</b>	<b>\$36,150,000</b>	<b>\$37,732,000</b>
<b>Department 412 - Canal</b>	<b>Table 17</b>					
Employee Services		\$647,000	\$678,000	\$709,000	\$743,000	\$777,000
Maintenance & Operations		\$205,000	\$212,000	\$220,000	\$229,000	\$237,000
Capital Outlay		\$28,000	\$29,000	\$31,000	\$32,000	\$33,000
Internal Service		\$180,000	\$186,000	\$193,000	\$201,000	\$208,000
Allocations		\$18,000	\$19,000	\$20,000	\$20,000	\$21,000
<b>Subtotal Department 412 - Canal</b>		<b>\$1,078,000</b>	<b>\$1,124,000</b>	<b>\$1,173,000</b>	<b>\$1,225,000</b>	<b>\$1,276,000</b>
<b>Department 414 - Lakes</b>	<b>Table 17</b>					
Employee Services		\$2,621,000	\$2,747,000	\$2,879,000	\$3,017,000	\$3,162,000
Maintenance & Operations		\$748,000	\$777,000	\$807,000	\$839,000	\$872,000
Capital Outlay		\$27,000	\$28,000	\$29,000	\$30,000	\$31,000
Internal Service		\$663,000	\$688,000	\$714,000	\$741,000	\$769,000
Allocations		\$34,000	\$35,000	\$36,000	\$37,000	\$39,000
Uncategorized		\$6,000	\$6,000	\$7,000	\$7,000	\$7,000
<b>Subtotal Department 414 - Lakes</b>		<b>\$4,099,000</b>	<b>\$4,281,000</b>	<b>\$4,472,000</b>	<b>\$4,671,000</b>	<b>\$4,880,000</b>
<b>Debt Service</b>	<b>Table 17</b>					
Existing Debt		\$5,409,927	\$5,438,372	\$5,496,031	\$5,497,808	\$5,495,476
Pending Debt		\$1,282,588	\$1,465,815	\$1,465,815	\$3,009,765	\$3,009,765
<b>Subtotal Debt Service</b>		<b>\$6,692,515</b>	<b>\$6,904,188</b>	<b>\$6,961,846</b>	<b>\$8,507,572</b>	<b>\$8,505,241</b>
<b>Total Expenses</b>		<b>\$66,752,515</b>	<b>\$73,613,188</b>	<b>\$79,132,846</b>	<b>\$82,445,572</b>	<b>\$84,285,241</b>
<b>Net Operating Income</b>		<b>\$9,861,485</b>	<b>\$12,186,812</b>	<b>\$13,667,154</b>	<b>\$17,990,428</b>	<b>\$24,440,759</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 22: Water Transfers and Reserves Activity through FY 2028

Operating Fund	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$11,770,220	\$10,973,016	\$12,100,798	\$13,008,139	\$13,552,697
Transfers (Net Operating Income) Table 21	\$9,861,485	\$12,186,812	\$13,667,154	\$17,990,428	\$24,440,759
Transfers from/(to) Rate Stabilization Reserve	(\$10,658,689)	(\$11,059,031)	(\$12,759,813)	(\$17,445,870)	(\$24,138,348)
<b>Ending Balance</b>	<b>\$10,973,016</b>	<b>\$12,100,798</b>	<b>\$13,008,139</b>	<b>\$13,552,697</b>	<b>\$13,855,108</b>

Rate Stabilization Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$1,450,050	\$1,154,300	\$1,405,900	\$1,594,600	\$1,594,600
Transfers from/(to) Operating Fund	\$10,658,689	\$11,059,031	\$12,759,813	\$17,445,870	\$24,138,348
Transfers from/(to) Capital Reserve	(\$10,954,439)	(\$10,807,431)	(\$12,571,113)	(\$17,445,870)	(\$24,138,348)
<b>Ending Balance</b>	<b>\$1,154,300</b>	<b>\$1,405,900</b>	<b>\$1,594,600</b>	<b>\$1,594,600</b>	<b>\$1,594,600</b>

Capital Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$16,292,558	\$26,244,496	\$29,192,685	\$32,938,787	\$21,016,276
Plus:					
Other Sources/(Uses)					
Debt Proceeds	\$6,150,000	\$32,000,000	\$20,000,000	\$6,997,000	\$0
Grants	\$3,412,000	\$3,412,000	\$3,412,000	\$0	\$0
Transfers from/(to) Rate Stabilization Reserve	\$10,954,439	\$10,807,431	\$12,571,113	\$17,445,870	\$24,138,348
Less:					
CIP	(\$10,881,155)	(\$43,683,925)	(\$32,699,527)	(\$36,767,032)	(\$31,943,942)
Subtotal Capital Reserve	\$25,927,843	\$28,780,001	\$32,476,270	\$20,614,626	\$13,210,682
Interest Earnings	\$316,653	\$412,684	\$462,517	\$401,651	\$256,702
<b>Ending Balance</b>	<b>\$26,244,496</b>	<b>\$29,192,685</b>	<b>\$32,938,787</b>	<b>\$21,016,276</b>	<b>\$13,467,384</b>

Debt Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$338,471	\$338,471	\$338,471	\$338,471	\$338,471
<b>Ending Balance</b>	<b>\$338,471</b>	<b>\$338,471</b>	<b>\$338,471</b>	<b>\$338,471</b>	<b>\$338,471</b>
	\$5,077	\$5,077	\$5,077	\$5,077	\$5,077

Summary Information	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$29,851,299	\$38,710,283	\$43,037,854	\$47,879,997	\$36,502,044
<b>Ending Balance</b>	<b>\$38,710,283</b>	<b>\$43,037,854</b>	<b>\$47,879,997</b>	<b>\$36,502,044</b>	<b>\$29,255,563</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

The operating position based on the proposed financial plan is identified in Figure 7. Figure 8 and Figure 9 show the capital plan with funding sources and projected ending reserve balances, respectively.

Figure 7: Water – Proposed Operating Position

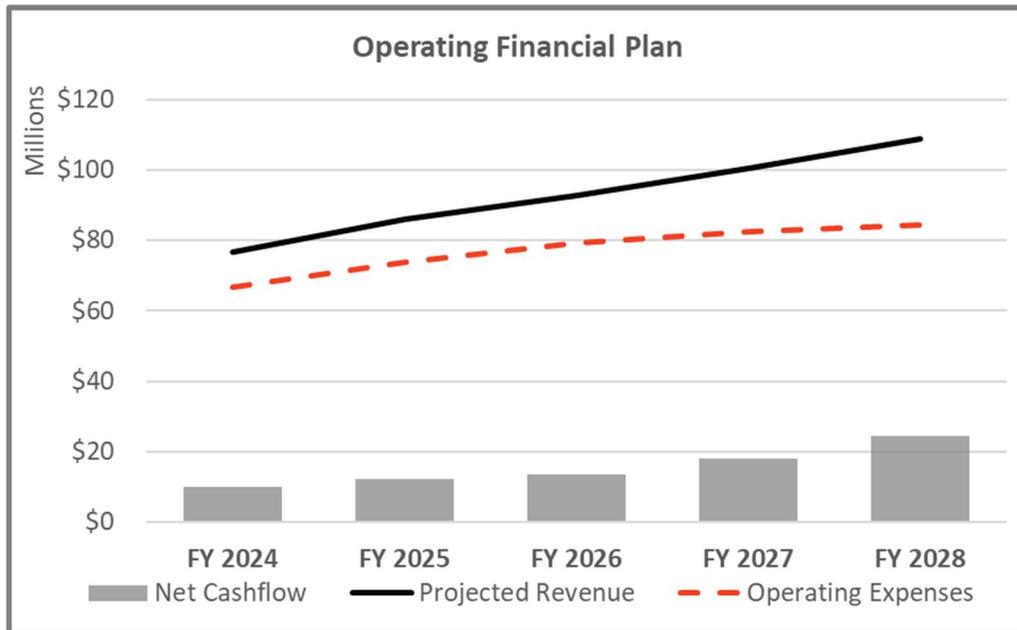
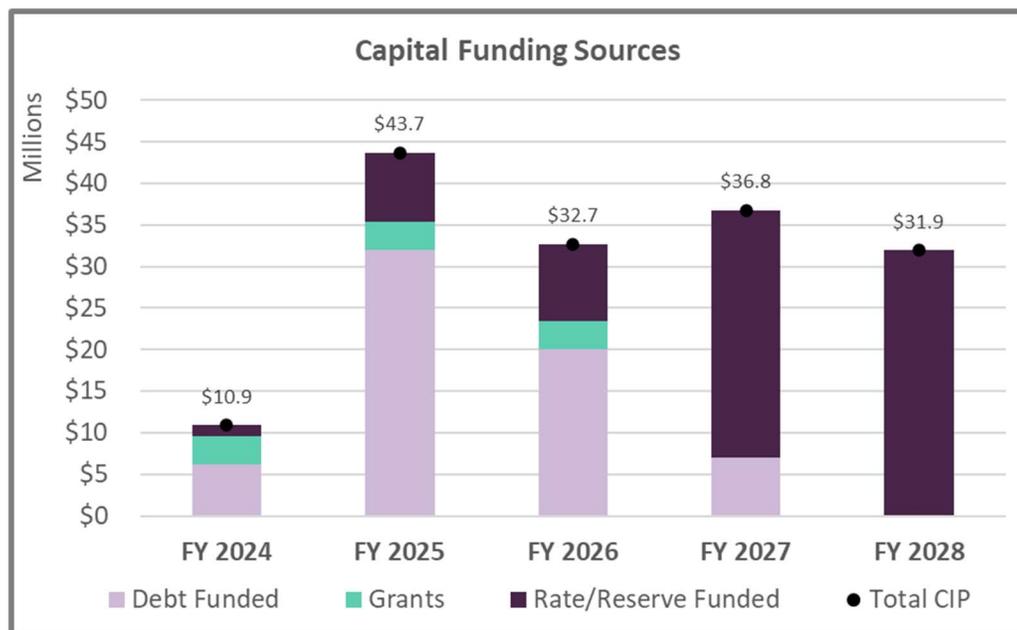
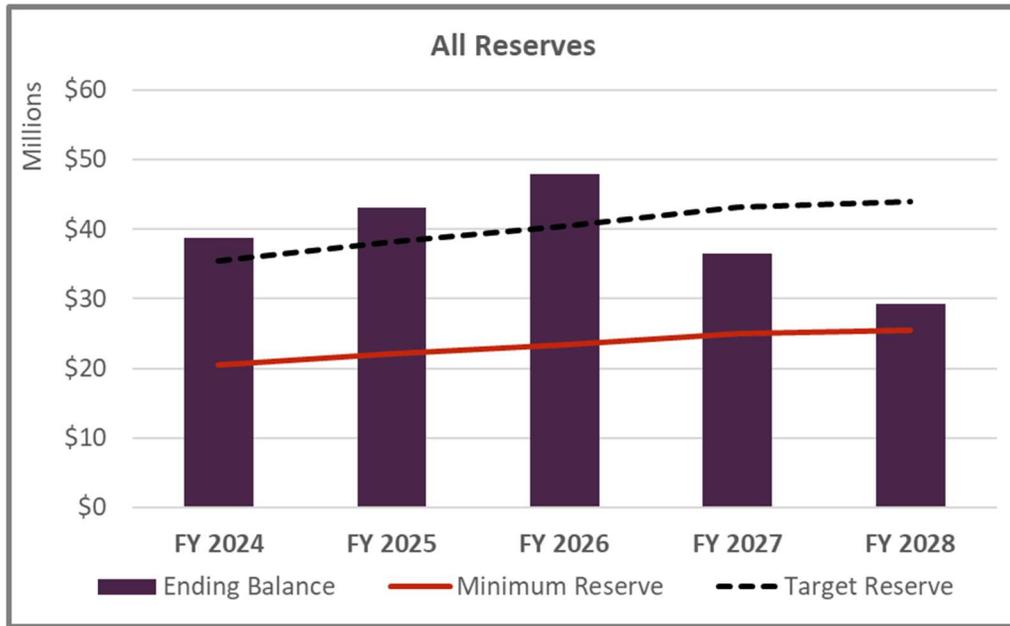


Figure 8: Water – Capital Improvement Plan with Funding Sources



# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Figure 9: Water – Proposed Ending Reserves



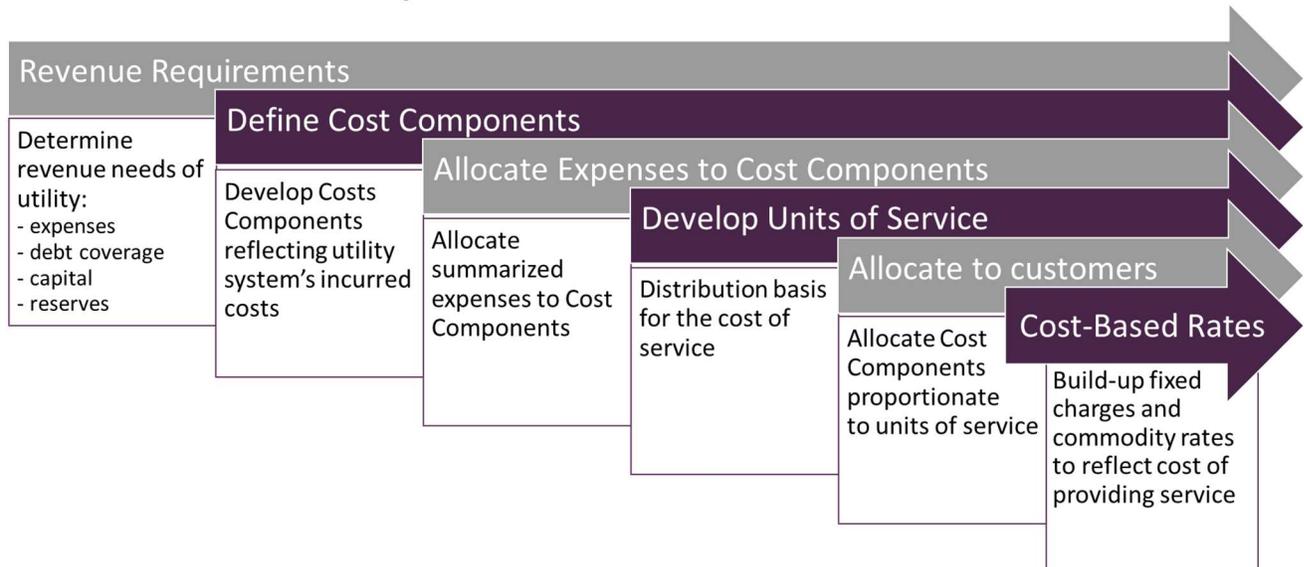
## Cost-of-Service Analysis – Water Utility

### Cost-of-Service Process

The next step in developing rates is to perform a cost-of-service analysis. This step develops proposed water rates that are cost-based and equitable. Meeting the requirements of Proposition 218 is of paramount importance in developing utility rates. Proposition 218 does not provide a particular methodology for establishing cost-based rates. This study and analysis herein allocate costs proportionately to each parcel served by the City and derives water rates that adhere to the cost-of-service provisions of Proposition 218.

It is important to understand **how** costs are incurred to determine the most appropriate way to recover them. The following graphic summarizes the cost-of-service process. This process allocates costs incurred to customer classes and tiers based on their proportional share. As a result, the proposed rates are cost-based and reflect the costs incurred to deliver water service to all customers.

Figure 10: Cost-of-Service Process



### Revenue Requirements

With FY 2024 as the first year of the proposed rate schedule, revenue requirements are determined for FY 2024 and used for the cost-of-service. Revenue requirements include O&M expenses, available offsets from other operating and non-operating revenues, annual net income, and any mid-year adjustments if rates are implemented after the start of the fiscal year. The proposed revenue adjustments and corresponding rates generate the necessary funding over the Rate Setting Period to satisfy debt service requirements and fund total revenue requirements, including capital and minimum reserve requirements. The results of the financial plan analysis are summarized in Table 23 and represent the revenue required from rates over the Rate Setting Period.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 23: Water Revenue Requirements

Revenue Requirements	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	Total	Total	Total	Total	Total
<b>Purchased Water Costs</b>					
MWD Readiness-to-Serve Charge	\$773,000	\$773,000	\$773,000	\$773,000	\$773,000
MWD Capacity Charge	\$304,000	\$304,000	\$304,000	\$304,000	\$304,000
Supply Reliability Charge	\$1,699,000	\$1,699,000	\$1,699,000	\$1,699,000	\$1,699,000
Customer Service Charge	\$1,101,000	\$1,101,000	\$1,101,000	\$1,101,000	\$1,101,000
Emergency Storage Charge	\$2,488,000	\$2,488,000	\$2,488,000	\$2,488,000	\$2,488,000
Infrastructure Access Charge	\$1,818,000	\$1,818,000	\$1,818,000	\$1,818,000	\$1,818,000
Purchased Water (Variable Costs)	\$15,668,000	\$20,700,000	\$24,474,000	\$24,474,000	\$24,474,000
PSAWR Credit/Discount	(\$34,000)	(\$34,000)	(\$34,000)	(\$34,000)	(\$34,000)
IPWR Credit/Discount	(\$731,000)	(\$731,000)	(\$731,000)	(\$731,000)	(\$731,000)
<b>Total Purchased Water Costs</b>	<b>\$23,086,000</b>	<b>\$28,118,000</b>	<b>\$31,892,000</b>	<b>\$31,892,000</b>	<b>\$31,892,000</b>
<b>Operations and Maintenance</b>					
<i>Department 410 - Water</i>					
Employee Services	\$11,578,000	\$12,128,000	\$12,705,000	\$13,310,000	\$13,944,000
Maintenance & Operations	\$7,450,000	\$7,756,000	\$8,074,000	\$8,406,000	\$8,752,000
Treatment	\$4,214,000	\$4,425,000	\$4,646,000	\$4,879,000	\$5,122,000
Capital Outlay	\$100,000	\$104,000	\$108,000	\$112,000	\$116,000
Internal Service	\$2,785,000	\$2,890,000	\$2,998,000	\$3,111,000	\$3,228,000
Allocations	\$5,670,000	\$5,883,000	\$6,103,000	\$6,332,000	\$6,570,000
<b>Total Department 410 - Water</b>	<b>\$31,797,000</b>	<b>\$33,186,000</b>	<b>\$34,634,000</b>	<b>\$36,150,000</b>	<b>\$37,732,000</b>
<i>Department 412 - Canal</i>					
Employee Services	\$647,000	\$678,000	\$709,000	\$743,000	\$777,000
Maintenance & Operations	\$205,000	\$212,000	\$220,000	\$229,000	\$237,000
Capital Outlay	\$28,000	\$29,000	\$31,000	\$32,000	\$33,000
Internal Service	\$180,000	\$186,000	\$193,000	\$201,000	\$208,000
Allocations	\$18,000	\$19,000	\$20,000	\$20,000	\$21,000
<b>Total Department 412 - Canal</b>	<b>\$1,078,000</b>	<b>\$1,124,000</b>	<b>\$1,173,000</b>	<b>\$1,225,000</b>	<b>\$1,276,000</b>
<i>Department 414 - Lakes</i>					
Employee Services	\$2,621,000	\$2,747,000	\$2,879,000	\$3,017,000	\$3,162,000
Maintenance & Operations	\$748,000	\$777,000	\$807,000	\$839,000	\$872,000
Capital Outlay	\$27,000	\$28,000	\$29,000	\$30,000	\$31,000
Internal Service	\$663,000	\$688,000	\$714,000	\$741,000	\$769,000
Allocations	\$34,000	\$35,000	\$36,000	\$37,000	\$39,000
Uncategorized	\$6,000	\$6,000	\$7,000	\$7,000	\$7,000
<b>Total Department 414 - Lakes</b>	<b>\$4,099,000</b>	<b>\$4,281,000</b>	<b>\$4,472,000</b>	<b>\$4,671,000</b>	<b>\$4,880,000</b>
<b>Total Operations and Maintenance</b>	<b>\$36,974,000</b>	<b>\$38,591,000</b>	<b>\$40,279,000</b>	<b>\$42,046,000</b>	<b>\$43,888,000</b>
<b>Debt Service</b>					
Existing Debt	\$5,409,927	\$5,438,372	\$5,496,031	\$5,497,808	\$5,495,476
Pending Debt	\$1,282,588	\$1,465,815	\$1,465,815	\$3,009,765	\$3,009,765
New/Proposed Debt	\$0	\$0	\$0	\$0	\$0
<b>Total Debt Service</b>	<b>\$6,692,515</b>	<b>\$6,904,188</b>	<b>\$6,961,846</b>	<b>\$8,507,572</b>	<b>\$8,505,241</b>
<b>Other Funding</b>					
<i>Revenue Offsets</i>					
Contract Revenue	(\$3,095,000)	(\$3,163,000)	(\$3,163,000)	(\$3,163,000)	(\$3,163,000)
Lake Revenue	(\$1,158,000)	(\$1,158,000)	(\$1,158,000)	(\$1,158,000)	(\$1,158,000)
<i>Operating Revenue</i>					
Penalties	(\$500,000)	(\$500,000)	(\$500,000)	(\$500,000)	(\$500,000)
VID Rincon Filtration Charge	(\$2,625,000)	(\$2,625,000)	(\$2,625,000)	(\$2,625,000)	(\$2,625,000)
VID - Canal Rembursement	(\$539,000)	(\$562,000)	(\$587,000)	(\$613,000)	(\$638,000)
Electrical Energy	(\$75,000)	(\$75,000)	(\$75,000)	(\$75,000)	(\$75,000)
Temporary Meter Installations	(\$11,000)	(\$11,000)	(\$11,000)	(\$11,000)	(\$11,000)
CIP Reimbursement	(\$100,000)	(\$100,000)	(\$100,000)	(\$100,000)	(\$100,000)
Reimbursement from LS&S	(\$51,000)	(\$51,000)	(\$51,000)	(\$51,000)	(\$51,000)
<i>Non-Operating Revenue</i>					
Other Interest-Non Investment	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Interest-Trustee	(\$6,000)	(\$6,000)	(\$6,000)	(\$6,000)	(\$6,000)
Investment Earnings	(\$206,000)	(\$115,000)	(\$114,000)	(\$120,000)	(\$97,000)
Rent	(\$110,000)	(\$110,000)	(\$110,000)	(\$110,000)	(\$110,000)
Bank Acct Analysis Fees-Contra	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Cr. Card Merchant Fees-Contra	\$315,000	\$315,000	\$315,000	\$315,000	\$315,000
Interest-UAL Prepayment	(\$74,000)	(\$74,000)	(\$74,000)	(\$74,000)	(\$74,000)
Other Revenue	(\$82,000)	(\$82,000)	(\$82,000)	(\$82,000)	(\$82,000)
<b>Total Revenue Offsets</b>	<b>(\$8,285,000)</b>	<b>(\$8,285,000)</b>	<b>(\$8,309,000)</b>	<b>(\$8,341,000)</b>	<b>(\$8,343,000)</b>
<i>Adjustments</i>					
Reserve Funding	\$9,859,485	\$12,186,812	\$13,667,154	\$17,990,428	\$24,440,759
Adjustment for Mid-Year Increase	\$2,785,000	\$0	\$0	\$0	\$0
<b>Total Adjustments</b>	<b>\$12,644,485</b>	<b>\$12,186,812</b>	<b>\$13,667,154</b>	<b>\$17,990,428</b>	<b>\$24,440,759</b>
<b>Total Other Funding</b>	<b>\$4,359,485</b>	<b>\$3,901,812</b>	<b>\$5,358,154</b>	<b>\$9,649,428</b>	<b>\$16,097,759</b>
<b>Revenue Requirement from Rates</b>	<b>\$71,112,000</b>	<b>\$77,515,000</b>	<b>\$84,491,000</b>	<b>\$92,095,000</b>	<b>\$100,383,000</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Define Cost Components

The utility incurs costs to accommodate total water demand throughout the year, including water supply costs, treatment, operating expenses, and reinvestment in the water system. Therefore, to determine the most appropriate way to recover the utility's expenses, cost components are identified to allocate expenses based on how they are incurred. The cost components shown in Figure 11 and Figure 12 reflect the fixed and variable cost components, respectively, used for this study.

Figure 11: Fixed Cost Components



Figure 12: Variable Cost Components



### Fixed Cost Components:

**Emergency Storage & Supply Reliability (ES & SR):** Fixed charges from SDCWA for emergency storage and supply reliability expenses (subject to pass-throughs to capture increases in future years).

**SDCWA Fixed:** All remaining fixed charges incurred from SDCWA, less ES and SR expenses (subject to pass-throughs to capture increases in future years).

**Account Services:** Fixed costs associated with having an account that do not vary by meter size or usage.

**Meter Capacity:** Fixed costs associated with system demand to be recovered based on meter capacity.

### Variable Cost Components:

**Purchased Water:** Variable costs related to purchased water from SDCWA, net of local surface water (subject to pass-throughs to capture increases in future years).

**PSAWR Credit:** Credit received from SDCWA for customers that joined the PSAWR program.

**Delivery:** Operating and capital expenses of the water system associated with conveying water to customers throughout the year based on the average annual water usage. These costs tend to vary with the total water used.

**Peaking:** Costs incurred to meet customer peak demands above the annual average usage.

**Revenue Offset:** Penalty revenues used to specifically offset certain variable rates.

**Treatment:** Chemical costs to treat purchased/local water at the City's water treatment plant. Special Unfiltered customers do not pay for chemical costs as they receive untreated water through an outlet prior to the water entering the City's treatment plant.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Allocate Expenses to Cost Components

When allocating expenses to the defined costs components, it is important to have a sound basis as to why an expense was allocated to a certain fixed cost component versus a variable cost component or split between both fixed and variable. The distribution of expenses to the cost components should be straightforward to ensure the method of apportionment is **understandable** and easily **correlates to how expenses are incurred**. A description of each expense category is identified on the next page.

### **O&M Expense Categories:**

*Purchased Water Costs:* Fixed and variable charges incurred from SDCWA and MWD, including credits for PSAWR customers.

*Department 410 – Water:* Costs associated with running the water system, including the Water Treatment Plant, 440 miles of pipelines, 11 reservoirs, 5 pump stations, meter reading, customer service, and a portion of overhead costs.

*Department 412 – Canal:* Costs associated with the maintenance on the canal, which carries untreated water 14 miles from the San Luis Rey River to Lake Wohlford. Water from the canal serves the City, Vista Irrigation District, as well as local Indian tribes.

*Department 414 – Lakes:* Costs, net of lake revenues, associated with maintaining Dixon Lake, Lake Wohlford, and Daley Ranch. The lakes serve as reservoirs and Daley Ranch is a conservation area that feeds into Dixon Lake. The lakes generate recreational revenue that vary from year-to-year and are used to offset a portion of expenses and maintenance costs.

Table 24 summarizes the percent allocation of purchased water costs, including SDCWA fixed costs, SDCWA variable costs, and PSAWR credits to the fixed and variable cost components. Table 25 reflects the dollars to each cost component based on the percent allocations in Table 24. These expenses are allocated 100% to the respective cost component that ties specifically to how the expenses are incurred. These costs are not adjusted by revenue offsets or reserve funding.

*Table 24: Purchased Water Costs Allocation to Cost Components (%)*

Purchased Water Costs	Methodology / Allocation Basis	ES & SR	SDCWA Fixed	Purchased Water	PSAWR Credit	Total
MWD Readiness-to-Serve Charge	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
MWD Capacity Charge	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
Supply Reliability Charge	Specific	100.0%	0.0%	0.0%	0.0%	100.0%
Customer Service Charge	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
Emergency Storage Charge	Specific	100.0%	0.0%	0.0%	0.0%	100.0%
Infrastructure Access Charge	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
Purchased Water (Variable Costs)	Specific	0.0%	0.0%	100.0%	0.0%	100.0%
PSAWR Credit/Discount	Specific	0.0%	0.0%	0.0%	100.0%	100.0%
IPWR Credit/Discount	Specific	0.0%	0.0%	100.0%	0.0%	100.0%

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Table 25: Purchased Water Costs Allocation to Cost Components (\$)

Purchased Water Costs	Methodology / Allocation Basis	ES & SR	SDCWA Fixed	Purchased Water	PSAWR Credit	Total
MWD Readiness-to-Serve Charge	Specific	\$0	\$773,000	\$0	\$0	\$773,000
MWD Capacity Charge	Specific	\$0	\$304,000	\$0	\$0	\$304,000
Supply Reliability Charge	Specific	\$1,699,000	\$0	\$0	\$0	\$1,699,000
Customer Service Charge	Specific	\$0	\$1,101,000	\$0	\$0	\$1,101,000
Emergency Storage Charge	Specific	\$2,488,000	\$0	\$0	\$0	\$2,488,000
Infrastructure Access Charge	Specific	\$0	\$1,818,000	\$0	\$0	\$1,818,000
Purchased Water (Variable Costs)	Specific	\$0	\$0	\$15,668,000	\$0	\$15,668,000
PSAWR Credit/Discount	Specific	\$0	\$0	\$0	(\$34,000)	(\$34,000)
IPWR Credit/Discount	Specific	\$0	\$0	(\$731,000)	\$0	(\$731,000)
<b>Total Allocation (\$)</b>		<b>\$4,187,000</b>	<b>\$3,996,000</b>	<b>\$14,937,000</b>	<b>(\$34,000)</b>	<b>\$23,086,000</b>

The water system is sized to provide sufficient capacity to the City’s water users that place the highest levels of demand on the system. To accommodate water users that place higher demands on the water system, the City incurs operating and maintenance costs to serve such users. For this study, Employee Services under Department 410 – Water, which includes the water utility’s plant operators, field workers, and supervisors, was allocated to the variable components of Delivery and Peaking. System peaking factors were used to allocate costs between Average Day Demand (Average Day) and Max Day Demand (Max Day). The Peaking factors shown in Table 26 were based on the City’s Water Master Plan (Water Master Plan, page 2-11, Table 2-3), with Average Day assigned a value of 1.0 and Max Day assigned a value of 1.7. The Max Day factor of 1.7 means that the system delivers approximately 1.7 times the average daily demand during a peak day. Therefore, the Average Day factor of 1.0 makes up approximately 59% of Max Day ( $1.0 / 1.7 = 0.5882$ ). These peaking factors and corresponding allocations provide a means to spread costs incurred as a function of serving Average Day and Max Day proportionately between Delivery and Peaking, respectively.

Table 26: System Peaking Factors and Distribution Basis

System Peak	Peaking Factor [A]	Delivery [B] = A ÷ Average Day	Peaking [C] = 100% - B
Average Day	1.00	100.00%	0.00%
Max Day	1.70	58.82%	41.18%

With the distribution basis for Average Day and Max Day identified in Table 26, the O&M expenses can be allocated to the cost components.

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Table 27 summarizes the percent allocation of O&M revenue requirements to the cost components, and Table 28 uses the percent allocations in Table 27 to allocate expenses in dollars to each cost component. The expense line of “Allocations,” under Department 410 – Water, was allocated between the fixed cost components of Account Services and Meter Capacity. The 32.1% assigned to Meter Capacity is based on the portion of “Allocations” associated with engineering, planning, building, and direct charges from water staffing. These functions assist with maintaining the system to serve the various demands placed on the system from connected meters. The remaining overhead costs (67.9%) are recovered under Account Services.

**Table 27: Water O&M Expense Allocation to Cost Components (%)**

Operations and Maintenance	Methodology / Allocation Basis	Account Services	Meter Capacity	Delivery	Peaking	Treatment	Total
<b>Department 410 - Water</b>							
Employee Services	Max Day	0.00%	0.00%	58.82%	41.18%	0.00%	100.0%
Maintenance & Operations	Average Day	0.00%	0.00%	100.00%	0.00%	0.00%	100.0%
Treatment	Specific	0.00%	0.00%	0.00%	0.00%	100.00%	100.0%
Capital Outlay	Specific	0.00%	100.00%	0.00%	0.00%	0.00%	100.0%
Internal Service	Average Day	0.00%	0.00%	100.00%	0.00%	0.00%	100.0%
Allocations	Specific	67.89%	32.11%	0.00%	0.00%	0.00%	100.0%
<b>Department 412 - Canal</b>							
Employee Services	Average Day	0.00%	0.00%	100.00%	0.00%	0.00%	100.0%
Maintenance & Operations	Average Day	0.00%	0.00%	100.00%	0.00%	0.00%	100.0%
Capital Outlay	Specific	0.00%	100.00%	0.00%	0.00%	0.00%	100.0%
Internal Service	Average Day	0.00%	0.00%	100.00%	0.00%	0.00%	100.0%
Allocations	Specific	100.00%	0.00%	0.00%	0.00%	0.00%	100.0%
<b>Department 414 - Lakes</b>							
Employee Services	Average Day	0.00%	0.00%	100.00%	0.00%	0.00%	100.0%
Maintenance & Operations	Average Day	0.00%	0.00%	100.00%	0.00%	0.00%	100.0%
Capital Outlay	Specific	0.00%	100.00%	0.00%	0.00%	0.00%	100.0%
Internal Service	Average Day	0.00%	0.00%	100.00%	0.00%	0.00%	100.0%
Allocations	Specific	100.00%	0.00%	0.00%	0.00%	0.00%	100.0%

**Table 28: Water O&M Expense Allocation to Cost Components (\$)**

Operations and Maintenance	Methodology / Allocation Basis	Account Services	Meter Capacity	Delivery	Peaking	Treatment	Total
<b>Department 410 - Water</b>							
Employee Services	Max Day	\$0	\$0	\$6,810,588	\$4,767,412	\$0	\$11,578,000
Maintenance & Operations	Average Day	\$0	\$0	\$7,450,000	\$0	\$0	\$7,450,000
Treatment	Specific	\$0	\$0	\$0	\$0	\$4,214,000	\$4,214,000
Capital Outlay	Specific	\$0	\$100,000	\$0	\$0	\$0	\$100,000
Internal Service	Average Day	\$0	\$0	\$2,785,000	\$0	\$0	\$2,785,000
Allocations	Specific	\$3,849,460	\$1,820,540	\$0	\$0	\$0	\$5,670,000
<b>Department 412 - Canal</b>							
Employee Services	Average Day	\$0	\$0	\$647,000	\$0	\$0	\$647,000
Maintenance & Operations	Average Day	\$0	\$0	\$205,000	\$0	\$0	\$205,000
Capital Outlay	Specific	\$0	\$28,000	\$0	\$0	\$0	\$28,000
Internal Service	Average Day	\$0	\$0	\$180,000	\$0	\$0	\$180,000
Allocations	Specific	\$18,000	\$0	\$0	\$0	\$0	\$18,000
<b>Department 414 - Lakes</b>							
Employee Services	Average Day	\$0	\$0	\$2,621,000	\$0	\$0	\$2,621,000
Maintenance & Operations	Average Day	\$0	\$0	\$748,000	\$0	\$0	\$748,000
Capital Outlay	Specific	\$0	\$27,000	\$0	\$0	\$0	\$27,000
Internal Service	Average Day	\$0	\$0	\$663,000	\$0	\$0	\$663,000
Allocations	Specific	\$34,000	\$0	\$0	\$0	\$0	\$34,000
<b>Total Allocation (\$)</b>		<b>\$3,907,460</b>	<b>\$1,975,540</b>	<b>\$22,109,588</b>	<b>\$4,767,412</b>	<b>\$4,214,000</b>	<b>\$36,974,000</b>
<b>O&amp;M Allocation (%)</b>		<b>10.6%</b>	<b>5.3%</b>	<b>59.8%</b>	<b>12.9%</b>	<b>11.4%</b>	<b>100.0%</b>

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The debt was allocated to Meter Capacity because debt is used for capital improvements of the water system, and Meter Capacity is a fixed cost recovery component that reflects the demand each meter places on the water system. Table 29 identifies the percent allocation of the debt expense to the cost components, and Table 30 reflects the debt expense in dollars.

*Table 29: Water Debt Allocation to Cost Components (%)*

Debt Service	Methodology / Allocation Basis	Account Services	Meter Capacity	Delivery	Peaking	Treatment	Total
Existing Debt	Specific	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Pending Debt	Specific	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%

*Table 30: Water Debt Allocation to Cost Components (\$)*

Debt Service	Methodology / Allocation Basis	Account Services	Meter Capacity	Delivery	Peaking	Treatment	Total
Existing Debt	Specific	\$0	\$5,409,927	\$0	\$0	\$0	\$5,409,927
Pending Debt	Specific	\$0	\$1,282,588	\$0	\$0	\$0	\$1,282,588
<b>Total Allocation (\$)</b>		<b>\$0</b>	<b>\$6,692,515</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,692,515</b>

Other Funding includes Contract Revenue, Lake Revenues, other Operating and Non-operating Revenues. Contract Revenues, Rent and Other Revenues were specially allocated to Variable Purchased Water to offset the costs incurred from SDCWA for purchasing untreated water for IPWR. Penalties were allocated to the cost component of Revenue Offset and may be used to specifically offset certain variable rates. All other items were allocated to the cost components based on the O&M percentages derived in Table 28 to maintain the proportionality in how O&M expenses were allocated to each cost component. Table 31 summarizes the percent allocation to the cost components, and Table 32 uses the percent allocations in Table 31 to allocate each line item in dollars to each cost component. Table 33 and Table 34 summarize the revenue requirement derived in Table 23 by cost component. Table 35 reflects the total revenue requirements in Table 23 between fixed cost recovery and variable cost recovery.

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Table 31: Water Other Funding to Cost Components (%)

Other Funding	Methodology / Allocation Basis	Account Services	Meter Capacity	Purchased Water	Delivery	Peaking	Revenue Offset	Treatment	Total
<b>Revenue Offsets</b>									
Contract Revenue	Specific	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Lake Revenue	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
<b>Operating Revenue</b>									
Penalties	Specific	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
VID Rincon Filtration Charge	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
VID - Canal Rembursement	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
Electrical Energy	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
Temporaty Meter Installations	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
CIP Reimbursement	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
Reimbursement from LS&S	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
<b>Non-Operating Revenue</b>									
Other Interest-Non Investment	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
Interest-Trustee	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
Investment Earnings	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
Rent	Specific	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Bank Acct Analysis Fees-Contra	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
Cr. Card Merchant Fees-Contra	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
Interest-UAL Prepayment	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
Other Revenue	Specific	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
<b>Adjustments</b>									
Reserve Funding	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%
Adjustment for Mid-Year Increase	O&M Allocation	10.6%	5.3%	0.0%	59.8%	12.9%	0.0%	11.4%	100.0%

Table 32: Water Other Funding Allocation to Cost Components (\$)

Other Funding	Methodology / Allocation Basis	Account Services	Meter Capacity	Purchased Water	Delivery	Peaking	Revenue Offset	Treatment	Total
<b>Revenue Offsets</b>									
Contract Revenue	Specific	\$0	\$0	(\$3,095,000)	\$0	\$0	\$0	\$0	(\$3,095,000)
Lake Revenue	O&M Allocation	(\$122,379)	(\$61,873)	\$0	(\$692,457)	(\$149,312)	\$0	(\$131,980)	(\$1,158,000)
<b>Operating Revenue</b>									
Penalties	Specific	\$0	\$0	\$0	\$0	\$0	(\$500,000)	\$0	(\$500,000)
VID Rincon Filtration Charge	O&M Allocation	(\$277,413)	(\$140,255)	\$0	(\$1,569,689)	(\$338,466)	\$0	(\$299,176)	(\$2,625,000)
VID - Canal Rembursement	O&M Allocation	(\$56,962)	(\$28,799)	\$0	(\$322,309)	(\$69,498)	\$0	(\$61,431)	(\$539,000)
Electrical Energy	O&M Allocation	(\$7,926)	(\$4,007)	\$0	(\$44,848)	(\$9,670)	\$0	(\$8,548)	(\$75,000)
Temporaty Meter Installations	O&M Allocation	(\$1,162)	(\$588)	\$0	(\$6,578)	(\$1,418)	\$0	(\$1,254)	(\$11,000)
CIP Reimbursement	O&M Allocation	(\$10,568)	(\$5,343)	\$0	(\$59,798)	(\$12,894)	\$0	(\$11,397)	(\$100,000)
Reimbursement from LS&S	O&M Allocation	(\$5,390)	(\$2,725)	\$0	(\$30,497)	(\$6,576)	\$0	(\$5,813)	(\$51,000)
<b>Non-Operating Revenue</b>									
Other Interest-Non Investment	O&M Allocation	\$211	\$107	\$0	\$1,196	\$258	\$0	\$228	\$2,000
Interest-Trustee	O&M Allocation	(\$634)	(\$321)	\$0	(\$3,588)	(\$774)	\$0	(\$684)	(\$6,000)
Investment Earnings	O&M Allocation	(\$21,770)	(\$11,007)	\$0	(\$123,183)	(\$26,562)	\$0	(\$23,478)	(\$206,000)
Rent	Specific	\$0	\$0	(\$110,000)	\$0	\$0	\$0	\$0	(\$110,000)
Bank Acct Analysis Fees-Contra	O&M Allocation	\$3,170	\$1,603	\$0	\$17,939	\$3,868	\$0	\$3,419	\$30,000
Cr. Card Merchant Fees-Contra	O&M Allocation	\$33,290	\$16,831	\$0	\$188,363	\$40,616	\$0	\$35,901	\$315,000
Interest-UAL Prepayment	O&M Allocation	(\$7,820)	(\$3,954)	\$0	(\$44,250)	(\$9,542)	\$0	(\$8,434)	(\$74,000)
Other Revenue	Specific	\$0	\$0	(\$82,000)	\$0	\$0	\$0	\$0	(\$82,000)
<b>Adjustments</b>									
Reserve Funding	O&M Allocation	\$1,042,174	\$526,904	\$0	\$5,896,938	\$1,271,536	\$0	\$1,123,933	\$9,861,485
Adjustment for Mid-Year Increase	O&M Allocation	\$294,322	\$148,804	\$0	\$1,665,365	\$359,097	\$0	\$317,412	\$2,785,000
<b>Total Allocation (\$)</b>		<b>\$861,142</b>	<b>\$435,378</b>	<b>(\$3,287,000)</b>	<b>\$4,872,604</b>	<b>\$1,050,662</b>	<b>(\$500,000)</b>	<b>\$928,699</b>	<b>\$4,361,485</b>

Table 33: FY 2024 Water Cost-of-Service Revenue Requirements by Fixed Component

Revenue Requirement	ES & SR	SDCWA Fixed	Account Services	Meter Capacity	Fixed Total
Purchased Water Costs	\$4,187,000	\$3,996,000	\$0	\$0	\$8,183,000
Operations and Maintenance	\$0	\$0	\$3,907,460	\$1,975,540	\$5,883,000
Debt Service	\$0	\$0	\$0	\$6,692,515	\$6,692,515
Other Funding	\$0	\$0	\$861,142	\$435,378	\$1,296,520
<b>COS Requirement</b>	<b>\$4,187,000</b>	<b>\$3,996,000</b>	<b>\$4,768,602</b>	<b>\$9,103,433</b>	<b>\$22,055,035</b>

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Table 34: FY 2024 Water Cost-of-Service Requirements by Variable Cost Component

Revenue Requirement	Purchased Water	PSAWR Credit	Delivery	Peaking	Revenue Offset	Treatment	Variable Total
Purchased Water Costs	\$14,937,000	(\$34,000)	\$0	\$0	\$0	\$0	\$14,903,000
Operations and Maintenance	\$0	\$0	\$22,109,588	\$4,767,412	\$0	\$4,214,000	\$31,091,000
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Funding	(\$3,287,000)	\$0	\$4,872,604	\$1,050,662	(\$500,000)	\$928,699	\$3,064,965
<b>COS Requirement</b>	<b>\$11,650,000</b>	<b>(\$34,000)</b>	<b>\$26,982,192</b>	<b>\$5,818,074</b>	<b>(\$500,000)</b>	<b>\$5,142,699</b>	<b>\$49,058,965</b>

Table 35: FY 2024 Water Cost-of-Service Combined Revenue Requirements

Revenue Requirement	Fixed Total	Variable Total	Total
Purchased Water Costs	\$8,183,000	\$14,903,000	\$23,086,000
Operations and Maintenance	\$5,883,000	\$31,091,000	\$36,974,000
Debt Service	\$6,692,515	\$0	\$6,692,515
Other Funding	\$1,296,520	\$3,064,965	\$4,361,485
<b>COS Requirement</b>	<b>\$22,055,035</b>	<b>\$49,058,965</b>	<b>\$71,114,000</b>

## Rate Design – Water Utility

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### Develop Units of Service

Unit rates for each cost component are derived by spreading the corresponding revenue requirements over appropriate units of service (distribution basis). This approach provides a clear connection between costs incurred and the proportionate share attributable to each customer class, corresponding tier, and customer account. When designing rates, the most critical component is to connect costs to the proposed rates, resulting in a rate structure that is cost-based and in compliance with Proposition 218. The previous section summarized costs by expense category and then allocated to cost components based on how each cost is incurred. The next step in designing rates is to allocate each cost component to customers in relation to their use of the system and facilities. The method of apportionment considers each customer's share of system costs and is reflected by the units of service used to equitably distribute the cost components to each customer account. The distribution basis varies by cost component and includes total bills (total accounts multiplied by 12 billing periods), Meter Equivalents (MEs), which reflect demand placed on the system based on meter size, total water sales, and usage by tier. In [Table 37](#), each meter size was assigned an equivalency factor using the flow characteristics of a 3/4" meter. Based on the City's meter inventory and discussion with staff, the majority of meters are displacement for 1 1/2" meters or less, and turbines for bigger sized meters. The safe maximum operating flow capacity for these meter types, as identified in the AWWA M1 Manual, 6<sup>th</sup> Edition, [Table B-2](#), were used for determining total meter equivalencies when compared to a 3/4" meter.

The safe maximum operating flow capacity for each meter was divided by the 3/4" meters' safe operating flow capacity of 30 gpm to determine the equivalent meter ratio. In other words, the calculations convert all larger sized meters to an equivalent number of 3/4" meters based on the safe operating flow capacity of 30 gpm. The Capacity Ratio represents the potential flow through each meter size compared to the flow through the base 3/4" meter to establish parity between meter sizes. Total MEs are determined by multiplying the number of meters by the Capacity Ratio and then multiplying the result by the billing periods in a year (12 billing periods). [Table 36](#) and [Table 37](#) identifies the units of service related to total Accounts and MEs by customer class, respectively, including PSAWR accounts. As stated previously, certain SDCWA fixed costs (Emergency Storage and Supply Reliability) are not incurred by PSAWR accounts. In addition, the City does not incur fixed charges from SDCWA for Detectors.

[Table 38](#) summarizes the annual units of service related to All Accounts (Total Bills) (line 10 of [Table 36](#)) and Total MEs (line 10 of [Table 37](#)). [Table 38](#) also separately identifies the annual MEs less PSAWR and detectors and annual MEs less detectors, which are needed for the allocation of certain cost-of-service components.

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Table 36: Number of Accounts by Meter Size<sup>4</sup>

Line #	Meter Size	Single-Family	Residential/Agricultural	Multi-Family	Commercial	Irrigation	SD Zoo Safari Park	PSAWR	Detector	Number of Accounts
1	5/8" and 3/4"	20,465	33	360	721	112	-	4	-	21,695
2	1"	2,204	67	221	336	123	-	29	381	3,361
3	1 1/2"	121	7	333	268	189	-	12	-	930
4	2"	16	7	382	287	146	-	4	-	842
5	3"	1	-	20	40	3	-	1	-	65
6	4"	-	1	8	15	2	-	1	-	27
7	6"	-	-	7	4	2	-	-	-	13
8	8"	-	-	3	1	-	1	-	-	5
9	Total	22,807	115	1,334	1,672	577	1	51	381	26,938
10	Annual Units (Total x 12 bills)	273,684	1,380	16,008	20,064	6,924	12	612	4,572	323,256

Table 37: Number of Meter Equivalents

Line #	Meter Size	AWWA Capacity (gpm) [A]	Capacity Ratio [B] = A + 30	Single-Family [C] = Accounts x B	Residential/Agricultural [D] = Accounts x B	Multi-Family [E] = Accounts x B	Commercial [F] = Accounts x B	Irrigation [G] = Accounts x B	SD Zoo Safari Park [H] = Accounts x B	PSAWR [I] = Accounts x B	Detector [J] = Accounts x B	Meter Equivalents [K] = Sum (C-J)
1	5/8" and 3/4"	30	1.00	20,465	33	360	721	112	-	4	-	21,695
2	1"	50	1.67	3,673	112	368	560	205	-	48	635	5,602
3	1 1/2"	100	3.33	403	23	1,110	893	630	-	40	-	3,100
4	2"	190	6.33	101	44	2,419	1,818	925	-	25	-	5,333
5	3"	435	14.50	15	-	290	580	44	-	15	-	943
6	4"	750	25.00	-	25	200	375	50	-	25	-	675
7	6"	1,600	53.33	-	-	373	213	107	-	-	-	693
8	8"	2,800	93.33	-	-	280	93	-	93	-	-	467
9	Total			24,658	237	5,401	5,254	2,072	93	157	635	38,507
10	Annual Units (Total x 12 bills)			295,890	2,848	64,812	63,044	24,862	1,120	1,886	7,620	462,082

Table 38: Accounts and Meter Equivalents Summary

Customer Class	Total Bills	Total ME's	ME's Less Detectors	ME's less PSAWR & Detectors
Single-Family	273,684	295,890	295,890	295,890
Residential/Agricultural	1,380	2,848	2,848	2,848
Multi-Family	16,008	64,812	64,812	64,812
Commercial	20,064	63,044	63,044	63,044
Irrigation	6,924	24,862	24,862	24,862
SD Zoo Safari Park	12	1,120	1,120	1,120
PSAWR	612	1,886	1,886	-
Detector	4,572	7,620	-	-
<b>Annual Fixed Units</b>	<b>323,256</b>	<b>462,082</b>	<b>454,462</b>	<b>452,576</b>

<sup>4</sup> The 23 3/4 x 3" meters are included with the 3" meters and will have equivalent fixed charges

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Total usage by customer class and tier must be known to derive the units of service for allocating variable costs. Table 39 provides the projected usage for FY 2024, broken out by customer class. Peaking factors are derived by taking each customer class’s usage during the max month summer period divided by average annual monthly usage of each customer class.

*Table 39: Projected Usage and Peaking Factors by Customer Class (kgals)*

Customer Class	All Usage [A]	PSAWR Credit Usage [B]	All Usage Except Special Unfiltered [C]	Peaking Factors [D]	Weighted Peak [E] = A x D
Single-Family	2,535,116		2,535,116	1.53	3,880,306
Residential/Agricultural	59,809		59,809	2.01	120,441
Multi-Family	1,235,436		1,235,436	1.26	1,562,722
Commercial	701,337		701,337	1.42	993,303
Irrigation	463,125		463,125	1.93	892,160
SD Zoo Safari Park	159,410		159,410	1.42	226,975
Special Unfiltered	7,647		-	1.10	8,448
PSAWR	56,789	47,865	56,789	1.85	104,841
<b>Variable Units</b>	<b>5,218,669</b>	<b>47,865</b>	<b>5,211,022</b>		<b>7,789,196</b>

Table 40 provides the projected tiered usage for residential customer classes (Single-Family, Multi-Family, and Residential/Agricultural). The tiered usage will be used to further apportion the total variable costs allocated to each customer class to the corresponding tiers. Allocating variable costs to customer classes first, then to tiers, ensures each customer class is recovering its own fair share of costs. The Single-Family tier allotments were adjusted to reflect updated usage characteristics throughout the year (Tier 1 = average winter usage, Tier 2 = average summer usage, and Tier 3 = greater than Tier 2). Residential/Agricultural Tier 1 is the same as Single-Family, with Tier 2 capturing all usage exceeding Tier 1. A third tier does not exist for Residential/Agricultural because their irrigation needs are for crops, which can vary significantly based on the area served and crop type. Therefore, additional property data would be required to establish a third tier on a per parcel basis (commonly referred to as Budget-Based Rates). Multi-Family customers will adjust from three-tiers to a two-tiered rate structure based on their usage characteristics (Tier 1 = winter average and Tier 2 = usage above Tier 1). Multi-Family complexes may vary significantly from each other due to density factors, landscaping needs, onsite laundry facilities, and recreational facilities such as pools. Therefore, determining an equitable breakpoint between Tier 2 and Tier 3 to apply to all Multi-Family accounts would be difficult to achieve. Each Multi-Family Tier 1 allotment will account for the number of total dwelling units to provide sufficient water for indoor water needs. Peaking factors are derived by taking each tier’s usage during the max month summer period divided by the average annual monthly usage of each tier.

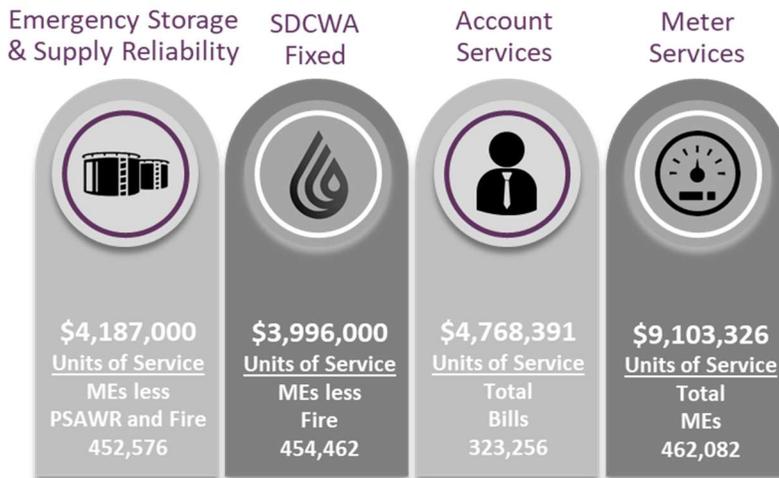
# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 40: Usage and Peaking Factors for Tiers (kgals)

Tier Usage Characteristics	Tier Allotments	Projected Usage [A]	Peaking Factors [B]	Weighted Peak [C] = A x B
<b>Single-Family</b>				
Tier 1	7	1,572,715	1.13	1,784,157
Tier 2	7-14	539,337	1.81	974,433
Tier 3	15+	423,064	2.65	1,121,716
<b>Total</b>		<b>2,535,116</b>		<b>3,880,306</b>
<b>Residential/Agricultural</b>				
Tier 1	7	14,140	1.10	15,604
Tier 2	8+	45,669	2.30	104,836
<b>Total</b>		<b>59,809</b>		<b>120,441</b>
<b>Multi-Family</b>				
Tier 1	5	928,326	1.08	1,000,092
Tier 2	6+	307,110	1.83	562,630
<b>Total</b>		<b>1,235,436</b>		<b>1,562,722</b>

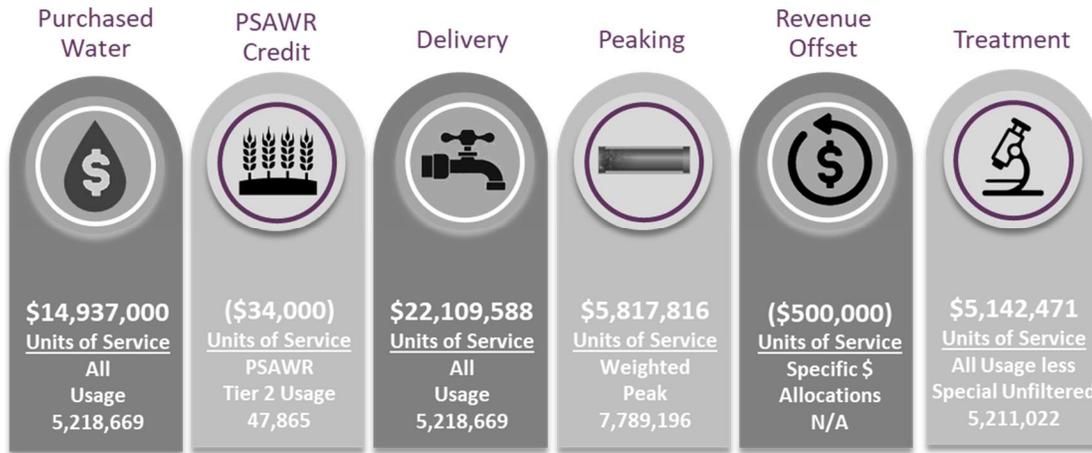
With the units of service shown in Table 38, Table 39, and Table 40, we can select the appropriate distribution basis for each cost component. Figure 13 identifies the fixed revenue requirements from Table 33 with the corresponding units of service, and Figure 14 identifies the variable revenue requirements from Table 34 with the corresponding units of service.

Figure 13: Fixed Revenue Requirements – Distribution Basis and Units of Service



# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Figure 14: Variable Revenue Requirements – Distribution Basis and Units of Service



Using the FY 2024 revenue requirements, the cost-of-service allocates expenses to customers based on the service demands that each place on the system (cost causation). This approach ensures that each customer proportionately shares in the financial obligation of the water utility. For the following unit rate computations for each cost component, unit rates were rounded up to the nearest penny.

## Fixed Cost Recovery

### Emergency Storage & Supply Reliability

SDCWA Fixed costs include six separate charges to its member agencies, including MWD Capacity, Customer Service, Infrastructure Access, Emergency Storage, Supply Reliability, and MWD Readiness-to-Serve. The SDCWA PSAWR program allows eligible agricultural customers to participate and receive a lower level of water service during water shortages or emergencies. In exchange, PSAWR customers are exempt from paying Emergency Storage and Supply Reliability fixed charges. SDCWA also doesn't charge the City fixed costs for Detectors associated with fire lines. Therefore, these costs are spread based on meter size of all meters, except PSAWR customers and Detectors. Table 41 identifies the revenue requirement for Emergency Storage & Supply Reliability, which is apportioned based on meter size as represented by MEs less PSAWR and Detector (Table 38).

Table 41: FY 2024 Emergency Storage & Supply Reliability Monthly Unit Rate

ES & SR Component Unit Rate	
Revenue Requirement	\$4,187,000
÷ ME's less PSAWR & Detectors	452,576
<b>Monthly Unit Rate</b>	<b>\$9.26</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## SDCWA Fixed

The SDCWA Fixed cost component includes all SDCWA fixed charges except for Emergency Storage and Supply Reliability. Similar to Emergency Storage and Supply Reliability, SDCWA doesn't charge the City fixed costs for Detectors associated with fire lines. Therefore, SDCWA Fixed costs are spread to all potable meters, including PSAWR, similar to how the costs are incurred by the City. Table 42 identifies the revenue requirement for SDCWA Fixed, which is apportioned based on meter size as represented by total MEs less Detectors (Table 38).

*Table 42: FY 2024 SDCWA Fixed Monthly Unit Rate*

<b>SDCWA Fixed Component Unit Rate</b>	
Revenue Requirement	\$3,996,000
÷ ME's Less Detectors	454,462
<b>Monthly Unit Rate</b>	<b>\$8.80</b>

## Account Services

Each customer incurs Account Services costs regardless of the type of land use, meter size, or total amount of water used. These costs should be spread equally across all accounts. This is achieved by using the distribution basis of Total Bills. Total Bills are determined by multiplying the total accounts by the number of billing periods over the fiscal year (12 billing periods). Therefore, the revenue requirement for Account Services is apportioned based on the Total Bills (Table 38) to determine the monthly unit cost-of-service shown in Table 43.

*Table 43: FY 2024 Account Services Monthly Unit Rate*

<b>Account Services Component Unit Rate</b>	
Revenue Requirement	\$4,768,602
÷ Total Bills	323,256
<b>Monthly Unit Rate</b>	<b>\$14.76</b>

## Meter Capacity

The Meter Capacity Component includes operational costs, debt and a portion of system-wide operations capital and reserve funding. The revenue requirement for Meter Capacity is apportioned based on meter size. Larger sized meters can generate a greater demand on the system from the amount of potential water flow that may pass through the meter. The revenue requirement for Meter Capacity is apportioned to meter size as represented by total MEs (Table 38), as shown in Table 44.

*Table 44: FY 2024 Meter Capacity Monthly Unit Rate*

<b>Meter Capacity Component Unit Rate</b>	
Revenue Requirement	\$9,103,326
÷ MEs	462,082
<b>Monthly Unit Rate</b>	<b>\$19.71</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Variable Cost Recovery

The remaining cost components are recovered through the variable rates. The proposed variable rate structure includes tiers for residential customers (Single-Family, Residential/Agricultural, and Multi-Family) and uniform rates for all non-residential accounts (Commercial, Irrigation, SD Zoo Safari Park, Special Filtered, and PSAWR). Within the following sections, PSAWR is structured as a uniform rate, but a second tier is identified solely to track the usage over 17 kgals that receives a credit from the SDCWA.

### Purchased Water

Purchased water includes charges from the SDCWA for the delivery of untreated water. The City owns and operates its own water treatment plant. Purchased water costs are net of local surface water supplies available to the City. In FY 2024 and FY 2025, the City has access to an abundant amount of local surface water due to the wet winter of FY 2023. For FY 2024, the amount of purchased water was offset by 8,000 AF of local water, providing substantial savings to City customers. Net purchased water cost is apportioned over total water usage to determine the unit cost-of-service, irrespective of tier, as shown in Table 45.

*Table 45: FY 2024 Purchased Water Cost Unit Rate per kgal*

<b>Purchased Water Component Unit Rate</b>	
Revenue Requirement	\$11,650,000
÷ All Usage	5,218,669
<b>Unit Rate</b>	<b>\$2.24</b>

### PSAWR Credit

The City has customers that are part of the SDCWA PSAWR program. SDCWA provides variable credits against water usage for agricultural use. For PSAWR accounts that have a residence, SDCWA does not provide credits to the first 17 kgals per month because SDCWA considers the first 17 kgals as the amount of water needed to serve residential purposes. Therefore, Table 46 allocates the credit over the PSAWR usage that would receive the credit.

*Table 46: FY 2024 PSAWR Credit Unit Rate per kgal*

<b>PSAWR Credit Component Unit Rate</b>	
Revenue Requirement	(\$34,000)
÷ PSAWR Credit Usage	47,865
<b>Unit Rate</b>	<b>(\$0.71)</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Delivery

Delivery costs are incurred based on the total volume of water produced and delivered to customers throughout the year. Therefore, the revenue requirement for Delivery is apportioned based on the projected total water usage to determine the unit cost-of-service, irrespective of tier, as shown in Table 47.

*Table 47: FY 2024 Delivery Cost Unit Rate per kgal*

<b>Delivery Component Unit Rate</b>	
Revenue Requirement	\$26,980,996
÷ All Usage	5,218,669
<b>Unit Rate</b>	<b>\$5.18</b>

## Peaking

Peaking costs are incurred not only based on the total volume of water produced and delivered but also as a function of the peaking characteristics of customer classes and tiers. Therefore, the revenue requirement for Peaking is first allocated to each customer class based on the Weighted Peaking derived in Table 39 and the results are identified in Table 48. Table 49 takes the Peaking cost allocated to Single-Family, Residential/Agricultural, and Multi-Family and further apportions the costs to the corresponding tiers utilizing the Weighted Peaking derived in Table 40. PSAWR's variable rate is uniform, and Tier 2 is solely for tracking the amount of usage over 17 kgal that receives the PSAWR credit from SDCWA. Therefore, the peaking factor assigned to each tier is equivalent to the peaking factor for PSAWR as a customer class in Table 39.

*Table 48: FY 2024 Peaking Allocation to Customer Classes*

Customer Class	Weighted Peak [A]	% Allocation [B] = A as a %	Revenue Requirement [C] = Rev Req x B
Single-Family	3,880,306	49.8%	\$2,898,361
Residential/Agricultural	120,441	1.5%	\$89,962
Multi-Family	1,562,722	20.1%	\$1,167,262
Commercial	993,303	12.8%	\$741,939
Irrigation	892,160	11.5%	\$666,391
SD Zoo Safari Park	226,975	2.9%	\$169,537
Special Unfiltered	8,448	0.1%	\$6,310
PSAWR	104,841	1.3%	\$78,310
<b>Total</b>	<b>7,789,196</b>	<b>100.0%</b>	<b>\$5,818,074</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 49: FY 2024 Peaking Unit Rate by Customer Class and Tier

Customer Class	Tier Allotments kgal	Projected Usage [A]	Peaking Factors [B]	Weighted Peak [C] = A x B	% Allocation [D] = C as a %	Revenue Requirement [E] = Rev Req x D	Unit Rate [F] = E ÷ A
<b>Single-Family</b>							
Tier 1	7	1,572,715	1.13	1,784,157	46%	\$1,332,661	<b>\$0.85</b>
Tier 2	7-14	539,337	1.81	974,433	25%	\$727,845	<b>\$1.35</b>
Tier 3	> 14	423,064	2.65	1,121,716	29%	\$837,856	<b>\$1.99</b>
<b>Subtotal</b>		<b>2,535,116</b>		<b>3,880,306</b>	<b>100%</b>	<b>\$2,898,361</b>	
<b>Residential/Agricultural</b>							
Tier 1	7	14,140	1.10	15,604	13%	\$11,656	<b>\$0.83</b>
Tier 2	> 7	45,669	2.30	104,836	87%	\$78,307	<b>\$1.72</b>
<b>Subtotal</b>		<b>59,809</b>		<b>120,441</b>	<b>100%</b>	<b>\$89,962</b>	
<b>Multi-Family</b>							
Tier 1	5	928,326	1.08	1,000,092	64%	\$747,010	<b>\$0.81</b>
Tier 2	> 5	307,110	1.83	562,630	36%	\$420,252	<b>\$1.37</b>
<b>Subtotal</b>		<b>1,235,436</b>		<b>1,562,722</b>	<b>100%</b>	<b>\$1,167,262</b>	
Commercial		701,337	1.42	993,303	100%	\$741,939	<b>\$1.06</b>
Irrigation		463,125	1.93	892,160	100%	\$666,391	<b>\$1.44</b>
SD Zoo Safari Park		159,410	1.42	226,975	100%	\$169,537	<b>\$1.07</b>
Special Unfiltered		7,647	1.10	8,448	100%	\$6,310	<b>\$0.83</b>
<b>PSAWR</b>							
Tier 1	17	8,924	1.85	16,475	16%	\$12,306	<b>\$1.38</b>
Tier 2	> 17	47,865	1.85	88,366	84%	\$66,004	<b>\$1.38</b>
<b>Subtotal</b>		<b>56,789</b>		<b>104,841</b>	<b>100%</b>	<b>\$78,310</b>	
<b>Total</b>		<b>5,218,669</b>		<b>7,789,196</b>		<b>\$5,818,074</b>	

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Revenue Offset

The City is using penalty revenue to specifically offset variable rates for Single-Family Tier 1, Residential/Agricultural, and PSAWR. Revenues from penalties maybe used for any purpose and is projected to generate \$500,000 annually. Based on direction from City Staff, Table 50 identifies the revenue offset amount to each of the three customer classes and how the credit was applied to the respective tiers.

Single-Family was used to offset the Tier 1 rate to ensure all customers benefit from the revenue offset. Not all Single-Family customers have usage within the upper tiers and assigning revenue offsets to the high tiers would cause certain customers to not receive the benefit. However, conversely, all customers that typically use water within the higher tiers must use their entire Tier 1 allotment and would receive the full benefit of the offset. The amount to Residential/Agricultural was applied equally to all usage, which provides a sufficient reduction for Tier 1 to equal the same rate as Single-Family Tier 1. The offset to Tier 2 results in a Tier 2 rate that falls between the Single-Family Tier 2 and Tier 3 rates. Lastly, the amount to PSAWR was applied equally to all usage as Tier 2 is only for tracking the usage above 17 kgals that receive the SCDWA credit. Table 50 identifies each customer class's share of the Revenue Offset and the impact to their variable rates.

*Table 50: FY 2024 Revenue Offset Unit Rate per kgal*

### Allocation to Customer Class

Customer Class	All Usage	Revenue Requirement <i>Specific Allocation</i>
Single-Family	2,535,116	(\$362,500)
Residential/Agricultural	59,809	(\$12,500)
PSAWR	56,789	(\$125,000)
<b>Total</b>	<b>5,218,669</b>	<b>(\$500,000)</b>

Tier Usage Characteristics	Tier Allotments	Projected Usage	Weighted Usage	% Allocation	Revenue Requirement	Unit Rate
<b>Single-Family</b>						
Tier 1	7	1,572,715	1,572,715	100%	(\$362,500)	(\$0.23)
Tier 2	7-14	539,337	-	0%	\$0	\$0.00
Tier 3	> 14	423,064	-	0%	\$0	\$0.00
<b>Total</b>		<b>2,535,116</b>	<b>1,572,715</b>	<b>100%</b>	<b>(\$362,500)</b>	
<b>Residential/Agricultural</b>						
Tier 1	7	14,140	14,140	24%	(\$2,955)	(\$0.21)
Tier 2	> 7	45,669	45,669	76%	(\$9,545)	(\$0.21)
<b>Total</b>		<b>59,809</b>	<b>59,809</b>	<b>100%</b>	<b>(\$12,500)</b>	
<b>PSAWR</b>						
Tier 1	17	8,924	8,924	16%	(\$19,643)	(\$2.21)
Tier 2	> 17	47,865	47,865	84%	(\$105,357)	(\$2.21)
<b>Total</b>		<b>56,789</b>	<b>56,789</b>	<b>100%</b>	<b>(\$125,000)</b>	

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Treatment

Treatment costs are associated with the chemicals needed for the treatment processes at the water treatment plant. These costs are recovered over all water usage, except for Special Unfiltered because these customers receive untreated water through an outlet prior to the water entering the City’s treatment plant. Therefore, the revenue requirement for Treatment is apportioned over projected total usage identified in Table 39, less Special Unfiltered to determine the unit cost-of-service, as shown in Table 51.

*Table 51: FY 2024 Treatment Unit Rate per kgal*

<b>Treatment Component Unit Rate</b>	
Revenue Requirement	\$5,142,471
÷ All Usage Except Special Unfiltered	5,211,022
<b>Unit Rate</b>	<b>\$0.99</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## FY 2024 Cost-of-Service Rates – Water Utility

### Proposed FY 2024 Monthly Fixed Charges

Table 52 and Table 53 reflect the combined charges of the City's proposed fixed charge for Potable Meters (including PSAWR Meters), and Dedicated Fire Lines, respectively. Unit rates for all cost components, except for Account Services, were derived based on Meter Equivalents. Therefore, the unit rate is multiplied by the corresponding Capacity Ratios of each meter size in Column A to derive the FY 2024 fixed charges. Account Services unit rate was determined based on Total Bills and constant across all meter sizes. PSAWR meters are not charged the Emergency Storage & Supply Reliability fixed charge because the City does not incur such charges from SDCWA for PSAWR meters. Detectors are charged for Account Services and Meter Capacity but does not incur any charges from the SDCWA.

*Table 52: FY 2024 Monthly Fixed Charges by Meter Size*

Meter Size	Capacity Ratio [A]	ES & SR [B] = \$9.26 x A	SDCWA Fixed [C] = \$8.80 x A	Account Services [D] = \$14.76	Meter Capacity [E] = \$19.71 x A	All Customers except PSAWR [F] = Sum (B - E)	PSAWR Customers [G] = Sum (C - E)
5/8" and 3/4"	1.00	\$9.26	\$8.80	\$14.76	\$19.71	\$52.53	\$43.27
1"	1.67	\$15.44	\$14.67	\$14.76	\$32.85	\$77.72	\$62.28
1 1/2"	3.33	\$30.87	\$29.34	\$14.76	\$65.70	\$140.67	\$109.80
2"	6.33	\$58.65	\$55.74	\$14.76	\$124.83	\$253.98	\$195.33
3"	14.50	\$134.27	\$127.60	\$14.76	\$285.80	\$562.43	\$428.16
4"	25.00	\$231.50	\$220.00	\$14.76	\$492.75	\$959.01	\$727.51
6"	53.33	\$493.87	\$469.34	\$14.76	\$1,051.20	\$2,029.17	\$1,535.30
8"	93.33	\$864.27	\$821.34	\$14.76	\$1,839.60	\$3,539.97	\$2,675.70

*Table 53: FY 2024 Monthly Detector Fixed Charges by Meter Size*

Fire Line Detector	Capacity Ratio [A]	ES & SR [B]	SDCWA Fixed [C]	Account Services [D] = 14.76	Meter Capacity [E] = \$19.76 x A	Dedicated Fire Line Charge [F] = D + E
1"	1.67	N/A	N/A	\$14.76	\$32.85	\$47.61

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Proposed FY 2024 Variable Rates

The proposed variable rates for FY 2024 are shown in Table 54 for each customer class and tier, reflecting the combined variable rate components.

*Table 54: FY 2024 Variable Rates by Customer Class and Tier (kgal)*

Customer Class	Projected Usage	Purchased Water	PSAWR Credit	Delivery	Peaking	Revenue Offset	Treatment	Proposed Variable Rate (\$/kgal)
		[A]	[B]	[C]	[D]	[E]	[F]	[G] = Sum (A - F)
<b>Single-Family</b>								
Tier 1	1,572,715	\$2.24	\$0.00	\$5.18	\$0.85	(\$0.23)	\$0.99	<b>\$9.03</b>
Tier 2	539,337	\$2.24	\$0.00	\$5.18	\$1.35	\$0.00	\$0.99	<b>\$9.76</b>
Tier 3	423,064	\$2.24	\$0.00	\$5.18	\$1.99	\$0.00	\$0.99	<b>\$10.40</b>
<b>Residential/Agricultural</b>								
Tier 1	14,140	\$2.24	\$0.00	\$5.18	\$0.83	(\$0.21)	\$0.99	<b>\$9.03</b>
Tier 2	45,669	\$2.24	\$0.00	\$5.18	\$1.72	(\$0.21)	\$0.99	<b>\$9.92</b>
<b>Multi-Family</b>								
Tier 1	928,326	\$2.24	\$0.00	\$5.18	\$0.81	\$0.00	\$0.99	<b>\$9.22</b>
Tier 2	307,110	\$2.24	\$0.00	\$5.18	\$1.37	\$0.00	\$0.99	<b>\$9.78</b>
<b>Commercial</b>	701,337	\$2.24	\$0.00	\$5.18	\$1.06	\$0.00	\$0.99	<b>\$9.47</b>
<b>Irrigation</b>	463,125	\$2.24	\$0.00	\$5.18	\$1.44	\$0.00	\$0.99	<b>\$9.85</b>
<b>SD Zoo Safari Park</b>	159,410	\$2.24	\$0.00	\$5.18	\$1.07	\$0.00	\$0.99	<b>\$9.48</b>
<b>Special Unfiltered</b>	7,647	\$2.24	\$0.00	\$5.18	\$0.83	\$0.00	\$0.00	<b>\$8.25</b>
<b>PSAWR</b>								
Tier 1	8,924	\$2.24	\$0.00	\$5.18	\$1.38	(\$2.21)	\$0.99	<b>\$7.58</b>
Tier 2	47,865	\$2.24	(\$0.71)	\$5.18	\$1.38	(\$2.21)	\$0.99	<b>\$6.87</b>

## Wastewater Utility

### Wastewater System

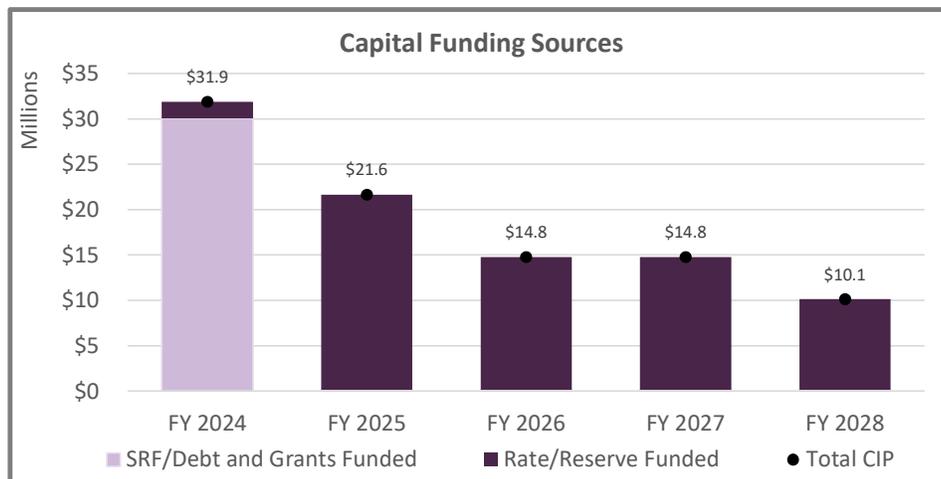
The City owns and operates a sewer collection system, pump stations, and treats collected wastewater at its wastewater treatment plant known as HARRF.

Figure 15: Wastewater System



The City provided a detailed CIP for the wastewater utility through FY 2028 that identified capital project costs equal to \$93M. The wastewater CIP includes a significant project related to the MFRO facility, which started construction in FY 2022 with \$10.7M remaining plus the lift station to pump recycled water to a new storage facility. The MFRO will treat up to 4 million gallons per day of recycled water through membrane filtration and reverse osmosis technology. The facility will expand the City’s recycled water footprint for irrigation and agricultural needs while reducing its dependence on imported water from SDCWA., Figure 16 shows the wastewater CIP through FY 2028 with current funding sources that includes grants, low-interest state/federal loans, and rates/reserves.

Figure 16: Wastewater Capital Improvement Plan



# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Customers

The City has 27,482 accounts that represent 48,386 active billable units, which includes total residential dwelling units and Equivalent Dwelling Units (EDUs). EDUs are assigned to commercial accounts based on the demand placed on the wastewater system when compared to a single-family residence. Table 55 identifies the billable units by customer class.

*Table 55: Wastewater Billable Units by Existing Customer Classes*

Customer Class	Accounts	Billing Units	Annual Billing Units
	[A]	[B]	[C] = B x 12
Single-Family	23,867	24,612	295,344
Multi-Family	1,218	17,676	212,112
Mobile Homes	132	3,246	38,952
Car Wash/Soft Water Service	16	15	180
Hotel/Motel without Dining	24	24	288
Hotel/Motel with Dining	1	1	12
Repair Shop/Service Station	167	167	2,004
Commercial Laundry	0	0	0
Laundromats	24	24	288
Hospital	11	11	132
Grocery Store with Meat Dept.	33	34	408
Industrial	100	100	1,200
Restaurant	261	263	3,156
All Other Commercial	1,531	2,079	24,948
Senior High Schools	7	7	84
Elementary & Middle Schools	12	12	144
Churches	68	68	816
High Strength Use (Metered) (Metered)	10	10	120
<b>Total</b>	<b>27,482</b>	<b>48,349</b>	<b>580,188</b>

The current wastewater rate structure consists of monthly fixed charges against each billing unit, and variable rates. Residential customers (Single-Family, Multi-Family, and Mobile Homes) are charged variable rates that are applied to each customer's average winter water usage with return factors. Typically, wastewater flows are not metered. The average winter usage estimates indoor water usage, reflecting the flow that enters the wastewater system, as outdoor water needs are at their lowest during the winter. Commercial customers are charged variable rates that vary based on the type of business to capture the various strength concentrations of influent produced by each commercial use. Institutional customers (schools and churches) are charged flat charges per student per year and per 100 seats per month. High Strength Use (Metered) customers include certain commercial and industrial accounts whose flows are monitored by the City and manually billed. These accounts are subject to additional charges for flows that exceed the City's discharge guidelines. Recycled water is a department within the wastewater utility and costs associated with recycled are tracked as a separate fund. Recycled customers are charged the same fixed charges as potable and a uniform variable rate. Table 56 identifies the current wastewater fixed rates and Table 57 identifies the wastewater variable rates.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 56: Existing Wastewater Fixed Charges

Fixed Charges (\$/Month)	
Customer Class	Existing
<b>Residential</b>	
Single-Family	\$25.90
Multi-Family	\$25.90
Mobile Homes	\$25.90
<b>All Commercial</b>	\$25.90
Recycled Fixed Charges (\$/Month)	
Meter Size	Existing
5/8" and 3/4"	\$41.29
1"	\$64.69
1 1/2"	\$122.71
2"	\$192.58
3"	\$414.13
4"	\$740.17
6"	\$1,637.19
8"	\$2,801.87

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 57: Existing Wastewater Variable Rates

Variable Rates (\$/kgal), (\$/Student), (\$/100 Seats), and (\$/Lb)	
Customer Class	Existing
<b>Residential</b>	
Single-Family	\$5.14
Multi-Family	\$4.20
Mobile Homes	\$2.58
<b>Commercial</b>	
Low	\$8.44
Medium	\$11.54
High	\$15.14
<b>Institutional</b>	
Senior High Schools (Students)	\$35.89
Elementary & Middle Schools (Students)	\$23.92
Churches (Seats)	\$49.84
<b>High Strength Use (Metered)</b>	
Flow (kgals)	\$6.90
Excess BOD (\$/Lb)	\$0.67
Excess TSS (\$/Lb)	\$0.63
Recycled Variable Rates (\$/kgal)	
Customer Class	Existing
Recycled	\$3.85

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Financial Plan Overview – Wastewater Utility

### Financial Planning Assumptions

Developing a long-term financial plan requires understanding the utility's financial position by evaluating existing revenue streams, ongoing expenses, how those expenses will change over time, new strategic objectives, and reserve policies. These considerations require certain assumptions for projecting revenues, expenses, and expected ending fund balances. Table 58 and Table 59 identifies assumptions used for forecasting revenues, and Table 60 identifies assumptions used for forecasting increases in expenses through the Rate Setting Period.

*Table 58: Wastewater Assumptions for Forecasting Revenues and Fixed Billable Units<sup>5</sup>*

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Revenue Escalation</b>					
Non-Rate Revenues	0%	0%	0%	0%	0%
Reserve Interest	1.5%	1.5%	1.5%	1.5%	1.5%
Account Growth	0%	0%	0%	0%	0%
Monthly Billable Units	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	24,612.00	24,612.00	24,612.00	24,612.00	24,612.00
Multi-Family	17,676.00	17,676.00	17,676.00	17,676.00	17,676.00
Mobile Homes	3,246.00	3,246.00	3,246.00	3,246.00	3,246.00
Car Wash/Soft Water Service	15.00	15.00	15.00	15.00	15.00
Hotel/Motel without Dining	24.00	24.00	24.00	24.00	24.00
Hotel/Motel with Dining	1.00	1.00	1.00	1.00	1.00
Repair Shop/Service Station	167.00	167.00	167.00	167.00	167.00
Commercial Laundry	0.00	0.00	0.00	0.00	0.00
Laundromats	24.00	24.00	24.00	24.00	24.00
Hospital	11.00	11.00	11.00	11.00	11.00
Grocery Store with Meat Dept.	34.00	34.00	34.00	34.00	34.00
Industrial	100.00	100.00	100.00	100.00	100.00
Restaurant	263.00	263.00	263.00	263.00	263.00
All Other Commercial	2,079.00	2,079.00	2,079.00	2,079.00	2,079.00
Senior High Schools	7.00	7.00	7.00	7.00	7.00
Elementary & Middle Schools	12.00	12.00	12.00	12.00	12.00
Churches	68.00	68.00	68.00	68.00	68.00
High Strength Use (Metered)	10.00	10.00	10.00	10.00	10.00
<b>Total Monthly Billable Units</b>	<b>48,349</b>	<b>48,349</b>	<b>48,349</b>	<b>48,349</b>	<b>48,349</b>
Recycled Meters	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Recycled Water</b>					
Meter Size					
1"	1	1	1	1	1
1 1/2"	4	4	4	4	4
2"	20	20	20	20	20
3"	3	3	3	3	3
4"	5	5	5	5	5
6"	4	4	4	4	4
<b>Total Recycled Water Meters</b>	<b>37</b>	<b>37</b>	<b>37</b>	<b>37</b>	<b>37</b>

<sup>5</sup> Institutional accounts listed within Table 58 are used within the cost-of-service to allocate Account Services costs.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 59: Wastewater Assumptions for Forecasting Variable Revenues

Consumption by Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	1,480,471	1,480,471	1,480,471	1,480,471	1,480,471
Multi-Family	787,186	787,186	787,186	787,186	787,186
Mobile Homes	162,732	162,732	162,732	162,732	162,732
Car Wash/Soft Water Service	26,342	26,342	26,342	26,342	26,342
Hotel/Motel without Dining	30,203	30,203	30,203	30,203	30,203
Hotel/Motel with Dining	1,867	1,867	1,867	1,867	1,867
Repair Shop/Service Station	36,125	36,125	36,125	36,125	36,125
Commercial Laundry	-	-	-	-	-
Laundromats	41,448	41,448	41,448	41,448	41,448
Hospital	10,647	10,647	10,647	10,647	10,647
Grocery Store with Meat Dept.	28,691	28,691	28,691	28,691	28,691
Industrial	29,499	29,499	29,499	29,499	29,499
Restaurant	125,993	125,993	125,993	125,993	125,993
All Other Commercial	293,255	293,255	293,255	293,255	293,255
<b>Total Consumption by Customer Class (kgal)</b>	<b>3,054,459</b>	<b>3,054,459</b>	<b>3,054,459</b>	<b>3,054,459</b>	<b>3,054,459</b>
Units of Service for Institutional	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Senior High Schools (Students)	9,185	9,185	9,185	9,185	9,185
Elementary & Middle Schools (Students)	18,574	18,574	18,574	18,574	18,574
Churches (100 Seats)	273	273	273	273	273
High Strength Use (Metered) Consumption	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Flow (kgal)	81,747	81,747	81,747	81,747	81,747
BOD (lbs)	273,137	273,137	273,137	273,137	273,137
TSS (lbs)	84,128	84,128	84,128	84,128	84,128
Recycled Consumption	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Recycled Water	176,068	176,068	176,068	176,068	176,068

Table 60: Wastewater Assumptions for Forecasting Expense Requirements<sup>6</sup>

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Expenditure Escalation</b>					
Benefits	3.0%	3.0%	3.0%	3.0%	3.0%
Capital Construction	7.2%	3.8%	3.8%	3.8%	3.8%
Chemicals	5.0%	5.0%	5.0%	5.0%	5.0%
Energy Costs	5.0%	5.0%	5.0%	5.0%	5.0%
General Costs	7.7%	3.8%	3.8%	3.8%	3.8%
PERS	5.0%	5.0%	5.0%	5.0%	5.0%
Salaries	5.0%	5.0%	5.0%	5.0%	5.0%

<sup>6</sup> Capital Construction inflation and General Costs for FY 2024 and FY 2025 were increased to 7.2% and 7.7%, respectively to account for recent annual increase due to inflation. Outer years reduced to 3.8% for both, reflecting the 5-year average of the Engineer's News Record – CCI index and the LA Consumer Price Index, respectively.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

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## Current Financial Position

### Revenues

Based on the forecasting assumptions, revenues were calculated using the existing wastewater rates in Table 56 and Table 57, multiplied by the billable units and consumption data in Table 58 and Table 59, respectively. Monthly fixed charges were annualized by multiplying by 12 billing periods. Table 61 shows the calculated revenues for FY 2024 through the Rate Setting Period. Table 62 summarizes calculated rate revenues (rounded to thousands) and other non-rate revenues available through the Rate Setting Period.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 61: Wastewater Calculated Rate Revenues<sup>7</sup>

Fixed Revenues	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Fixed Monthly Charge</b>					
Single-Family	\$7,649,410	\$7,649,410	\$7,649,410	\$7,649,410	\$7,649,410
Multi-Family	\$5,493,701	\$5,493,701	\$5,493,701	\$5,493,701	\$5,493,701
Mobile Homes	\$1,008,857	\$1,008,857	\$1,008,857	\$1,008,857	\$1,008,857
Car Wash/Soft Water Service	\$4,662	\$4,662	\$4,662	\$4,662	\$4,662
Hotel/Motel without Dining	\$7,459	\$7,459	\$7,459	\$7,459	\$7,459
Hotel/Motel with Dining	\$311	\$311	\$311	\$311	\$311
Repair Shop/Service Station	\$51,904	\$51,904	\$51,904	\$51,904	\$51,904
Laundromats	\$7,459	\$7,459	\$7,459	\$7,459	\$7,459
Hospital	\$3,419	\$3,419	\$3,419	\$3,419	\$3,419
Grocery Store with Meat Dept.	\$10,567	\$10,567	\$10,567	\$10,567	\$10,567
Industrial	\$31,080	\$31,080	\$31,080	\$31,080	\$31,080
Restaurant	\$81,740	\$81,740	\$81,740	\$81,740	\$81,740
All Other Commercial	\$646,153	\$646,153	\$646,153	\$646,153	\$646,153
<b>Total Fixed Revenues</b>	<b>\$14,996,722</b>	<b>\$14,996,722</b>	<b>\$14,996,722</b>	<b>\$14,996,722</b>	<b>\$14,996,722</b>
<b>High Strength Use (Metered)</b>					
High Strength Use Metered	\$3,108	\$3,108	\$3,108	\$3,108	\$3,108
<b>Total Fixed - High Strength Use (Metered)</b>	<b>\$3,108</b>	<b>\$3,108</b>	<b>\$3,108</b>	<b>\$3,108</b>	<b>\$3,108</b>
<b>Recycled Fixed Charge</b>					
Recycled Water	\$190,790	\$190,790	\$190,790	\$190,790	\$190,790
<b>Total Recycled Fixed Charge</b>	<b>\$190,790</b>	<b>\$190,790</b>	<b>\$190,790</b>	<b>\$190,790</b>	<b>\$190,790</b>
Variable Revenues	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Customer Class Revenue</b>					
Single-Family	\$7,609,621	\$7,609,621	\$7,609,621	\$7,609,621	\$7,609,621
Multi-Family	\$3,306,181	\$3,306,181	\$3,306,181	\$3,306,181	\$3,306,181
Mobile Homes	\$419,849	\$419,849	\$419,849	\$419,849	\$419,849
Car Wash/Soft Water Service	\$199,672	\$199,672	\$199,672	\$199,672	\$199,672
Hotel/Motel without Dining	\$273,035	\$273,035	\$273,035	\$273,035	\$273,035
Hotel/Motel with Dining	\$24,420	\$24,420	\$24,420	\$24,420	\$24,420
Repair Shop/Service Station	\$287,555	\$287,555	\$287,555	\$287,555	\$287,555
Laundromats	\$336,143	\$336,143	\$336,143	\$336,143	\$336,143
Hospital	\$92,735	\$92,735	\$92,735	\$92,735	\$92,735
Grocery Store with Meat Dept.	\$437,251	\$437,251	\$437,251	\$437,251	\$437,251
Industrial	\$363,133	\$363,133	\$363,133	\$363,133	\$363,133
Restaurant	\$1,894,935	\$1,894,935	\$1,894,935	\$1,894,935	\$1,894,935
All Other Commercial	\$2,700,879	\$2,700,879	\$2,700,879	\$2,700,879	\$2,700,879
<b>Total Customer Class Revenue</b>	<b>\$17,945,409</b>	<b>\$17,945,409</b>	<b>\$17,945,409</b>	<b>\$17,945,409</b>	<b>\$17,945,409</b>
<b>Institutional Revenue</b>					
Senior High Schools	\$329,650	\$329,650	\$329,650	\$329,650	\$329,650
Elementary & Middle Schools	\$444,290	\$444,290	\$444,290	\$444,290	\$444,290
Churches	\$163,276	\$163,276	\$163,276	\$163,276	\$163,276
<b>Total Institutional Revenue</b>	<b>\$937,216</b>	<b>\$937,216</b>	<b>\$937,216</b>	<b>\$937,216</b>	<b>\$937,216</b>
<b>High Strength Use (Metered)</b>					
Flow	\$564,054	\$564,054	\$564,054	\$564,054	\$564,054
BOD	\$183,002	\$183,002	\$183,002	\$183,002	\$183,002
TSS	\$53,001	\$53,001	\$53,001	\$53,001	\$53,001
<b>Total Variable - High Strength Use (Metered)</b>	<b>\$800,057</b>	<b>\$800,057</b>	<b>\$800,057</b>	<b>\$800,057</b>	<b>\$800,057</b>
<b>Recycled Variable Revenue</b>					
Recycled Water	\$677,862	\$677,862	\$677,862	\$677,862	\$677,862
<b>Total Recycled Variable Revenue</b>	<b>\$677,862</b>	<b>\$677,862</b>	<b>\$677,862</b>	<b>\$677,862</b>	<b>\$677,862</b>
<b>Total Rate Revenue</b>	<b>\$35,551,162</b>	<b>\$35,551,162</b>	<b>\$35,551,162</b>	<b>\$35,551,162</b>	<b>\$35,551,162</b>

<sup>7</sup> Institutional total charges for schools and churches are captured within their respective flat charges per student and 100 seats, respectively.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 62: Wastewater Projected Revenues

Revenue Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>					
Fixed Monthly Charge	\$14,997,000	\$14,997,000	\$14,997,000	\$14,997,000	\$14,997,000
Fixed High Strength Use (Metered)	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Variable Revenues	\$17,945,000	\$17,945,000	\$17,945,000	\$17,945,000	\$17,945,000
Institutional Revenue	\$937,000	\$937,000	\$937,000	\$937,000	\$937,000
Variable High Strength Use (Metered)	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000
<b>Subtotal Rate Revenues</b>	<b>\$34,682,000</b>	<b>\$34,682,000</b>	<b>\$34,682,000</b>	<b>\$34,682,000</b>	<b>\$34,682,000</b>
<b>Recycled Variable Revenue</b>					
Recycled Fixed Charge	\$191,000	\$191,000	\$191,000	\$191,000	\$191,000
Recycled Variable Revenue	\$678,000	\$678,000	\$678,000	\$678,000	\$678,000
<b>Subtotal Recycled Variable Revenue</b>	<b>\$869,000</b>	<b>\$869,000</b>	<b>\$869,000</b>	<b>\$869,000</b>	<b>\$869,000</b>
<b>Operating Revenue</b>					
Penalties	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Treatment Charge - San Diego	\$2,800,000	\$2,800,000	\$2,800,000	\$2,800,000	\$2,800,000
Othr Curr Serv Cge - Sewer	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
Restaurant FOG Pretreatment	\$83,000	\$83,000	\$83,000	\$83,000	\$83,000
CIP Reimbursement	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Sale of Recycle Water	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
Agency Incentives	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Automotive Maint. Pretreatment	\$67,000	\$67,000	\$67,000	\$67,000	\$67,000
SDG&E Raw Water Line	\$83,000	\$83,000	\$83,000	\$83,000	\$83,000
<b>Subtotal Operating Revenue</b>	<b>\$6,441,000</b>	<b>\$6,441,000</b>	<b>\$6,441,000</b>	<b>\$6,441,000</b>	<b>\$6,441,000</b>
<b>Non-Operating Revenue</b>					
Other Interest-Non Investment	\$16,000	\$16,000	\$16,000	\$16,000	\$16,000
Interest-Trustee	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Investment Earnings	\$152,000	\$152,000	\$152,000	\$152,000	\$152,000
Bank Acct Analysis Fees-Contra	(\$24,000)	(\$24,000)	(\$24,000)	(\$24,000)	(\$24,000)
Cr. Card Merchant Fees-Contra	(\$188,000)	(\$188,000)	(\$188,000)	(\$188,000)	(\$188,000)
Interest-UAL Prepayment	\$83,000	\$83,000	\$83,000	\$83,000	\$83,000
<b>Subtotal Non-Operating Revenue</b>	<b>\$40,000</b>	<b>\$40,000</b>	<b>\$40,000</b>	<b>\$40,000</b>	<b>\$40,000</b>
<b>Total Revenue</b>	<b>\$42,032,000</b>	<b>\$42,032,000</b>	<b>\$42,032,000</b>	<b>\$42,032,000</b>	<b>\$42,032,000</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Expenses

The FY 2023 budget was used as the utility's baseline expenses and adjusted over the Rate Setting Period based on the escalation factors shown in Table 60. Table 63 provides projected O&M expenses through the Rate Setting Period (rounded to thousands). Each expense category includes detailed line-item expenditures that were discussed with staff to determine the appropriate escalation factor to use for forecasting how costs will increase over time.

*Table 63: Wastewater Projected O&M Expenses*

O&M Expenses	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Department 420 - Wastewater</b>					
Employee Services	\$13,085,000	\$13,709,000	\$14,364,000	\$15,050,000	\$15,770,000
Maintenance & Operations	\$9,312,000	\$9,702,000	\$10,109,000	\$10,534,000	\$10,976,000
Capital Outlay	\$177,000	\$184,000	\$191,000	\$198,000	\$205,000
Internal Service	\$2,235,000	\$2,319,000	\$2,406,000	\$2,496,000	\$2,590,000
Allocations	\$968,000	\$1,004,000	\$1,042,000	\$1,081,000	\$1,121,000
<b>Subtotal Department 420 - Wastewater</b>	<b>\$25,777,000</b>	<b>\$26,918,000</b>	<b>\$28,112,000</b>	<b>\$29,359,000</b>	<b>\$30,662,000</b>
<b>Department 422 - Recycled Water</b>					
Employee Services	\$326,000	\$342,000	\$358,000	\$375,000	\$393,000
Maintenance & Operations	\$1,832,000	\$1,918,000	\$2,007,000	\$2,100,000	\$2,198,000
Internal Service	\$33,000	\$34,000	\$35,000	\$37,000	\$38,000
Allocations	\$1,568,000	\$1,627,000	\$1,688,000	\$1,751,000	\$1,817,000
<b>Subtotal Department 422 - Recycled Water</b>	<b>\$3,759,000</b>	<b>\$3,921,000</b>	<b>\$4,088,000</b>	<b>\$4,263,000</b>	<b>\$4,446,000</b>
<b>Department 440 - Environmental Programs</b>					
Employee Services	\$1,767,000	\$1,852,000	\$1,940,000	\$2,033,000	\$2,130,000
Maintenance & Operations	\$606,000	\$628,000	\$652,000	\$676,000	\$702,000
Internal Service	\$197,000	\$205,000	\$212,000	\$220,000	\$228,000
Allocations	\$22,000	\$23,000	\$24,000	\$25,000	\$26,000
<b>Subtotal Department 440 - Environmental Programs</b>	<b>\$2,592,000</b>	<b>\$2,708,000</b>	<b>\$2,828,000</b>	<b>\$2,954,000</b>	<b>\$3,086,000</b>
<b>Debt Service</b>					
Existing Debt	\$3,798,409	\$3,806,990	\$3,700,918	\$3,182,424	\$2,270,993
Pending Debt	\$1,340,631	\$1,594,201	\$1,594,201	\$1,594,201	\$1,594,201
<b>Subtotal Debt Service</b>	<b>\$5,139,040</b>	<b>\$5,401,192</b>	<b>\$5,295,119</b>	<b>\$4,776,625</b>	<b>\$3,865,194</b>
<b>Total Expenses</b>	<b>\$37,267,040</b>	<b>\$38,948,192</b>	<b>\$40,323,119</b>	<b>\$41,352,625</b>	<b>\$42,059,194</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Reserves

The wastewater utility reserves include Operating, Capital and Debt. Similar to the water utility, these reserves help mitigate risks to the utility by ensuring sufficient cash is on hand for daily operations and to fund annual system improvements, including unforeseen system failures. Table 64 summarizes the minimum reserve requirements and the ideal funding targets of each reserve.

*Table 64: Wastewater Reserve Requirements and Targets*

Reserve	Minimum Requirement	Reserve Target
Operating	60 days of operating expenses	90 days of operating expenses
Capital Replacement	Annual Depreciation	2x Annual Depreciation
Debt	50% Annual Debt Payments	100% Annual Debt Payments

The unaudited starting reserve balance as of July 1, 2023, equaled approximately \$29M.

## Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. Revenues from current rates will cover operating expenses through the FY 2027, with a projected minor deficit by FY 2028. Net operating income is limited and reduces annually as projected expenses increase and can only fund a small portion of capital needs. Therefore, reserves would need to cover the remaining capital costs, which would not be sustainable long-term, as reserves would be below the minimum requirement by FY 2025 and fully depleted in FY 2027. In addition, the City would not meet its debt service coverage requirements in FY 2027 and FY 2028. Table 65 forecasts existing revenues and expenses through the Rate Setting Period. Table 66 identifies reserve transfers and reserve activity, with projected FY 2024 starting reserve balances shown for each reserve.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 65: Wastewater Financial Plan at Existing Rates

Revenue	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>	<b>Table 62</b>					
Fixed Monthly Charge		\$14,997,000	\$14,997,000	\$14,997,000	\$14,997,000	\$14,997,000
Fixed High Strength Use (Metered)		\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Variable Revenues		\$17,945,000	\$17,945,000	\$17,945,000	\$17,945,000	\$17,945,000
Institutional Revenue		\$937,000	\$937,000	\$937,000	\$937,000	\$937,000
Variable High Strength Use (Metered)		\$800,000	\$800,000	\$800,000	\$800,000	\$800,000
Recycled Fixed Charge		\$191,000	\$191,000	\$191,000	\$191,000	\$191,000
Recycled Variable Revenue		\$678,000	\$678,000	\$678,000	\$678,000	\$678,000
<b>Total Rate Revenues</b>		<b>\$35,551,000</b>	<b>\$35,551,000</b>	<b>\$35,551,000</b>	<b>\$35,551,000</b>	<b>\$35,551,000</b>
<b>Operating Revenue</b>	<b>Table 62</b>					
Penalties		\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Treatment Charge - San Diego		\$2,800,000	\$2,800,000	\$2,800,000	\$2,800,000	\$2,800,000
Othr Curr Serv Cge - Sewer		\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
Restaurant FOG Pretreatment		\$83,000	\$83,000	\$83,000	\$83,000	\$83,000
CIP Reimbursement		\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Sale of Recycle Water		\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
Agency Incentives		\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Automotive Maint. Pretreatment		\$67,000	\$67,000	\$67,000	\$67,000	\$67,000
SDG&E Raw Water Line		\$83,000	\$83,000	\$83,000	\$83,000	\$83,000
<b>Subtotal Operating Revenue</b>		<b>\$6,441,000</b>	<b>\$6,441,000</b>	<b>\$6,441,000</b>	<b>\$6,441,000</b>	<b>\$6,441,000</b>
<b>Non-Operating Revenue</b>	<b>Table 62</b>					
Other Interest-Non Investment		\$16,000	\$16,000	\$16,000	\$16,000	\$16,000
Interest-Trustee		\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Investment Earnings		\$152,000	\$152,000	\$152,000	\$152,000	\$152,000
Bank Acct Analysis Fees-Contra		(\$24,000)	(\$24,000)	(\$24,000)	(\$24,000)	(\$24,000)
Cr. Card Merchant Fees-Contra		(\$188,000)	(\$188,000)	(\$188,000)	(\$188,000)	(\$188,000)
Interest-UAL Prepayment		\$83,000	\$83,000	\$83,000	\$83,000	\$83,000
<b>Subtotal Non-Operating Revenue</b>		<b>\$40,000</b>	<b>\$40,000</b>	<b>\$40,000</b>	<b>\$40,000</b>	<b>\$40,000</b>
<b>Total Revenues</b>		<b>\$42,032,000</b>	<b>\$42,032,000</b>	<b>\$42,032,000</b>	<b>\$42,032,000</b>	<b>\$42,032,000</b>
<b>O&amp;M Expenses</b>	<b>Source</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Department 420 - Wastewater</b>	<b>Table 63</b>					
Employee Services		\$13,085,000	\$13,709,000	\$14,364,000	\$15,050,000	\$15,770,000
Maintenance & Operations		\$9,312,000	\$9,702,000	\$10,109,000	\$10,534,000	\$10,976,000
Capital Outlay		\$177,000	\$184,000	\$191,000	\$198,000	\$205,000
Internal Service		\$2,235,000	\$2,319,000	\$2,406,000	\$2,496,000	\$2,590,000
Allocations		\$968,000	\$1,004,000	\$1,042,000	\$1,081,000	\$1,121,000
<b>Subtotal Department 420 - Wastewater</b>		<b>\$25,777,000</b>	<b>\$26,918,000</b>	<b>\$28,112,000</b>	<b>\$29,359,000</b>	<b>\$30,662,000</b>
<b>Department 422 - Recycled Water</b>	<b>Table 63</b>					
Employee Services		\$326,000	\$342,000	\$358,000	\$375,000	\$393,000
Maintenance & Operations		\$1,832,000	\$1,918,000	\$2,007,000	\$2,100,000	\$2,198,000
Internal Service		\$33,000	\$34,000	\$35,000	\$37,000	\$38,000
Allocations		\$1,568,000	\$1,627,000	\$1,688,000	\$1,751,000	\$1,817,000
<b>Subtotal Department 422 - Recycled Water</b>		<b>\$3,759,000</b>	<b>\$3,921,000</b>	<b>\$4,088,000</b>	<b>\$4,263,000</b>	<b>\$4,446,000</b>
<b>Department 440 - Environmental Programs</b>	<b>Table 63</b>					
Employee Services		\$1,767,000	\$1,852,000	\$1,940,000	\$2,033,000	\$2,130,000
Maintenance & Operations		\$606,000	\$628,000	\$652,000	\$676,000	\$702,000
Internal Service		\$197,000	\$205,000	\$212,000	\$220,000	\$228,000
Allocations		\$22,000	\$23,000	\$24,000	\$25,000	\$26,000
<b>Subtotal Department 440 - Environmental Programs</b>		<b>\$2,592,000</b>	<b>\$2,708,000</b>	<b>\$2,828,000</b>	<b>\$2,954,000</b>	<b>\$3,086,000</b>
<b>Debt Service</b>	<b>Table 63</b>					
Existing Debt		\$3,798,409	\$3,806,990	\$3,700,918	\$3,182,424	\$2,270,993
Pending Debt		\$1,340,631	\$1,594,201	\$1,594,201	\$1,594,201	\$1,594,201
<b>Subtotal Debt Service</b>		<b>\$5,139,040</b>	<b>\$5,401,192</b>	<b>\$5,295,119</b>	<b>\$4,776,625</b>	<b>\$3,865,194</b>
<b>Total Expenses</b>		<b>\$37,267,040</b>	<b>\$38,948,192</b>	<b>\$40,323,119</b>	<b>\$41,352,625</b>	<b>\$42,059,194</b>
<b>Net Operating Income</b>		<b>\$4,764,960</b>	<b>\$3,083,808</b>	<b>\$1,708,881</b>	<b>\$679,375</b>	<b>(\$27,194)</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 66: Wastewater Transfers and Reserve Activity at Existing Rates

Operating Fund	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance		\$9,026,502	\$9,189,133	\$9,603,664	\$9,942,687	\$10,196,538
Transfers (Net Operating Income)	Table 65	\$4,764,960	\$3,083,808	\$1,708,881	\$679,375	(\$27,194)
Transfers from/(to) Wastewater Utilities Capital Projects Fund		(\$4,602,329)	(\$2,669,278)	(\$1,369,858)	(\$425,524)	\$0
<b>Ending Balance</b>		<b>\$9,189,133</b>	<b>\$9,603,664</b>	<b>\$9,942,687</b>	<b>\$10,196,538</b>	<b>\$10,169,344</b>

Wastewater Utilities Capital Projects Fund	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$17,738,457	\$22,541,489	\$3,916,804	(\$9,225,045)	(\$23,409,833)
<u>Plus:</u>					
Other Sources/(Uses)	\$30,064,000	\$150,000	\$150,000	\$150,000	\$150,000
Transfers from/(to) Operating Fund	\$4,602,329	\$2,669,278	\$1,369,858	\$425,524	\$0
<u>Less:</u>					
CIP	(\$31,892,000)	(\$21,640,923)	(\$14,760,525)	(\$14,760,312)	(\$10,124,592)
Transfers from/(to) Wastewater Capital Reserve Fund (SRF)	\$1,728,852	\$0	\$98,817	\$0	\$0
Subtotal Wastewater Utilities Capital Projects Fund	\$22,241,639	\$3,719,844	(\$9,225,045)	(\$23,409,833)	(\$33,384,425)
Interest Earnings	\$299,851	\$196,960	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$22,541,489</b>	<b>\$3,916,804</b>	<b>(\$9,225,045)</b>	<b>(\$23,409,833)</b>	<b>(\$33,384,425)</b>

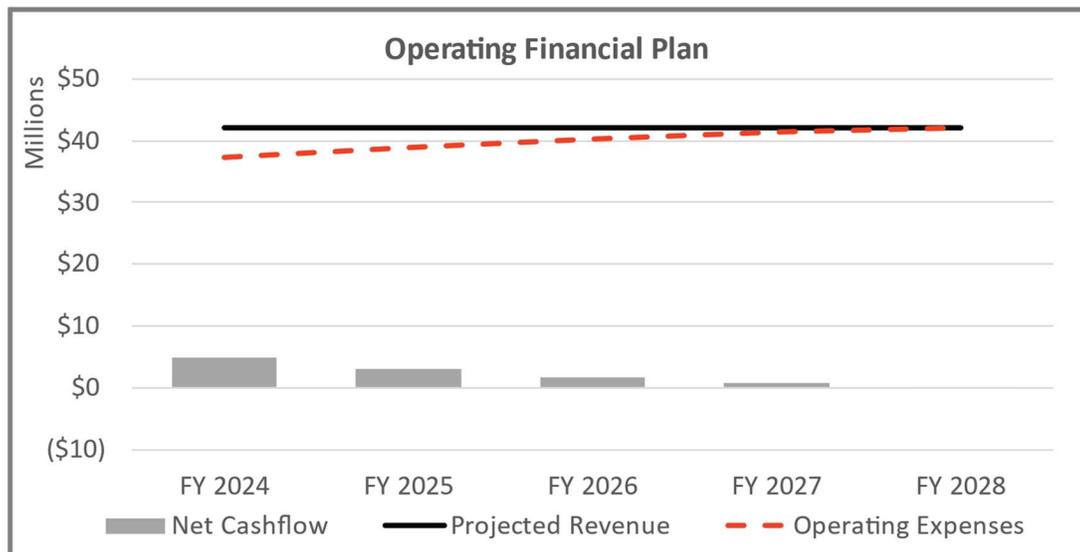
Wastewater Capital Reserve Fund (SRF)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$2,284,061	\$555,209	\$555,209	\$456,393	\$456,393
Transfers from/(to) Wastewater Utilities Capital Projects Fund	(\$1,728,852)	\$0	(\$98,817)	\$0	\$0
<b>Ending Balance</b>	<b>\$555,209</b>	<b>\$555,209</b>	<b>\$456,393</b>	<b>\$456,393</b>	<b>\$456,393</b>

Summary Information	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$29,049,021	\$32,285,832	\$14,075,677	\$1,174,034	(\$12,756,903)
<b>Ending Balance</b>	<b>\$32,285,832</b>	<b>\$14,075,677</b>	<b>\$1,174,034</b>	<b>(\$12,756,903)</b>	<b>(\$22,758,689)</b>

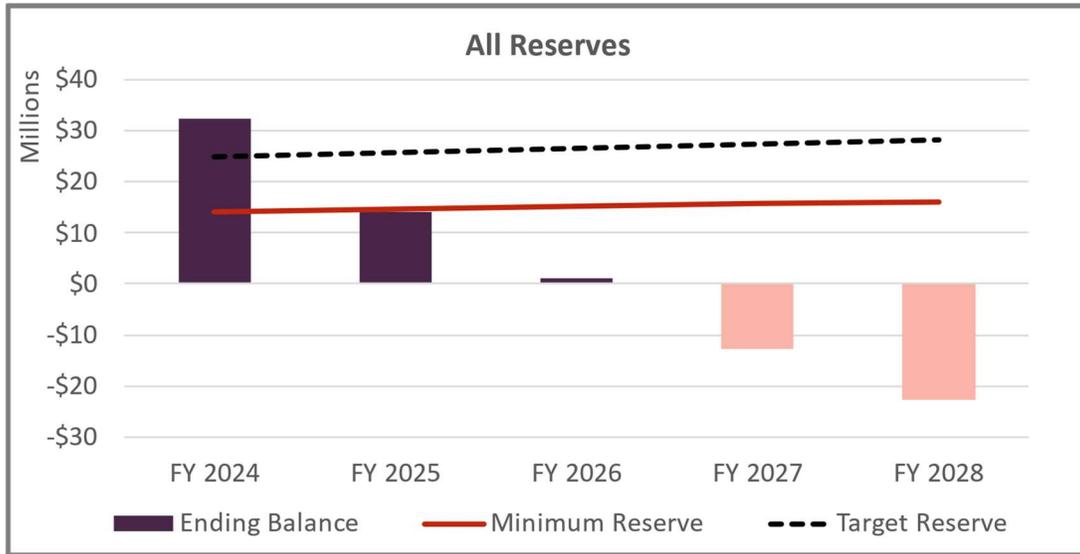
Figure 17 illustrates the operating position of the wastewater utility, where O&M expenses are identified with the dashed red trendline, and the horizontal black trendline shows total revenues at existing rates. The bars represent the amount of net operating income available. Figure 18 reflects the projected ending balances of reserves after funding operating and capital projects through the Rate Setting Period.

Figure 17: Wastewater Current Operating Financial Position



# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Figure 18: Wastewater Projected Ending Reserves at Existing Rates



## Proposed Financial Plan – Wastewater Utility

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From the financial outlook at existing rates, a proposed financial plan can be developed to adequately fund the multi-year revenue requirements, while meeting reserve requirements. The proposed financial plan generates approximately \$42.5M in additional revenue over the Rate Setting Period. The additional revenue generates positive net operating income each year to go towards capital spending and satisfy reserve requirements. Table 67 forecasts projected revenues, **with annual revenue adjustments**, and expenses through FY 2028. Table 68 identifies the projected FY 2024 total starting reserve balances, activity within each reserve (including net income transfer, transfers between reserves, and annual CIP), and projected ending balances for each fiscal year of the Rate Setting Period.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 67: Proposed Wastewater Financial Plan

Revenue		Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>		<b>Table 62</b>					
Fixed Monthly Charge			\$14,997,000	\$14,997,000	\$14,997,000	\$14,997,000	\$14,997,000
Fixed High Strength Use (Metered)			\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Variable Revenues			\$17,945,000	\$17,945,000	\$17,945,000	\$17,945,000	\$17,945,000
Institutional Revenue			\$937,000	\$937,000	\$937,000	\$937,000	\$937,000
Variable High Strength Use (Metered)			\$800,000	\$800,000	\$800,000	\$800,000	\$800,000
Recycled Fixed Charge			\$191,000	\$191,000	\$191,000	\$191,000	\$191,000
Recycled Variable Revenue			\$678,000	\$678,000	\$678,000	\$678,000	\$678,000
<b>Total Rate Revenues</b>			<b>\$35,551,000</b>	<b>\$35,551,000</b>	<b>\$35,551,000</b>	<b>\$35,551,000</b>	<b>\$35,551,000</b>
<b>Fiscal Year</b>	<b>Revenue Adjustment</b>	<b>Effective Month</b>					
FY 2024	9.0%	January	\$1,599,000	\$3,199,000	\$3,199,000	\$3,199,000	\$3,199,000
FY 2025	7.0%	July		\$2,712,000	\$2,712,000	\$2,712,000	\$2,712,000
FY 2026	7.0%	July			\$2,902,000	\$2,902,000	\$2,902,000
FY 2027	7.0%	July				\$3,105,000	\$3,105,000
FY 2028	5.0%	July					\$2,373,000
<b>Total Additional Revenue</b>			<b>\$1,599,000</b>	<b>\$5,911,000</b>	<b>\$8,813,000</b>	<b>\$11,918,000</b>	<b>\$14,291,000</b>
<b>Projected Rate Revenues</b>			<b>\$37,150,000</b>	<b>\$41,462,000</b>	<b>\$44,364,000</b>	<b>\$47,469,000</b>	<b>\$49,842,000</b>
<b>Operating Revenue</b>		<b>Table 62</b>					
Penalties			\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Treatment Charge - San Diego			\$2,800,000	\$2,800,000	\$2,800,000	\$2,800,000	\$2,800,000
Othr Curr Serv Cge - Sewer			\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
Restaurant FOG Pretreatment			\$83,000	\$83,000	\$83,000	\$83,000	\$83,000
CIP Reimbursement			\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Sale of Recycle Water			\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
Agency Incentives			\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Automotive Maint. Pretreatment			\$67,000	\$67,000	\$67,000	\$67,000	\$67,000
SDG&E Raw Water Line			\$83,000	\$83,000	\$83,000	\$83,000	\$83,000
<b>Subtotal Operating Revenue</b>			<b>\$6,441,000</b>	<b>\$6,441,000</b>	<b>\$6,441,000</b>	<b>\$6,441,000</b>	<b>\$6,441,000</b>
<b>Non-Operating Revenue</b>		<b>Table 62</b>					
Other Interest-Non Investment			\$16,000	\$16,000	\$16,000	\$16,000	\$16,000
Interest-Trustee			\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Investment Earnings			\$152,000	\$152,000	\$152,000	\$152,000	\$152,000
Bank Acct Analysis Fees-Contra			(\$24,000)	(\$24,000)	(\$24,000)	(\$24,000)	(\$24,000)
Cr. Card Merchant Fees-Contra			(\$188,000)	(\$188,000)	(\$188,000)	(\$188,000)	(\$188,000)
Interest-UAL Prepayment			\$83,000	\$83,000	\$83,000	\$83,000	\$83,000
<b>Subtotal Non-Operating Revenue</b>			<b>\$40,000</b>	<b>\$40,000</b>	<b>\$40,000</b>	<b>\$40,000</b>	<b>\$40,000</b>
<b>Total Revenues</b>			<b>\$43,631,000</b>	<b>\$47,943,000</b>	<b>\$50,845,000</b>	<b>\$53,950,000</b>	<b>\$56,323,000</b>
<b>O&amp;M Expenses</b>		<b>Source</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Department 420 - Wastewater</b>		<b>Table 63</b>					
Employee Services			\$13,085,000	\$13,709,000	\$14,364,000	\$15,050,000	\$15,770,000
Maintenance & Operations			\$9,312,000	\$9,702,000	\$10,109,000	\$10,534,000	\$10,976,000
Capital Outlay			\$177,000	\$184,000	\$191,000	\$198,000	\$205,000
Internal Service			\$2,235,000	\$2,319,000	\$2,406,000	\$2,496,000	\$2,590,000
Allocations			\$968,000	\$1,004,000	\$1,042,000	\$1,081,000	\$1,121,000
<b>Subtotal Department 420 - Wastewater</b>			<b>\$25,777,000</b>	<b>\$26,918,000</b>	<b>\$28,112,000</b>	<b>\$29,359,000</b>	<b>\$30,662,000</b>
<b>Department 422 - Recycled Water</b>		<b>Table 63</b>					
Employee Services			\$326,000	\$342,000	\$358,000	\$375,000	\$393,000
Maintenance & Operations			\$1,832,000	\$1,918,000	\$2,007,000	\$2,100,000	\$2,198,000
Internal Service			\$33,000	\$34,000	\$35,000	\$37,000	\$38,000
Allocations			\$1,568,000	\$1,627,000	\$1,688,000	\$1,751,000	\$1,817,000
<b>Subtotal Department 422 - Recycled Water</b>			<b>\$3,759,000</b>	<b>\$3,921,000</b>	<b>\$4,088,000</b>	<b>\$4,263,000</b>	<b>\$4,446,000</b>
<b>Department 440 - Environmental P</b>		<b>Table 63</b>					
Employee Services			\$1,767,000	\$1,852,000	\$1,940,000	\$2,033,000	\$2,130,000
Maintenance & Operations			\$606,000	\$628,000	\$652,000	\$676,000	\$702,000
Internal Service			\$197,000	\$205,000	\$212,000	\$220,000	\$228,000
Allocations			\$22,000	\$23,000	\$24,000	\$25,000	\$26,000
<b>Subtotal Department 440 - Environmental Programs</b>			<b>\$2,592,000</b>	<b>\$2,708,000</b>	<b>\$2,828,000</b>	<b>\$2,954,000</b>	<b>\$3,086,000</b>
<b>Debt Service</b>		<b>Table 63</b>					
Existing Debt			\$3,798,409	\$3,806,990	\$3,700,918	\$3,182,424	\$2,270,993
Pending Debt			\$1,340,631	\$1,594,201	\$1,594,201	\$1,594,201	\$1,594,201
<b>Subtotal Debt Service</b>			<b>\$5,139,040</b>	<b>\$5,401,192</b>	<b>\$5,295,119</b>	<b>\$4,776,625</b>	<b>\$3,865,194</b>
<b>Total Expenses</b>			<b>\$37,267,040</b>	<b>\$38,948,192</b>	<b>\$40,323,119</b>	<b>\$41,352,625</b>	<b>\$42,059,194</b>
<b>Net Operating Income</b>			<b>\$6,363,960</b>	<b>\$8,994,808</b>	<b>\$10,521,881</b>	<b>\$12,597,375</b>	<b>\$14,263,806</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 68: Wastewater Reserves Activity through FY 2028

Operating Fund	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance		\$9,026,502	\$9,189,133	\$9,603,664	\$9,942,687	\$10,196,538
Transfers (Net Operating Income)	Table 67	\$6,363,960	\$8,994,808	\$10,521,881	\$12,597,375	\$14,263,806
Transfers from/(to) Wastewater Utilities Capital Projects Fund		(\$6,201,329)	(\$8,580,278)	(\$10,182,858)	(\$12,343,524)	(\$14,089,584)
<b>Ending Balance</b>		<b>\$9,189,133</b>	<b>\$9,603,664</b>	<b>\$9,942,687</b>	<b>\$10,196,538</b>	<b>\$10,370,760</b>
Wastewater Utilities Capital Projects Fund		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance		\$17,738,457	\$24,152,482	\$11,507,294	\$7,318,588	\$5,144,577
<i>Plus:</i>						
Other Sources/(Uses)		\$30,064,000	\$150,000	\$150,000	\$150,000	\$150,000
Transfers from/(to) Operating Fund		\$6,201,329	\$8,580,278	\$10,182,858	\$12,343,524	\$14,089,584
<i>Less:</i>						
CIP		(\$31,892,000)	(\$21,640,923)	(\$14,760,525)	(\$14,760,312)	(\$10,124,592)
Transfers from/(to) Wastewater Capital Reserve Fund (SRF)		\$1,728,852	\$0	\$98,817	\$0	\$0
Subtotal Wastewater Utilities Capital Projects Fund		\$23,840,639	\$11,241,837	\$7,178,445	\$5,051,799	\$9,259,569
Interest Earnings		\$311,843	\$265,457	\$140,143	\$92,778	\$108,031
<b>Ending Balance</b>		<b>\$24,152,482</b>	<b>\$11,507,294</b>	<b>\$7,318,588</b>	<b>\$5,144,577</b>	<b>\$9,367,601</b>
Wastewater Capital Reserve Fund (SRF)		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance		\$2,284,061	\$555,209	\$555,209	\$456,393	\$456,393
Transfers from/(to) Wastewater Utilities Capital Projects Fund		(\$1,728,852)	\$0	(\$98,817)	\$0	\$0
<b>Ending Balance</b>		<b>\$555,209</b>	<b>\$555,209</b>	<b>\$456,393</b>	<b>\$456,393</b>	<b>\$456,393</b>
Summary Information		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance		\$29,049,021	\$33,896,824	\$21,666,167	\$17,717,667	\$15,797,508
<b>Ending Balance</b>		<b>\$33,896,824</b>	<b>\$21,666,167</b>	<b>\$17,717,667</b>	<b>\$15,797,508</b>	<b>\$20,194,753</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

The operating position based on the proposed financial plan is identified in Figure 19, including debt service coverage. Figure 20 shows the capital plan with funding sources. Figure 21 identifies the ending undesignated reserve balances after funding capital expenses.

Figure 19: Wastewater Proposed Operating Position

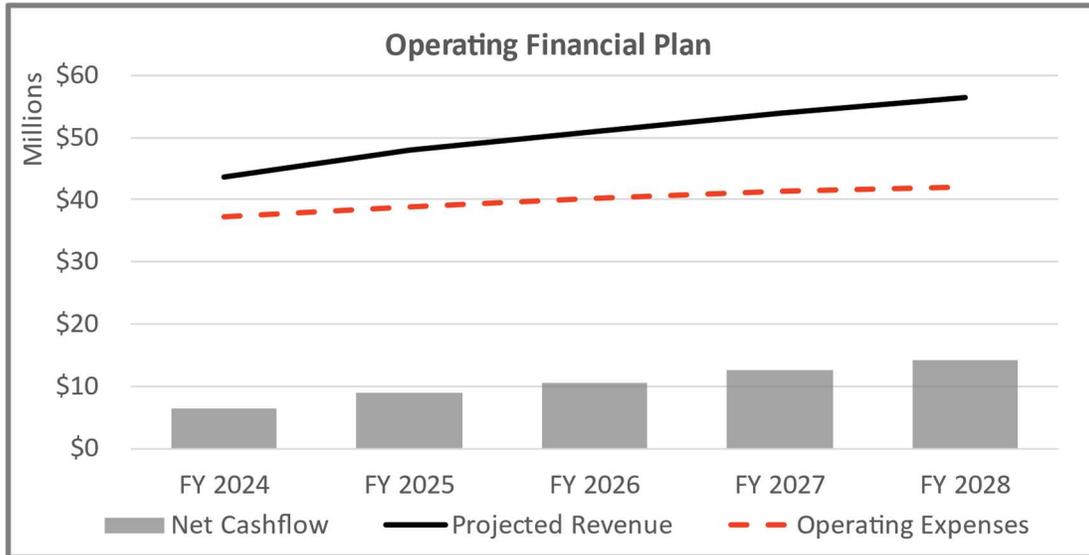
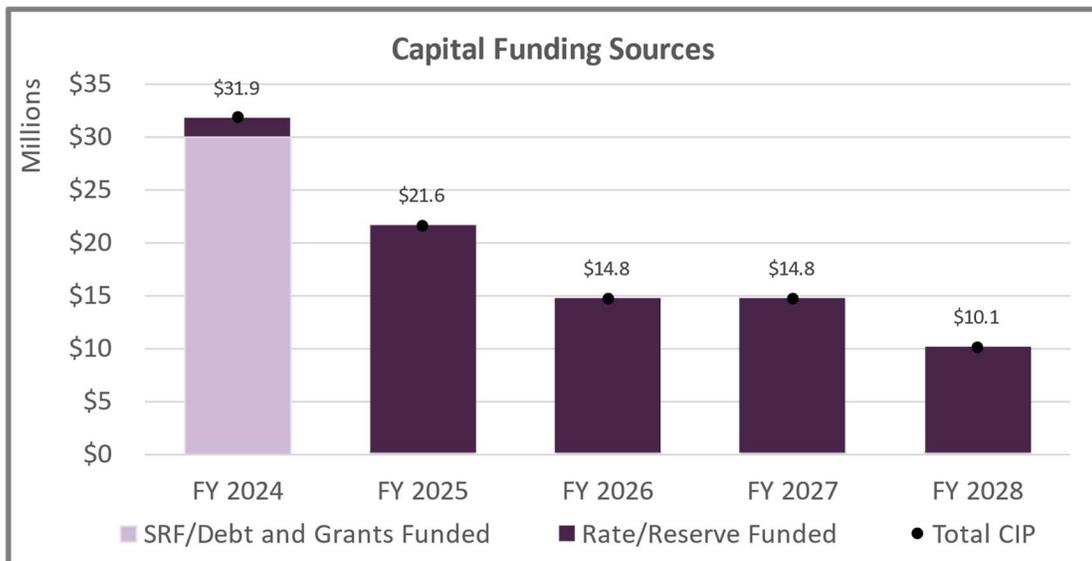
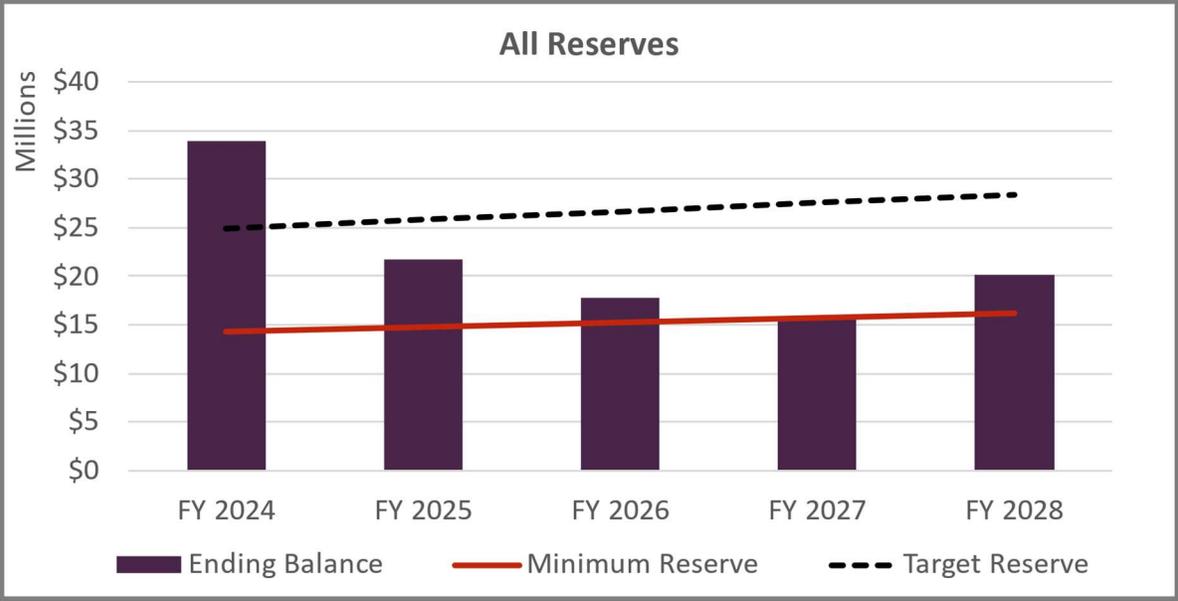


Figure 20: Wastewater Capital Improvement Plan with Funding Sources



# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Figure 21: Wastewater Proposed Ending Reserves



## Cost of Service Analysis – Wastewater Utility

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### Cost of Service Process

The next step in developing wastewater rates is to perform a cost-of-service analysis. Through this process, costs incurred are allocated to customer classes based on their proportional share. As a result, proposed rates are cost-based and reflect the costs incurred to provide service to customers.

### Revenue Requirements

FY 2024 revenue requirements were used for the cost-of-service analysis. Revenue requirements include O&M expenses, treatment expenses, available revenue offsets, non-rate revenues, and reserve funding. The proposed revenue adjustments and corresponding rates accumulate the necessary funding over the Rate Setting Period to fund O&M, capital projects, and meet minimum reserve requirements. The results of the financial plan analysis are summarized in Table 69 and represent the revenue required from rates over the Rate Setting Period.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 69: Wastewater Revenue Requirements

Revenue Requirements	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	Total	Total	Total	Total	Total
<b>Operations and Maintenance</b>					
<b>Department 420 - Wastewater</b>					
Employee Services	\$13,085,000	\$13,709,000	\$14,364,000	\$15,050,000	\$15,770,000
Maintenance & Operations	\$9,312,000	\$9,702,000	\$10,109,000	\$10,534,000	\$10,976,000
Capital Outlay	\$177,000	\$184,000	\$191,000	\$198,000	\$205,000
Internal Service	\$2,235,000	\$2,319,000	\$2,406,000	\$2,496,000	\$2,590,000
Allocations	\$968,000	\$1,004,000	\$1,042,000	\$1,081,000	\$1,121,000
<b>Total Department 420 - Wastewater</b>	<b>\$25,777,000</b>	<b>\$26,918,000</b>	<b>\$28,112,000</b>	<b>\$29,359,000</b>	<b>\$30,662,000</b>
<b>Department 422 - Recycled Water</b>					
Employee Services	\$326,000	\$342,000	\$358,000	\$375,000	\$393,000
Maintenance & Operations	\$1,832,000	\$1,918,000	\$2,007,000	\$2,100,000	\$2,198,000
Internal Service	\$33,000	\$34,000	\$35,000	\$37,000	\$38,000
Allocations	\$1,568,000	\$1,627,000	\$1,688,000	\$1,751,000	\$1,817,000
<b>Total Department 422 - Recycled Water</b>	<b>\$3,759,000</b>	<b>\$3,921,000</b>	<b>\$4,088,000</b>	<b>\$4,263,000</b>	<b>\$4,446,000</b>
<b>Department 440 - Environmental Programs</b>					
Employee Services	\$1,767,000	\$1,852,000	\$1,940,000	\$2,033,000	\$2,130,000
Maintenance & Operations	\$606,000	\$628,000	\$652,000	\$676,000	\$702,000
Internal Service	\$197,000	\$205,000	\$212,000	\$220,000	\$228,000
Allocations	\$22,000	\$23,000	\$24,000	\$25,000	\$26,000
<b>Total Department 440 - Environmental Programs</b>	<b>\$2,592,000</b>	<b>\$2,708,000</b>	<b>\$2,828,000</b>	<b>\$2,954,000</b>	<b>\$3,086,000</b>
<b>Total Operations and Maintenance</b>	<b>\$32,128,000</b>	<b>\$33,547,000</b>	<b>\$35,028,000</b>	<b>\$36,576,000</b>	<b>\$38,194,000</b>
<b>Debt Service</b>					
Existing Debt	\$3,798,409	\$3,806,990	\$3,700,918	\$3,182,424	\$2,270,993
Pending Debt	\$1,340,631	\$1,594,201	\$1,594,201	\$1,594,201	\$1,594,201
<b>Total Debt Service</b>	<b>\$5,139,040</b>	<b>\$5,401,192</b>	<b>\$5,295,119</b>	<b>\$4,776,625</b>	<b>\$3,865,194</b>
<b>Other Funding</b>					
<b>Operating Revenue</b>					
Penalties	(\$200,000)	(\$200,000)	(\$200,000)	(\$200,000)	(\$200,000)
Treatment Charge - San Diego	(\$2,800,000)	(\$2,800,000)	(\$2,800,000)	(\$2,800,000)	(\$2,800,000)
Othr Curr Serv Cge - Sewer	(\$8,000)	(\$8,000)	(\$8,000)	(\$8,000)	(\$8,000)
Restaurant FOG Pretreatment	(\$83,000)	(\$83,000)	(\$83,000)	(\$83,000)	(\$83,000)
CIP Reimbursement	(\$100,000)	(\$100,000)	(\$100,000)	(\$100,000)	(\$100,000)
Sale of Recycle Water	(\$3,000,000)	(\$3,000,000)	(\$3,000,000)	(\$3,000,000)	(\$3,000,000)
Agency Incentives	(\$100,000)	(\$100,000)	(\$100,000)	(\$100,000)	(\$100,000)
Automotive Maint. Pretreatment	(\$67,000)	(\$67,000)	(\$67,000)	(\$67,000)	(\$67,000)
SDG&E Raw Water Line	(\$83,000)	(\$83,000)	(\$83,000)	(\$83,000)	(\$83,000)
<b>Non-Operating Revenue</b>	<b>(\$40,000)</b>	<b>(\$40,000)</b>	<b>(\$40,000)</b>	<b>(\$40,000)</b>	<b>(\$40,000)</b>
<b>Total Revenue Offsets</b>	<b>(\$6,481,000)</b>	<b>(\$6,481,000)</b>	<b>(\$6,481,000)</b>	<b>(\$6,481,000)</b>	<b>(\$6,481,000)</b>
<b>Adjustments</b>					
Reserve Funding	\$6,363,960	\$8,994,808	\$10,521,881	\$12,597,375	\$14,263,806
Adjustment for Mid-Year Increase	\$1,599,000	\$0	\$0	\$0	\$0
<b>Total Adjustments</b>	<b>\$7,962,960</b>	<b>\$8,994,808</b>	<b>\$10,521,881</b>	<b>\$12,597,375</b>	<b>\$14,263,806</b>
<b>Total Other Funding</b>	<b>\$1,481,960</b>	<b>\$2,513,808</b>	<b>\$4,040,881</b>	<b>\$6,116,375</b>	<b>\$7,782,806</b>
<b>Revenue Requirement from Rates</b>	<b>\$38,749,000</b>	<b>\$41,462,000</b>	<b>\$44,364,000</b>	<b>\$47,469,000</b>	<b>\$49,842,000</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Define Cost Components

The District's wastewater cost-of-service requirements were allocated to cost components and then to customers classes to develop cost-based rates in compliance with Proposition 218. The utility incurs costs to accommodate the total flow demand generated by different customer classes. Therefore, to determine the most appropriate way to recover the utility's expenses, cost components are identified and used to allocate expenses based on how they are incurred. Through our review of the revenue requirements and understanding of the wastewater system, the cost-of-service allocation documented in this report is based on total billing units, flow (volume influent in kgals), and the strength characteristics of each customer class.

Strength loading factors for BOD and TSS are based the City's plant operators and the loading factors conveyed to HARRF. The cost components shown in Figure 22 are used within the cost-of-service to allocate costs to customer classes in relation to the demand that each place on the system.

Figure 22: Wastewater Cost Components



*Account Services:* Fixed expenses related to central services of the City providing support to the wastewater departments of 420 – Wastewater and 440 – Environmental Programs. Also includes direct allocation of other operating departments staffing such as water and public works.

*Flow:* Expenses associated with the collection system and volume of flow treated at HARRF.

*BOD:* Expenses associated with treating microbial and organic compounds at HARRF.

*TSS:* Expenses associated with removing and treating total suspended solids at HARRF.

*Recycled:* Expenses associated with treating influent through tertiary level for recycled use. The City tracks recycled water costs through fund number 422.

## Allocate Expenses to Cost Components

When allocating expenses to the defined cost components, it is important to have a sound basis as to why an expense was allocated to a certain fixed cost component versus a variable cost component or split between both fixed and variable. The distribution of expenses to the cost components should be straightforward to ensure the method of apportionment is **understandable** and easily **correlates to how expenses are incurred**. A description of each expense category is identified below.

Table 70 summarizes the percent allocation of Operating expenses to the cost components with Account Services as a fixed component and Flow, BOD, and TSS as variable cost components. Recycled costs are tracked under department 422 and the total expenses related to Recycled are allocated to the Recycled Cost Component. Internal Services and Allocations of the wastewater and environmental program departments are associated with the daily operating costs of the treatment plants and allocated to Flow, BOD and TSS based on the City's review of its treatment plant processes and how costs are incurred at the plant for treating influent, equal to 20% Flow, 40% BOD and 40% TSS. Table 71 uses the percent allocations in Table 70 to allocate expenses in dollars to each cost component.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 70: Wastewater O&M Expense Allocation to Cost Components (%)

O&M Allocation	Methodology / Allocation Basis	Accounts Services	Flow	BOD	TSS	Recycled	Total
Department 420 - Wastewater							
Employee Services	Treatment	0.0%	20.0%	40.0%	40.0%	0.0%	100.0%
Maintenance & Operations	Treatment	0.0%	20.0%	40.0%	40.0%	0.0%	100.0%
Capital Outlay	Treatment	0.0%	20.0%	40.0%	40.0%	0.0%	100.0%
Internal Service	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Allocations	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Department 422 - Recycled Water							
Employee Services	Specific	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Maintenance & Operations	Recycled	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Internal Service	Specific	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Allocations	Specific	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Department 440 - Environmental Programs							
Employee Services	Treatment	0.0%	20.0%	40.0%	40.0%	0.0%	100.0%
Maintenance & Operations	Treatment	0.0%	20.0%	40.0%	40.0%	0.0%	100.0%
Internal Service	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Allocations	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Table 71: Wastewater O&M Expense Allocation to Cost Components (\$)

O&M Allocation	Methodology / Allocation Basis	Cost Components					Total
		Accounts Services	Flow	BOD	TSS	Recycled	
Department 420 - Wastewater							
Employee Services	Treatment	\$0	\$2,617,000	\$5,234,000	\$5,234,000	\$0	\$13,085,000
Maintenance & Operations	Treatment	\$0	\$1,862,400	\$3,724,800	\$3,724,800	\$0	\$9,312,000
Capital Outlay	Treatment	\$0	\$35,400	\$70,800	\$70,800	\$0	\$177,000
Internal Service	Specific	\$2,235,000	\$0	\$0	\$0	\$0	\$2,235,000
Allocations	Specific	\$968,000	\$0	\$0	\$0	\$0	\$968,000
Department 422 - Recycled Water							
Employee Services	Specific	\$0	\$0	\$0	\$0	\$326,000	\$326,000
Maintenance & Operations	Recycled	\$0	\$0	\$0	\$0	\$1,832,000	\$1,832,000
Internal Service	Specific	\$0	\$0	\$0	\$0	\$33,000	\$33,000
Allocations	Specific	\$0	\$0	\$0	\$0	\$1,568,000	\$1,568,000
Department 440 - Environmental Programs							
Employee Services	Treatment	\$0	\$353,400	\$706,800	\$706,800	\$0	\$1,767,000
Maintenance & Operations	Treatment	\$0	\$121,200	\$242,400	\$242,400	\$0	\$606,000
Internal Service	Specific	\$197,000	\$0	\$0	\$0	\$0	\$197,000
Allocations	Specific	\$22,000	\$0	\$0	\$0	\$0	\$22,000
<b>Total Allocation (\$)</b>		<b>\$3,422,000</b>	<b>\$4,989,400</b>	<b>\$9,978,800</b>	<b>\$9,978,800</b>	<b>\$3,759,000</b>	<b>\$32,128,000</b>
<b>O&amp;M Allocation (%)</b>		<b>10.7%</b>	<b>15.5%</b>	<b>31.1%</b>	<b>31.1%</b>	<b>11.7%</b>	<b>100.0%</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

The City's debt was allocated 100% to flow to ensure a proportional allocation of debt to residential customers and non-residential customers based on the percentage of total flow generated by each customer class. Table 72 identifies the percent allocation of the debt expense to the cost components, and Table 73 reflects the debt expense in dollars.

*Table 72: Wastewater Debt Allocation to Cost Components (%)*

Debt Service	Methodology / Allocation Basis	Accounts Services	Flow	BOD	TSS	Recycled	Total
Existing Debt	Collection	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Pending Debt	Collection	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%

*Table 73: Wastewater Debt Allocation to Cost Components (\$)*

Debt Service	Methodology / Allocation Basis	Accounts Services	Flow	BOD	TSS	Recycled	Total
Existing Debt	Collection	\$0	\$3,798,409	\$0	\$0	\$0	\$3,798,409
Pending Debt	Collection	\$0	\$1,340,631	\$0	\$0	\$0	\$1,340,631
<b>Total Allocation (\$)</b>		<b>\$0</b>	<b>\$5,139,040</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,139,040</b>

Other Funding includes other operating revenue, non-operating revenue, and reserve funding. Sale of Recycled Water are to Rincon Municipal Water District and San Diego Gas & Electric, which directly offset recycled water expenses. All other line items under "Other Funding" were allocated to the cost components based on O&M percentages derived in Table 71 to maintain the proportionality in how O&M expenses were allocated to each cost component. Table 74 summarizes the percent allocation to the cost components, and Table 75 uses the percent allocations in Table 74 to allocate expenses in dollars to each cost component. Table 76 summarizes the FY 2024 revenue requirement derived in Table 69 by cost component.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 74: Wastewater Other Funding to Cost Components (%)

Other Funding	Methodology / Allocation Basis	Accounts Services	Flow	BOD	TSS	Recycled	Total
<i>Revenue Offsets</i>							
Operating Revenue							
Penalties	O&M Allocation	10.7%	15.5%	31.1%	31.1%	11.7%	100.0%
Treatment Charge - San Diego	O&M Allocation	10.7%	15.5%	31.1%	31.1%	11.7%	100.0%
Othr Curr Serv Cge - Sewer	O&M Allocation	10.7%	15.5%	31.1%	31.1%	11.7%	100.0%
Restaurant FOG Pretreatment	O&M Allocation	10.7%	15.5%	31.1%	31.1%	11.7%	100.0%
CIP Reimbursement	O&M Allocation	10.7%	15.5%	31.1%	31.1%	11.7%	100.0%
Sale of Recycle Water	Specific	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Agency Incentives	O&M Allocation	10.7%	15.5%	31.1%	31.1%	11.7%	100.0%
Automotive Maint. Pretreatment	O&M Allocation	10.7%	15.5%	31.1%	31.1%	11.7%	100.0%
Pension Expense-GASB 68	O&M Allocation	10.7%	15.5%	31.1%	31.1%	11.7%	100.0%
SDG&E Raw Water Line	O&M Allocation	10.7%	15.5%	31.1%	31.1%	11.7%	100.0%
Non-Operating Revenue	O&M Allocation	10.7%	15.5%	31.1%	31.1%	11.7%	100.0%
<i>Adjustments</i>							
Reserve Funding	O&M Allocation	10.7%	15.5%	31.1%	31.1%	11.7%	100.0%
Adjustment for Mid-Year Increase	O&M Allocation	10.7%	15.5%	31.1%	31.1%	11.7%	100.0%

Table 75: Wastewater Other Funding to Cost Components (\$)

Other Funding	Methodology / Allocation Basis	Accounts Services	Flow	BOD	TSS	Recycled	Total
<i>Revenue Offsets</i>							
Operating Revenue							
Penalties	O&M Allocation	(\$21,302)	(\$31,060)	(\$62,119)	(\$62,119)	(\$23,400)	(\$200,000)
Treatment Charge - San Diego	O&M Allocation	(\$298,232)	(\$434,833)	(\$869,666)	(\$869,666)	(\$327,602)	(\$2,800,000)
Othr Curr Serv Cge - Sewer	O&M Allocation	(\$852)	(\$1,242)	(\$2,485)	(\$2,485)	(\$936)	(\$8,000)
Restaurant FOG Pretreatment	O&M Allocation	(\$8,840)	(\$12,890)	(\$25,779)	(\$25,779)	(\$9,711)	(\$83,000)
CIP Reimbursement	O&M Allocation	(\$10,651)	(\$15,530)	(\$31,060)	(\$31,060)	(\$11,700)	(\$100,000)
Sale of Recycle Water	Specific	\$0	\$0	\$0	\$0	(\$3,000,000)	(\$3,000,000)
Agency Incentives	O&M Allocation	(\$10,651)	(\$15,530)	(\$31,060)	(\$31,060)	(\$11,700)	(\$100,000)
Automotive Maint. Pretreatment	O&M Allocation	(\$7,136)	(\$10,405)	(\$20,810)	(\$20,810)	(\$7,839)	(\$67,000)
SDG&E Raw Water Line	O&M Allocation	(\$8,840)	(\$12,890)	(\$25,779)	(\$25,779)	(\$9,711)	(\$83,000)
Non-Operating Revenue	O&M Allocation	(\$4,260)	(\$6,212)	(\$12,424)	(\$12,424)	(\$4,680)	(\$40,000)
<i>Adjustments</i>							
Reserve Funding	O&M Allocation	\$677,835	\$988,307	\$1,976,615	\$1,976,615	\$744,588	\$6,363,960
Adjustment for Mid-Year Increase	O&M Allocation	\$170,312	\$248,321	\$496,642	\$496,642	\$187,084	\$1,599,000
<b>Total Allocation (\$)</b>		<b>\$477,380</b>	<b>\$696,037</b>	<b>\$1,392,075</b>	<b>\$1,392,075</b>	<b>(\$2,475,607)</b>	<b>\$1,481,960</b>

Table 76: FY 2024 Wastewater Cost-of-Service Requirements by Cost Component

Revenue Requirement	Accounts Services	Flow	BOD	TSS	Recycled	Total
O&M Allocation	\$3,422,000	\$4,989,400	\$9,978,800	\$9,978,800	\$3,759,000	\$32,128,000
Debt Service	\$0	\$5,139,040	\$0	\$0	\$0	\$5,139,040
Other Funding	\$477,380	\$696,037	\$1,392,075	\$1,392,075	(\$2,475,607)	\$1,481,960
<b>COS Requirement</b>	<b>\$3,899,380</b>	<b>\$10,824,478</b>	<b>\$11,370,875</b>	<b>\$11,370,875</b>	<b>\$1,283,393</b>	<b>\$38,749,000</b>

## Rate Design – Wastewater Utility

### Develop Units of Service

The proposed wastewater rate structure has been revised by removing return factors for residential accounts and consolidating the eleven distinct commercial customer classes into three broad strength-based classes. Residential customer flows are currently based on the previous fiscal year’s average winter water usage with return factors of 80% for Single-Family and Multi Family, and 100% for Mobile Homes. Taking the average of winter water usage primarily captures indoor water usage as outdoor water needs are substantially reduced. For this Study, we used the average water usage of December 2022 and January 2023 (2023 Winter). The 2023 Winter was a historic wet year where outdoor watering was limited and, in most cases, negligible. Therefore, applying return factors to the 2023 Winter average water usage is unnecessary and would under project flows generated by residential customers. Therefore, using 2023 Winter average for each residential account and annualizing it is a sound basis for determining the amount of projected influent generated by residential accounts. Commercial uses within the City are more extensive than the existing eleven distinct commercial customer classes. Because of the broad spectrum of commercial uses, one of the eleven customer classes is entitled “All Other Commercial,” to capture commercial accounts that do not fall within the other ten customer classes. Therefore, commercial customer classes have been consolidated into three broader categories based on the strength of influent generated (Low Strength, Medium Strength, and High Strength). This will provide the City more flexibility to group commercial customers based on the demands placed on the wastewater system, instead of specific types of use. As new commercial uses come online, the City will determine the strength of influent generated and classify the business account, accordingly. Institutional accounts (schools and churches) and High Strength Use (Metered) customer classes will maintain their current rate structure, with rates recalibrated based on the updated cost-of-service analysis.

Table 77 derives the projected flows of Residential and Institutional customers classes. Institutional accounts (schools and churches) projected flows were based on the State Water Resources Control Board (SWRCB) – Revenue Program Guidelines for Wastewater Agencies – Table G-1 and Table G-4.

*Table 77: Residential and Institutional Projected Flows*

Residential Flow Projections	Dec/22 - Jan/23 Monthly Avg	Billing Periods	Projected Flow (kgals)	Notes
Single-Family	128,904	12	1,546,851	Total accounts/units
Multi-Family	78,274	12	939,284	Total accounts/units
Mobile Homes	14,246	12	170,955	Total accounts/units
<b>Projected Residential Flow</b>	<b>221,424 kgals</b>		<b>2,657,090 kgals</b>	

Institutional	Students / Seats	Gals per Unit/Day	Annualized	Notes
Senior High Schools (Students)	9,185	20.00	44,700	8 Months of School
Elementary & Middle Schools (Students)	18,574	10.00	45,197	8 Months of School
Churches (Seats)	27,300	2.00	19,929	12 Months
<b>Projected Institutional Flow</b>			<b>109,826 kgals</b>	

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Commercial customer flows were determined by estimating flow return factors for the Commercial customer class. To determine the appropriate flow return factor, we used the amount of total influent in FY 2022 that was treated at HARRF, net of influent from the City of San Diego. The total treated influent from the City is reduced by the percentage of infiltration and inflow (known as I/I, which is the amount of water entering the collection system that is not sewage, such as stormwater or groundwater infiltration), equal to 3.2%<sup>8</sup>. The total influent from the City is reduced by I/I and the projected flows generated by residential and institutional customers, derived in Table 77. The remainder is the projected amount of flow generated by Commercial customers. Table 78 provides the calculations used to derive the amount of projected flow generated by Commercial customers and the return factor to apply to Commercial water usage to achieve the projected flow.

*Table 78: Commercial Projected Flows (kgals)*

Flow Assumptions (kgals)	I/I as % of Influent	FY 2022
Total Escondido Treated Flow		3,532,800
Less: Inflow and Infiltration (I&I)	3.2%	(113,050)
<b>Flow from Customers</b>		<b>3,419,750</b>
Projected Residential Flow	Table 77	(2,657,090)
Projected Flow from High Schools (Students)	Table 77	(44,700)
Projected Flow from K-8 Schools (Students)	Table 77	(45,197)
Projected Flow from Churches (Seats)	Table 77	(19,929)
<b>Projected Commercial Flows (kgals)</b>		<b>652,835</b>

Customer Class	Water Usage [A]	Flow Return [B]	Projected Flow [C] = A x B
Projected Commercial Flow	775,158	84.22%	652,835

Applying a return factor of 84.22% against Commercial water usage generates a calculated flow of 652,835 kgals, matching the projected treated flow from Commercial. Therefore, the 84.22% return factor is applied to each Commercial customer class, except for High Strength Use customers that have their flows metered.

Unit rates for the cost components are derived by identifying the units of service for each cost component (distribution basis). The distribution basis varies by cost component and includes billable units, projected flow, weighted BOD, and weighted TSS. Strength concentrations for each customer class were provided by the City HARRF operators based on the influent conveyed to the plant and periodic sampling over the years. Table 79 summarizes the annual fixed billable units of service and the mapping of existing commercial customer classes to the new proposed customer classes based on strength of Low, Medium, and High. Table 80 identifies the variable units of service related to flow, BOD and TSS. Parts per Million (ppm) is how strength concentration of BOD and TSS are measured. The strength concentrations are weighted by total flow in Million Gallons (MG) multiplied by the strength concentrations in ppm, to develop the BOD units of service (Weighted BOD) and the TSS units of service (Weighted TSS). Recycled water usage is identified with Table 80, which will be used to update recycled variable rates.

<sup>8</sup> I/I as a percentage of total influent was provided by the City based on historical data.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 79: Wastewater Fixed Units of Service

Customer Class	Accounts [A]	Non-Residential Strength [B]	Billing Units [C]	Annual Billing Units [D] = C x 12
Single-Family	23,867		24,612	295,344
Multi-Family	1,218		17,676	212,112
Mobile Homes	132		3,246	38,952
Car Wash/Soft Water Service	16	Low	15	180
Hotel/Motel without Dining	24	Low	24	288
Hotel/Motel with Dining	1	Medium	1	12
Repair Shop/Service Station	167	Low	167	2,004
Commercial Laundry	0	Medium	0	0
Laundromats	24	Low	24	288
Hospital	11	Low	11	132
Grocery Store with Meat Dept.	33	High	34	408
Industrial	100	Medium	100	1,200
Restaurant	261	High	263	3,156
All Other Commercial	1,531	Low	2,079	24,948
Senior High Schools	7	Specific	7	84
Elementary & Middle Schools	12	Specific	12	144
Churches	68	Specific	68	816
High Strength Use (Metered) (Metered)	10	Specific	10	120
<b>Total</b>	<b>27,482</b>		<b>48,349</b>	<b>580,188</b>

**Annual Fixed Units of Service**

Customer Class	Accounts [A]	Billing Units [B]	Annual Billing Units [C] = B x 12
<b>Residential</b>			
Single-Family	23,867	24,612	295,344
Multi-Family	1,218	17,676	212,112
Mobile Homes	132	3,246	38,952
<b>Institutional</b>			
Senior High Schools	7	7	84
Elementary & Middle Schools	12	12	144
Churches	68	68	816
<b>Commercial</b>			
Low	1,773	2,320	27,840
Medium	101	101	1,212
High	294	297	3,564
High Strength Use (Metered) (Metered)	10	10	120
<b>Total</b>	<b>27,482</b>	<b>48,349</b>	<b>580,188</b>

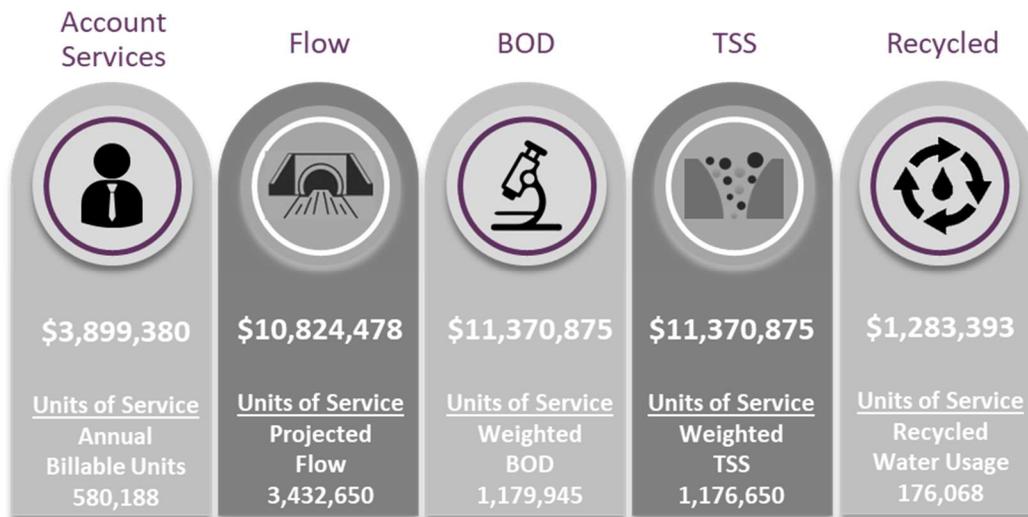
# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 80: Wastewater Variable Units of Service

Customer Classes	Students or Seats	Recycled Water (kgals)	Projected Water Usage (kgals)	Return Factor	Projected Flow (kgals)	BOD (ppm)	TSS (ppm)	Coversion Factor (kgals to MG)	Weighted BOD	Weighted TSS
	[A]	[B]	[C]	[D]	[E] = C x D	[F]	[G]	[H]	[I] = E x F x H	[J] = E x G x H
Residential										
Single-Family			N/A	Flow from Table 78	1,546,851	300	300	0.10%	464,055	464,055
Multi-Family			N/A	Flow from Table 78	939,284	300	300	0.10%	281,785	281,785
Mobile Homes			N/A	Flow from Table 78	170,955	300	300	0.10%	51,287	51,287
Institutional										
Senior High Schools (Students)	9,185		N/A	Flow from Table 78	44,700	130	100	0.10%	5,811	4,470
Elementary & Middle Schools (St)	18,574		N/A	Flow from Table 78	45,197	130	100	0.10%	5,876	4,520
Churches (Seats)	27,300		N/A	Flow from Table 78	19,929	130	100	0.10%	2,591	1,993
Commercial										
Low			486,689	84.22%	409,887	300	300	0.10%	122,966	122,966
Medium			34,851	84.22%	29,351	650	650	0.10%	19,078	19,078
High			171,871	84.22%	144,749	1,000	1,000	0.10%	144,749	144,749
High Strength Use (Metered)			81,747	100.00%	81,747	1,000	1,000	0.10%	81,747	81,747
Recycled Water		176,068							N/A	N/A
<b>Total</b>	55,059	176,068			3,432,650				1,179,945	1,176,650
<b>Annual Units</b>	<b>660,708</b>	<b>176,068</b>			<b>3,432,650</b>				<b>1,179,945</b>	<b>1,176,650</b>

With the units of service shown in Table 79 and Table 80, the distribution basis can be identified for each cost component. The total revenue requirements by cost component from Table 76 is shown in Figure 23 with the corresponding units of service.

Figure 23: Wastewater Distribution Basis and Units of Service by Cost Component



# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Allocate to Customer Class

Using the FY 2024 revenue requirements, the cost-of-service allocates expenses to customer classes based on the service demands that each place on the system (cost causation). Using this approach provides a clear connection between costs incurred and the proportionate share attributable to each customer class. When designing rates, the most critical component is to connect costs to the proposed rates, resulting in a cost-based rate structure in compliance with Proposition 218. In the previous section, costs were summarized by expense category and allocated to cost components based on how each cost is incurred. The next step in designing rates is to allocate each cost component to customers in relation to their use of the system and facilities. This ensures that each customer proportionately shares in the financial obligation of the wastewater utility. For the following unit rate computations, unit rates were rounded up to the nearest penny.

## Fixed Cost Recovery

### Account Services

Account Services costs are spread equally across all billable units over 12 months. Therefore, the revenue requirement for Account Services is apportioned based on the annual billing units to determine the monthly unit cost-of-service shown in Table 81.

*Table 81: FY 2024 Wastewater Account Services Monthly Unit Rate*

Accounts Services Component - Unit Rate	
Revenue Requirement	\$3,899,380
÷ Annual Billing Units	580,188
<b>Monthly Unit Rate</b>	<b>\$6.73</b>

Customer Class	Annual [A]	% [B] = A as a %	Revenue Requirement [C] = Rev Req x B
<b>Residential</b>			
Single-Family	295,344	50.90%	\$1,984,975
Multi-Family	212,112	36.56%	\$1,425,582
Mobile Homes	38,952	6.71%	\$261,792
<b>Institutional</b>			
Senior High Schools	84	0.01%	\$565
Elementary & Middle Schools	144	0.02%	\$968
Churches	816	0.14%	\$5,484
<b>Commercial</b>			
Low	27,840	4.80%	\$187,110
Medium	1,212	0.21%	\$8,146
High	3,564	0.61%	\$23,953
High Strength Use (Metered)	120	0.02%	\$807
<b>Total</b>	<b>580,188</b>	<b>100%</b>	<b>\$3,899,380</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Variable Cost Recovery

### Flow

Flow is a function of total volume of influent conveyed through the collection system and treated at HARRF. Therefore, the revenue requirement for Flow is apportioned to each customer class based on their percentage of the total projected flow, as summarized in Table 82.

*Table 82: FY 2024 Wastewater Collection Allocation by Customer Class*

Customer Class	Projected Flow (kgals)	% Allocation	Revenue Requirement
	[A]	[B] = A as %	[C] = Rev Req x B
Residential			
Single-Family	1,546,851	45.06%	\$4,877,820
Multi-Family	939,284	27.36%	\$2,961,926
Mobile Homes	170,955	4.98%	\$539,088
Institutional			
Senior High Schools (Students)	44,700	1.30%	\$140,957
Elementary & Middle Schools (Si	45,197	1.32%	\$142,523
Churches (Seats)	19,929	0.58%	\$62,844
Commercial			
Low	409,887	11.94%	\$1,292,533
Medium	29,351	0.86%	\$92,556
High	144,749	4.22%	\$456,450
High Strength Use (Metered)	81,747	2.38%	\$257,780
<b>Total</b>	<b>3,432,650</b>	<b>100%</b>	<b>\$10,824,478</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## BOD

BOD costs relate to the treatment process of breaking down organic material in wastewater. Higher BOD strengths require increased costs and longer periods of treatment time to dilute prior to discharging effluent into waterways. Therefore, the revenue requirement for BOD is apportioned based on Weighted BOD for each customer class, as shown in Table 83.

*Table 83: FY 2024 Wastewater BOD Allocation by Customer Class*

Customer Class	Weighted BOD	% Allocation	Revenue Requirement
	[A]	[B] = A as %	[C] = Rev Req x B
Residential			
Single-Family	464,055	39.33%	\$4,472,000
Multi-Family	281,785	23.88%	\$2,715,503
Mobile Homes	51,287	4.35%	\$494,238
Institutional			
Senior High Schools (Students)	5,811	0.49%	\$56,000
Elementary & Middle Schools (St	5,876	0.50%	\$56,622
Churches (Seats)	2,591	0.22%	\$24,967
Commercial			
Low	122,966	10.42%	\$1,184,998
Medium	19,078	1.62%	\$183,855
High	144,749	12.27%	\$1,394,916
High Strength Use (Metered)	81,747	6.93%	\$787,778
<b>Total</b>	<b>1,179,945</b>	<b>100%</b>	<b>\$11,370,875</b>

## TSS

TSS costs relate to the treatment process of removing solids from wastewater through settling, screening, and filtering. Higher TSS strengths require increased costs and additional filtration to treat and remove the high levels prior to discharging effluent into waterways. Therefore, the revenue requirement for TSS is apportioned based on Weighted TSS for each customer class, as shown in Table 84.

*Table 84: FY 2024 Wastewater TSS Allocation by Customer Class*

Customer Class	Weighted BOD	% Allocation	Revenue Requirement
	[A]	[B] = A as %	[C] = Rev Req x B
Residential			
Single-Family	464,055	39.33%	\$4,472,000
Multi-Family	281,785	23.88%	\$2,715,503
Mobile Homes	51,287	4.35%	\$494,238
Institutional			
Senior High Schools (Students)	5,811	0.49%	\$56,000
Elementary & Middle Schools (S	5,876	0.50%	\$56,622
Churches (Seats)	2,591	0.22%	\$24,967
Commercial			
Low	122,966	10.42%	\$1,184,998
Medium	19,078	1.62%	\$183,855
High	144,749	12.27%	\$1,394,916
High Strength Use (Metered)	81,747	6.93%	\$787,778
<b>Total</b>	<b>1,179,945</b>	<b>100%</b>	<b>\$11,370,875</b>

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Collectively, the total allocation of costs associated with Account Services, Flow, BOD and TSS (Total Revenue Requirement) derives the cost of providing service to each wastewater customer class. The Recycled customer class is allocated the entire cost associated with the Recycled revenue requirement in Table 76. Table 85 summarizes the combined revenue requirement by customer class.

*Table 85: FY 2024 Wastewater Total Revenue Requirement by Customer Class*

Customer Class	Account Services [A]	Flow [B]	BOD [C]	TSS [D]	Recycled [E]	Allocated Revenue Requirements [F] = Sum (A - E)
<b>Residential</b>						
Single-Family	\$1,984,975	\$4,877,820	\$4,472,000	\$4,484,522		\$15,819,316
Multi-Family	\$1,425,582	\$2,961,926	\$2,715,503	\$2,723,106		\$9,826,116
Mobile Homes	\$261,792	\$539,088	\$494,238	\$495,622		\$1,790,739
<b>Institutional</b>						
Senior High Schools (Students)	\$565	\$140,957	\$56,000	\$43,197		\$240,719
Elementary & Middle Schools (S)	\$968	\$142,523	\$56,622	\$43,677		\$243,789
Churches (Seats)	\$5,484	\$62,844	\$24,967	\$19,259		\$112,554
<b>Commercial</b>						
Low	\$187,110	\$1,292,533	\$1,184,998	\$1,188,316		\$3,852,957
Medium	\$8,146	\$92,556	\$183,855	\$184,370		\$468,927
High	\$23,953	\$456,450	\$1,394,916	\$1,398,822		\$3,274,140
High Strength Use (Metered)	\$807	\$257,780	\$787,778	\$789,984		\$1,836,349
Recycled	-	-	-	-	\$1,283,393	\$1,283,393
<b>Total</b>	<b>\$3,899,380</b>	<b>\$10,824,478</b>	<b>\$11,370,875</b>	<b>\$11,370,875</b>	<b>\$1,283,393</b>	<b>\$38,749,000</b>

## FY 2024 Wastewater Charges by Customer Class

### Residential

The revenue requirements for residential customers are noticed as monthly fixed charges for Account Services and variable rates for capturing the allocated revenue requirements associated with Flow, BOD, and TSS. The variable rates for residential customers are applied to each residential account's winter average water usage for all 12 billing periods. Table 86 derives the monthly fixed charge and variable rates for Residential customers.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 86: FY 2024 Residential Monthly Fixed Charges and Variable Rates in kgals

Customer Class	Account Services [A]	Annual Billing Units [B] = Table 80	Total Monthly Fixed Charge [C] = A ÷ B		
<b>Residential</b>					
Single-Family	\$1,984,975	295,344	\$6.73		
Multi-Family	\$1,425,582	212,112	\$6.73		
Mobile Homes	\$261,792	38,952	\$6.73		
<b>Variable Rate</b>					
Customer Class	Flow [A]	BOD [B]	TSS [C]	kgals [E] = Table 81	Variable Rates [F] = D ÷ E
<b>Residential</b>					
Single-Family	\$4,877,820	\$4,472,000	\$4,484,522	1,546,851	\$8.95
Multi-Family	\$2,961,926	\$2,715,503	\$2,723,106	939,284	\$8.95
Mobile Homes	\$539,088	\$494,238	\$495,622	170,955	\$8.95

## Institutional

For the Institutional customer classes, wastewater charges are derived as a flat annual charge per student for Schools, and a flat monthly charge per seat for Churches<sup>9</sup>. Table 87 derives the flat charges for Schools and Churches

Table 87: FY 2024 School and Churches Flat Charges

Customer Class	Annual Billing Units [A] = Table 80 x 12	Account Services [B]	Flow [C]	BOD [D]	TSS [E]	Total [F] = Sum (A - E)	Fixed Charge [G] = F ÷ A	Notes
<b>Institutional</b>								
Senior High Schools (Students)	110,220	\$565	\$140,957	\$56,000	\$43,197	\$240,719	\$2.19	per student/month
Elementary & Middle Schools (Students)	222,888	\$968	\$142,523	\$56,622	\$43,677	\$243,789	\$1.10	per student/month
Churches (Seats)	327,600	\$5,484	\$62,844	\$24,967	\$19,259	\$112,554	\$0.35	per seat/month

## Commercial

For Commercial customer classes, each account is charged a monthly fixed amount for Account Services and variable rates that vary between the categories of Low, Medium, and High. Variable rates are derived for the components of Flow, BOD, and TSS by dividing the total allocated cost by total water usage as wastewater flows are not metered. Table 88 derives the monthly fixed charges and variable rates for Commercial.

<sup>9</sup> The City wastewater charges to Schools are charged annually per student (Table 87 student rate multiplied by 12), and Churches are billed monthly per 100 seats (Table 87 rate x 100), which are shown within the 5-year rate schedule

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 88: FY 2024 Commercial Monthly Fixed Charge and Variable Rates

Customer Class	Annual Billing Units [A] = Table 80	Account Services [B]	Fixed Charge [C] = B ÷ A
Commercial	32,736	\$220,015	<b>\$6.73</b>

Customer Class	Commercial Water Usage [A] = Table 81	Variable Rate Components			Variable Rates			Total Variable Rates (\$/kgal) [H] = E + F + G
		Flow [B]	BOD [C]	TSS [D]	Flow [E] = B ÷ A	BOD [F] = C ÷ A	TSS [G] = D ÷ A	
<b>Commercial</b>								
Low	486,689	\$1,292,533	\$1,184,998	\$1,188,316	\$2.66	\$2.44	\$2.45	<b>\$7.55</b>
Medium	34,851	\$92,556	\$183,855	\$184,370	\$2.66	\$5.28	\$5.30	<b>\$13.24</b>
High	171,871	\$456,450	\$1,394,916	\$1,398,822	\$2.66	\$8.12	\$8.14	<b>\$18.92</b>
High Strength Use (Metered)	81,747	\$257,780	\$787,778	\$789,984	\$3.16	\$9.64	\$9.67	<b>\$22.47</b>

High Strength Use (Metered) customers are also subject to user fees for excess loadings above the City's discharge guidelines. When this occurs, these customers are charged fees associated with the additional pounds of BOD and TSS generated by the account. Table 89 provides the calculations for the user fees for excess BOD and TSS loadings.

Table 89: FY 2024 High Strength Use (Metered) Excess BOD and TSS Charges in lbs

High Strength Use (Metered)	BOD	TSS
Strength (mg/l or PPM)	1,000	1,000
Flow in MG	81.75	81.75
Lbs per Gallon Conversion Factor	8.34	8.34
<b>Total Pounds</b>	<b>681,770</b>	<b>681,770</b>
Revenue Requirement (Table 88)	\$787,778	\$789,984
<b>Cost per Pound (Revenue Requirement / Pounds)</b>	<b>\$1.16</b>	<b>\$1.16</b>

## Rate Design – Recycled

Recycled water fixed charges are set at 100% of potable fixed charges, with the remaining multi-year revenue requirements recovered from variable rates. Therefore, the amount of annual revenues generated by the meter rates for each fiscal year are determined and then used to derive variable rates over the Rate Setting Period.

### Fixed Cost Recovery

Table 90 identifies the recycled water monthly meter charges, based on 100% of potable meter charges over the Rate Setting Period. Recycled fixed revenue is derived by taking the product of total meters by size and corresponding rates, multiplied by 12 billing periods. Recycled meter counts remain constant for all five years for financial planning purposes.

*Table 90: Proposed Recycled Water Monthly Meter Charges and Annual Revenue*

Revenue from Fixed Charges						
	Meters	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Meter Size						
5/8" and 3/4"	-	\$52.53	\$57.26	\$62.42	\$68.04	\$74.17
1"	1	\$77.72	\$84.72	\$92.35	\$100.67	\$109.74
1 1/2"	4	\$140.67	\$153.34	\$167.15	\$182.20	\$198.60
2"	20	\$253.98	\$276.84	\$301.76	\$328.92	\$358.53
3"	3	\$562.43	\$613.05	\$668.23	\$728.38	\$793.94
4"	5	\$959.01	\$1,045.33	\$1,139.41	\$1,241.96	\$1,353.74
6"	4	\$2,029.17	\$2,211.80	\$2,410.87	\$2,627.85	\$2,864.36
8"	-	\$3,539.97	\$3,858.57	\$4,205.85	\$4,584.38	\$4,996.98
<b>Total Fixed Revenue</b>	<b>37</b>	<b>\$243,828</b>	<b>\$265,775</b>	<b>\$289,696</b>	<b>\$315,771</b>	<b>\$344,192</b>

### Variable Cost Recovery

Table 91 derives the proposed variable rates by taking the total revenue requirement identified in Table 69 and reducing the amount by total fixed revenue calculated in Table 90. The net amount is divided by total recycled water sales to determine the recycled water variable rate for the Rate Setting Period, rounded up to the next whole penny.

*Table 91: Proposed Recycled Water Variable Rates*

Variable Rate Analysis	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Recycled Revenue Requirement	\$1,283,393	\$1,373,230	\$1,469,356	\$1,572,211	\$1,650,822
Less: Projected Revenue from Fixed	(\$243,828)	(\$265,775)	(\$289,696)	(\$315,771)	(\$344,192)
Variable Revenue Requirement	\$1,039,564	\$1,107,456	\$1,179,660	\$1,256,441	\$1,306,629
÷ Projected Recycled Usage (Table 80)	176,068	176,068	176,068	176,068	176,068
<b>Proposed Variable Rate</b>	<b>\$5.91</b>	<b>\$6.29</b>	<b>\$6.71</b>	<b>\$7.14</b>	<b>\$7.43</b>

## Cost-Based Rates

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### Cost-of-Service and Rate Summary

The comprehensive cost-of-service analysis and rate development meet the requirements of Proposition 218 and identify the cost components that make up the proposed water, wastewater, and recycled water fixed charges and variable rates. Proposition 218 requires the following conditions:

1. An agency cannot collect revenue beyond what is necessary to provide service.  
*The long-term financial plan identifies the City's revenue requirements for each utility, including operating expenses, capital improvement programs, debt, and reserves.*
2. Revenues derived by the charge shall not be used for any other purpose other than that for which the charge was imposed.  
*The City's water and wastewater utilities are analyzed as separate business enterprises, with recycled as a separate fund within wastewater, to track revenues and expenses and do not fund services other than those necessary for the provision of water, wastewater, and recycled water.*
3. The amount of the fee may not exceed the proportional cost-of-service for the parcel.  
*The comprehensive cost-of-service analysis, updated fixed charges, and variable rates reflect each customer's fair share of water, wastewater, and recycled water costs, respectively. Through this updated analysis, each customer will pay the proportional cost of providing service to that parcel.*
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of a property.  
*Only properties that are actually receiving utility service or have service immediately available to them are required to pay the fixed and variable charges described in this study.*
5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing.  
*Notices were mailed to each affected parcel owner at least 45 days before the October 18, 2023, Public Hearing.*

The proposed water, wastewater, and recycled water 5-year rate schedules (FY 2024 through FY 2028) are shown in the following section. If a majority protest does not occur by or at the October 18<sup>th</sup> Public Hearing, the City Council may adopt the rates with an effective date of January 1, 2024.

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Five-Year Rate Schedules

### Water

Table 92 through Table 95 provide the five-year water rate schedule over the Rate Setting Period for monthly fixed charges, variable rates, and variable pumping rates, respectively. For FY 2025 through FY 2028, the revenue adjustments are applied across the board to the cost-of-service rates derived for FY 2024 as account growth and usage characteristics are projected to remain constant for financial planning.

*Table 92: Proposed Potable and Recycled Monthly Fixed Charge (FY 2024 – FY 2028)*

Potable and Recycled Fixed Charges (\$/Month)					
Revenue Adjustments:		9.0%	9.0%	9.0%	9.0%
Meter Size	2024	2025	2026	2027	2028
5/8" and 3/4"	\$52.53	\$57.26	\$62.42	\$68.04	\$74.17
1"	\$77.72	\$84.72	\$92.35	\$100.67	\$109.74
1 1/2"	\$140.67	\$153.34	\$167.15	\$182.20	\$198.60
2"	\$253.98	\$276.84	\$301.76	\$328.92	\$358.53
3"	\$562.43	\$613.05	\$668.23	\$728.38	\$793.94
4"	\$959.01	\$1,045.33	\$1,139.41	\$1,241.96	\$1,353.74
6"	\$2,029.17	\$2,211.80	\$2,410.87	\$2,627.85	\$2,864.36
8"	\$3,539.97	\$3,858.57	\$4,205.85	\$4,584.38	\$4,996.98

*Table 93: Proposed PSAWR Monthly Fixed Charge (FY 2024 – FY 2028)*

PSAWR Fixed Charges (\$/Month)					
Revenue Adjustments:		9.0%	9.0%	9.0%	9.0%
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8" and 3/4"	\$43.27	\$47.17	\$51.42	\$56.05	\$61.10
1"	\$62.28	\$67.89	\$74.01	\$80.68	\$87.95
1 1/2"	\$109.80	\$119.69	\$130.47	\$142.22	\$155.02
2"	\$195.33	\$212.91	\$232.08	\$252.97	\$275.74
3"	\$428.16	\$466.70	\$508.71	\$554.50	\$604.41
4"	\$727.51	\$792.99	\$864.36	\$942.16	\$1,026.96
6"	\$1,535.30	\$1,673.48	\$1,824.10	\$1,988.27	\$2,167.22
8"	\$2,675.70	\$2,916.52	\$3,179.01	\$3,465.13	\$3,777.00

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

Table 94: Proposed Detector Monthly Fixed Charge (FY 2024 – FY 2028)

Detector Fixed Charges (\$/Month)					
Revenue Adjustments:		9.0%	9.0%	9.0%	9.0%
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8" and 3/4"	\$34.47	\$37.58	\$40.97	\$44.66	\$48.68
1"	\$47.61	\$51.90	\$56.58	\$61.68	\$67.24
1 1/2"	\$80.46	\$87.71	\$95.61	\$104.22	\$113.60
2"	\$139.59	\$152.16	\$165.86	\$180.79	\$197.07
3"	\$300.56	\$327.62	\$357.11	\$389.25	\$424.29
4"	\$507.51	\$553.19	\$602.98	\$657.25	\$716.41
6"	\$1,065.96	\$1,161.90	\$1,266.48	\$1,380.47	\$1,504.72
8"	\$1,854.36	\$2,021.26	\$2,203.18	\$2,401.47	\$2,617.61

Table 95: Proposed Water Variable Charge (FY 2024 – FY 2028)

Potable Variable Rates (\$/kgal)					
Revenue Adjustments:		9.0%	9.0%	9.0%	9.0%
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Single-Family</b>					
Tier 1	\$9.03	\$9.85	\$10.74	\$11.71	\$12.77
Tier 2	\$9.76	\$10.64	\$11.60	\$12.65	\$13.79
Tier 3	\$10.40	\$11.34	\$12.37	\$13.49	\$14.71
<b>Residential/Agricultural</b>					
Tier 1	\$9.03	\$9.85	\$10.74	\$11.71	\$12.77
Tier 2	\$9.92	\$10.82	\$11.80	\$12.87	\$14.03
<b>Multi-Family</b>					
Tier 1	\$9.22	\$10.05	\$10.96	\$11.95	\$13.03
Tier 2	\$9.78	\$10.67	\$11.64	\$12.69	\$13.84
<b>Commercial</b>	\$9.47	\$10.33	\$11.26	\$12.28	\$13.39
<b>Irrigation</b>	\$9.85	\$10.74	\$11.71	\$12.77	\$13.92
<b>SD Zoo Safari Park</b>	\$9.48	\$10.34	\$11.28	\$12.30	\$13.41
<b>Special Unfiltered</b>	\$8.25	\$9.00	\$9.81	\$10.70	\$11.67
<b>PSAWR</b>					
Tier 1	\$7.58	\$8.27	\$9.02	\$9.84	\$10.73
Tier 2	\$6.87	\$7.49	\$8.17	\$8.91	\$9.72

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## Wastewater

Table 96 and Table 97 provide the five-year wastewater rate schedules over the Rate Setting Period for monthly fixed charges and variable rates. For FY 2025 through FY 2028, the revenue adjustments are applied across the board to the cost-of-service rates derived for FY 2024 as account growth and usage characteristics are projected to remain constant for financial planning.

*Table 96: Proposed Wastewater Fixed Charges (FY 2024 – FY 2028)*

Fixed Charges (\$/Month) and Institutional Flat Charges						
Revenue Adjustments:		7.0%	7.0%	7.0%	5.0%	
Customer Class		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Residential</b>						
Single-Family		\$6.73	\$7.21	\$7.72	\$8.27	\$8.69
Multi-Family		\$6.73	\$7.21	\$7.72	\$8.27	\$8.69
Mobile Homes		\$6.73	\$7.21	\$7.72	\$8.27	\$8.69
<b>All Commercial</b>		\$6.73	\$7.21	\$7.72	\$8.27	\$8.69
<b>Institutional</b>						
Senior High Schools (Students)	per student/year	\$26.28	\$28.20	\$30.24	\$32.40	\$34.08
Elementary & Middle Schools (Students)	per student/year	\$13.20	\$14.16	\$15.24	\$16.32	\$17.16
Churches (Seats)	per 100 seats/month	\$35.00	\$38.00	\$41.00	\$44.00	\$47.00

*Table 97: Proposed Wastewater Variable Rates (FY 2024 – FY 2028)*

Variable Rates (\$/kgal) and (\$/Lb)						
Revenue Adjustments:		7.0%	7.0%	7.0%	5.0%	
Customer Class		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Residential</b>						
Single-Family		\$8.95	\$9.58	\$10.26	\$10.98	\$11.53
Multi-Family		\$8.95	\$9.58	\$10.26	\$10.98	\$11.53
Mobile Homes		\$8.95	\$9.58	\$10.26	\$10.98	\$11.53
<b>Commercial</b>						
Low		\$7.55	\$8.08	\$8.65	\$9.26	\$9.73
Medium		\$13.24	\$14.17	\$15.17	\$16.24	\$17.06
High		\$18.92	\$20.25	\$21.67	\$23.19	\$24.35
<b>High Strength Use (Metered)</b>						
Flow (kgals)		\$22.47	\$24.05	\$25.74	\$27.55	\$28.93
Excess BOD (\$/Lb)		\$1.16	\$1.24	\$1.33	\$1.43	\$1.51
Excess TSS (\$/Lb)		\$1.16	\$1.25	\$1.34	\$1.44	\$1.52

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Recycled Variable

Table 98 identifies the five-year recycled variable rates over the Rate Setting Period as derived in Table 91.

*Table 98: Proposed Recycled Water Variable Rates (FY 2024 – FY 2028)*

Recycled Variable Rates (\$/kgal)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Recycled	\$5.91	\$6.29	\$6.71	\$7.14	\$7.43

# City of Escondido – 2023 Cost-of-Service Utility Rate Study

## Appendix A – Water Supply Cost Analysis

Table 99: Projected Purchased Water Costs (FY 2024 – FY 2028)

Key Inputs / Assumptions		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>System/Supply Characteristics</b>						
Water Loss		6.0%	6.0%	6.0%	6.0%	6.0%
Local Water		8,000 AF	4,000 AF	1,000 AF	1,000 AF	1,000 AF
PSAWR Usage Credit		147 AF				
IPWR Usage Credit		3,176 AF				
SDCWA Rates		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
<b>SDCWA Monthly Fixed Costs</b>						
MWD Readiness-to-Serve Charge	FY	\$64,408	\$64,408	\$64,408	\$64,408	\$64,408
MWD Capacity Charge	CY	\$25,357	\$25,357	\$25,357	\$25,357	\$25,357
Supply Reliability Charge	CY	\$141,602	\$141,602	\$141,602	\$141,602	\$141,602
Customer Service Charge	CY	\$91,753	\$91,753	\$91,753	\$91,753	\$91,753
Emergency Storage Charge	CY	\$207,366	\$207,366	\$207,366	\$207,366	\$207,366
Infrastructure Access Charge	CY	\$151,478	\$151,478	\$151,478	\$151,478	\$151,478
<b>Variable Purchased Water Costs</b>						
SDCWA M&I Melded Untreated Rate	(\$/AF)	\$1,085	\$1,085	\$1,085	\$1,085	\$1,085
Transportation Charge	(\$/AF)	\$173	\$173	\$173	\$173	\$173
PSAWR Discount	(\$/AF)	(\$230)	(\$230)	(\$230)	(\$230)	(\$230)
Fixed Purchased Water Costs (Annual)		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Fixed Purchased Water Costs</b>						
MWD Readiness-to-Serve Charge	FY	\$772,896	\$772,896	\$772,896	\$772,896	\$772,896
MWD Capacity Charge	CY	\$304,284	\$304,284	\$304,284	\$304,284	\$304,284
Supply Reliability Charge	CY	\$1,699,224	\$1,699,224	\$1,699,224	\$1,699,224	\$1,699,224
Customer Service Charge	CY	\$1,101,036	\$1,101,036	\$1,101,036	\$1,101,036	\$1,101,036
Emergency Storage Charge	CY	\$2,488,392	\$2,488,392	\$2,488,392	\$2,488,392	\$2,488,392
Infrastructure Access Charge	CY	\$1,817,736	\$1,817,736	\$1,817,736	\$1,817,736	\$1,817,736
Subtotal Fixed Purchased Water Costs		\$8,183,568	\$8,183,568	\$8,183,568	\$8,183,568	\$8,183,568
Variable Purchased Water Costs (Annual)		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Water Billings/Sales (AF)</b>						
Water Demand		19,227 AF				
Local Water		20,454 AF				
Purchased Water		8,000 AF	4,000 AF	1,000 AF	1,000 AF	1,000 AF
Water Purchased at Prior Rate		12,454 AF	16,454 AF	19,454 AF	19,454 AF	19,454 AF
Water Purchased at Current Rate		AF	AF	AF	AF	AF
PSAWR Credit at Prior Rate		12,454 AF	16,454 AF	19,454 AF	19,454 AF	19,454 AF
PSAWR Credit at Current Rate		AF	AF	AF	AF	AF
IPWR Credit at Prior Rate		147 AF				
IPWR Credit at Current Rate		AF	AF	AF	AF	AF
Calculated Variable Purchased Water Costs		3,176 AF				
Water Purchases		\$13,513,086	\$17,853,086	\$21,108,086	\$21,108,086	\$21,108,086
Transportation Costs		\$2,154,621	\$2,846,621	\$3,365,621	\$3,365,621	\$3,365,621
<b>Total Purchased Water Costs</b>		<b>\$15,667,707</b>	<b>\$20,699,707</b>	<b>\$24,473,707</b>	<b>\$24,473,707</b>	<b>\$24,473,707</b>
PSAWR Discount (credit)		(\$33,785)	(\$33,785)	(\$33,785)	(\$33,785)	(\$33,785)
IPWR Discount (credit)		(\$730,505)	(\$730,505)	(\$730,505)	(\$730,505)	(\$730,505)