MEMORANDUM

CITY OF ENCINITAS 2024 SEWER RATE STUDY

The purpose of this memorandum is to document the City of Encinitas (City) 2024 Sewer Rate Study (Study). The Study is a comprehensive sewer financial plan, cost of service analysis, capacity fee update, and rate update for the two separate sewer systems (Divisions) serving the City, the Cardiff Sanitary Division (CSD) and the Encinitas Sanitary Division (ESD). Parts of the City are served by a separate wastewater District, Leucadia Wastewater District (LWD). LWD is stand alone with its own board and rates and is not included in this study. The capital funding and other financial planning findings and conclusions identified from the recommended capital improvement plan (CIP) projects needed in the next five years are the basis of this Study.

Ardurra Group, Inc. prepared the memorandum for the City. The preliminary findings on all Study elements have been previously discussed with City staff; this report supports the assumptions, findings, and recommendations of the financial plan.

This memorandum is supported with an Executive Summary and is separated into Part I: CSD Analysis and Part II: ESD Analysis. Each part includes four distinct sections:

I. Financial Plan
II. Cost of Service Analysis
III. Capacity Fee Update
IV. Recommended Sewer Rates

The analyses for each of the two sewer Divisions are followed by a description of California Government Code 66000 et seq (AB 1600), a discussion of reserve policies, and a glossary of terms and abbreviations. The detailed technical analysis tables and appendices are provided in the final section of the report.

TABLE OF CONTENTS

Executive Summary 1
Background 1
Cardiff Sanitary Division Finances 1
Encinitas Sanitary Division Finances 2
Key Study Objectives 3
Key Recommendations 3
Part I. Cardiff Sanitary Division 7
Section I. CSD Financial Plan 7
Detailed Cost of Service Tables 1 to 5 8
Section II. Cost of Service Analysis 11
COSA Findings 12
Detailed Cost of Service Tables 6 to 10 13
Section III. Capacity Fee Update 14
Findings 14
Detailed Updated Capacity Fee Tables 11 to 13 15
Section IV. Recommended Sewer Rate Structure 16
Recommendations 16
Frequency of Water-B16ased Data Updates 16
Detailed Calculation Table 14-15 16
Part II. Encinitas Sanitary Division 19
Section I. ESD Financial Plan 19
Detailed Cost of Service Tables 18 to 23 20
Section II. Cost of Service Analysis 23
COSA Findings 24
Detailed Cost of Service Tables 24 to 28 25
Section III. Capacity Fee Update 26
Findings 26
Detailed Updated Capacity Fee Tables 29 to 31 27
Section IV. Recommended Sewer Rate Structure 28
Recommendations 28
Frequency of Water-Based Data Updates 28
Detailed Calculation Table 32-33 28
Laws Affecting Sewer Capacity Fees 31
Reserve Fund Recommendations 33
Glossary 34
Tables and Appendices 35

List of Figures and Tables - Report

Figure 1 CSD FY 23-24 Wastewater Revenue 2
Figure 2 ESD FY 23-24 Wastewater Revenue 2
Figure 3 CSD Annual Sources and Uses of Funds 8
Figure 4 ESD Annual Sources and Uses of Funds 20
Figure 5 Cash Flow Projection 10

Table A – Inflation Assumptions 7, 19
Table 15 CSD Projection of Recommend Existing Rates 5, 18
Table 33 ESD Projection of Recommend Existing Rates 6, 30

List of Tables - Appendix

Table 1 CSD Share of SEJPA O&M Expenditures
Table 2 CSD Capital Projects and Debt Service
Table 3 CSD Historical Revenues
Table 4 CSD O&M Budget Fund 511
Table 5 CSD Financial Plan
Table 6 CSD COSA Test Year Cost Allocations
Table 7 CSD Accounts & Water Meters
Table 8 CSD Sewage Flow Mass Balance
Table 9 CSD Account Loading Characteristics & Allocations
Table 10 CSD Cost of Service Analysis
Table 11 CSD EDUs for Capacity Fees
Table 12 CSD Capacity Fee Update
Table 13 CSD Capacity Fee EDUs by Sewer Account Classification
Table 14 CSD Current Rate Schedule
Table 15 CSD Projection of Recommend Existing Rates
Table 16 Not Used
Table 17 Not Used
Table 18 ESD Share of EWA Projected Expenditures
Table 19 ESD Share of LWD Expenditures
Table 20 ESD Capital Improvement Plan
Table 21 ESD Historical Revenues
Table 22 ESD O&M Budget Fund 521
Table 23 ESD Financial Plan
Table 24 ESD COSA Test Year Cost Allocations
Table 25 ESD Accounts & Water Meters
Table 26 ESD Sewage Flow Mass Balance
Table 27 ESD Account Loading Characteristics & Allocations
Table 28 ESD Cost of Service Analysis
Table 29 ESD EDUs for Capacity Fees
Table 30 ESD Capacity Fee Update
Table 31 ESD Capacity Fee EDUs by Sewer Account Classification
Table 32 ESD Current Rate Schedule
Table 33 ESD Projection of Recommend Existing Rates

Executive Summary

This section summarizes the Study objectives, findings, and recommendations of this comprehensive 5-year sewer financial plan, cost of service analysis, and rate study.

Background

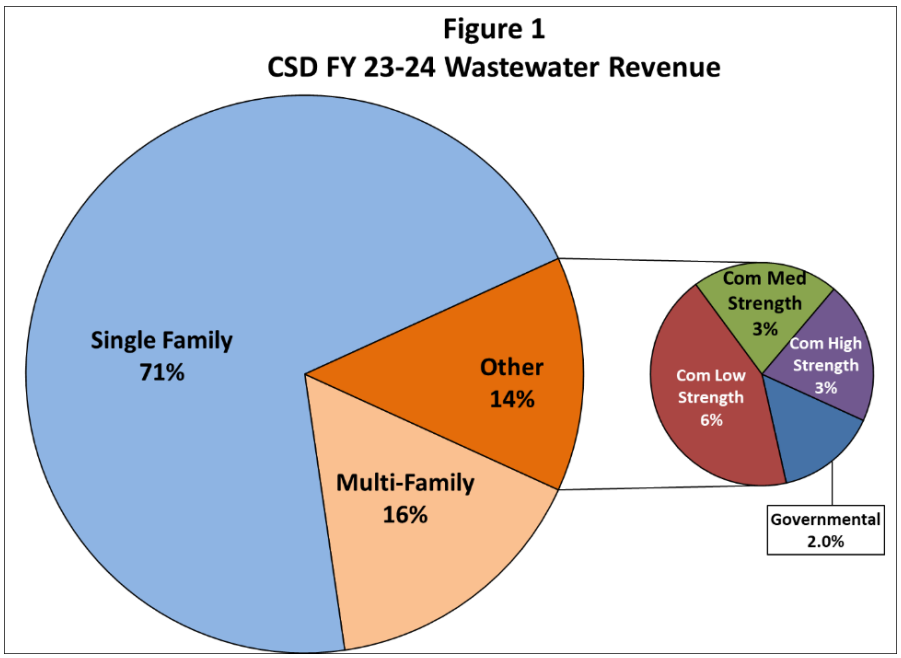
The City of Encinitas (City) Utilities Department owns and funds two of the community's sewer utilities. The Cardiff Sanitary Division (CSD) serving approximately 20,000 residents in a 12 square mile area in the southern and eastern area of the City; and the Encinitas Sanitary Division (ESD) serving approximately 17,000 residents in a higher density 3 square miles of the central coastal area. Leucadia Wastewater District (LWD) is a separate agency in the community, and therefore is not evaluated in this Study.

Both Divisions provide sewage collection and transmission to regional treatment facilities. CSD sewage is treated at the San Elijo Water Reclamation Facility operated by the San Elijo Joint Powers Authority (SEJPA) at an annual cost to CSD of $2.17 million; ESD sewage is treated at the Encina Water Pollution Control Facility operated by the Encina Wastewater Authority (EWA) at an annual cost of $1.1 million. The combined sewage pump station maintenance contracts for both Divisions totals an additional $0.65 million. The Bataquitos Lagoon Pump station is operated and maintained by LWD, and ESD contributes to maintenance and capital improvement costs for that facility. Treatment plant costs have continued to rise due to new regulatory requirements.

Most customers are billed using the annual County Assessor's Office property tax roll with flow-based rates that use their water consumption in calculating their regular sewer charges. An annual drop in water consumption of 1 percent has been incorporated into the sewer service revenue projection. Governmental customers are hand billed with the same methodology, but there are no property tax bills for governmental customers.

Cardiff Sanitary Division Finances. The FY 2023-24 operating budget for CSD is $3.53 million, plus an additional $0.69 million in debt service from SEJPA Projects. Less than 24 percent of the operating budget is controlled by CSD. The remainder of the operating costs are controlled by other agencies providing sewage treatment, the associated debt service for treatment plant improvements, and other services such as pump station maintenance. Annual

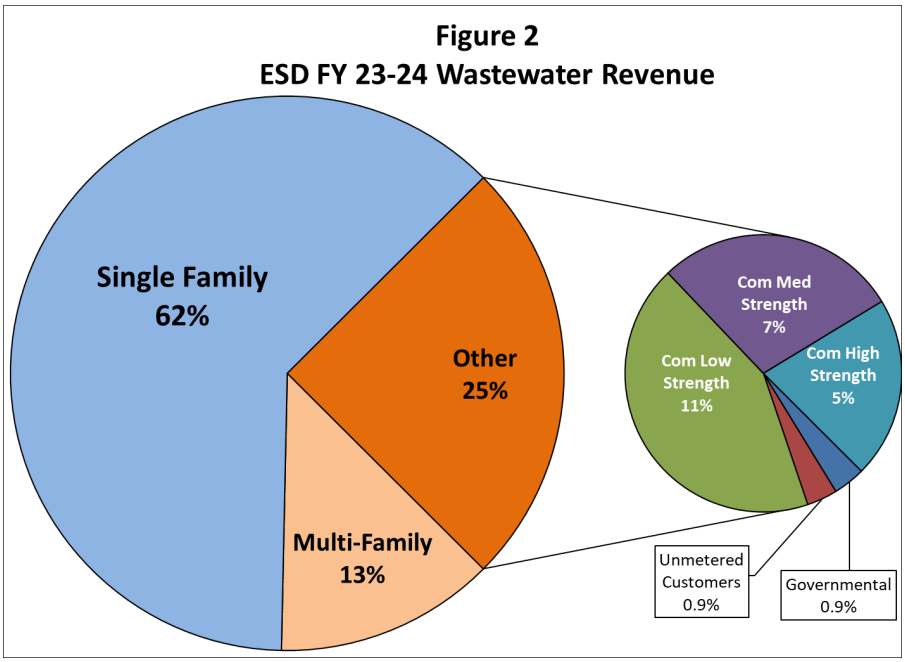
capital project expenditures for the next five years average $1.33 million for City Projects and $1.49 million for CSD's portion of SEJPA projects. The CSD controls 47% of the proposed capital budget expenditures for the 5-year study period.



As shown in Figure 1, 70 percent of the $4.7 million in rate-based revenues are paid by single-family customers, along with 16 percent from multi-family accounts. Fourteen percent of the revenues are from commercial and other sewer service customers in the CSD service area.

Additionally, CSD receives $0.17 million in interest earnings, investments, and capacity fees. The audited actual FY 2021-2022 year-end cash reserves on hand on June 30, 2022, were $9.93 million. Audited numbers for FY 2022-2023 were not available at the time of this report development. The typical single-family dwelling residential household pays approximately $53 monthly for sewer services year-round.

Encinitas Sanitary Division Finances. The FY 23-24 operating budget for ESD is $2.63 million. Fifty five percent of the operating budget is controlled by ESD. The remainder of the operating costs are controlled by other agencies providing sewage treatment, pump station maintenance and other contracted services. Annual capital project expenditures for the next five years total $0.79 million for City projects and average $1.62 million for



ESD's portion of EWA & LWD projects. The ESD controls 33% of the proposed capital budget expenditures for the 5-year study period.

As shown in Figure 2, 62 percent of the $2.60 million in rate-based revenues are paid by single-family customers, along with 13 percent from multi-family accounts, 25% of the revenues are from commercial and other sewer service customers in the ESD service area.

Additionally, ESD receives $38,000 in interest earnings, investments, and capacity fees. The audited actual FY 2021-22 year-end cash reserves on hand on June 30, 2022, were $12.10 million, including $1.52 million in capacity fee proceeds. Audited numbers for FY 2022-2023 were not available at the time of this report development. The typical single-family dwelling residential household pays approximately $46 monthly for sewer services.

Key Study Objectives

The key study objectives addressed in this Study are:

I. Prepare a sewer financial plan identifying annual rate-based revenue requirements;

II. Analyze the cost-of-service equity of current sewer charges;

III. Update the capacity fees for new development seeking first-time connections to the sewers; and

IV. Recommend updated sewer service charges.

Key Recommendations

Based on our financial analysis, we have found that both CSD and ESD require significant revenue increases due to inflation, capital needs, and increased treatment costs. We recommend that the City update the sewer service charge rates for both CSD & ESD. In summary, we make the following findings and recommendations:

I. Based on the City's financial plan, rate-based revenue increases are needed for the next five years for both Divisions. This recommendation is made due to 1) minimal projected growth in customer accounts, 2) stable water use for sewer service billing over the projection period, 3) increased Capital costs for aging infrastructure, and 4) increased treatment costs at both SEJPA & EWA. Per Proposition 218 requirements, for Years 2-5 these are the maximum annual rate increases that may be applied. After Year 1 and annually through Year 5, City Council will receive a reporting of the expenses, revenues, and Capital needs which will allow them to decrease the annual rate for Years 2-5 if they deem it appropriate. The City must annually monitor inflation effects on operation and construction prices for Capital Improvement Program (CIP) projects for the City and the treatment agencies, as well as monitor water usage with associated revenue;

II. The current customer rate structure results in unique sewer service bills for individual accounts that are proportional to each customer's load on the sewer system; the current

rates and charges for all customer classifications are stable, fair, and equitable and are in compliance with the proportional billing requirements of state law (California Proposition 218);

III. Minor revisions to the City's Ordinance should be made to clarify billing practices. These changes include codifying the practice of using the five year rolling average of winter water use and clarifying how properties that have irrigation meters are billed for wastewater; and

IV. The current capacity fees are $3,417 and $2,680 per 1.0 Equivalent Dwelling Unit for CSD and ESD, respectively. The City should increase these fees as they are falling well behind costs that have been invested in the system and inflationary impacts. It is recommended that the new Capacity fee for 1.0 Equivalent Dwelling Unit be $6,716 for CSD and $7,952 for ESD.

These key recommendations are based on the Study technical analysis and are supported by the calculation tables included at the end of the Study. The Study process has included numerous discussions with City Council and City staff; and has used budgeting information, projected capital project expenditures, historical water consumption, and sewer service billing data provided by City staff. Our recommendations are based on the Water Environment Federation Manual of Practice No. 27 for sewer rate-making. This document illustrates the standard of practice used throughout the United States for analyzing and allocating operating and capital costs associated with collecting and treating wastewater and developing rates and charges.

The proposed maximum rate increases for the Cardiff Sanitary Division are as follows:

Table 15
CSD Projection of Recommend Existing Rates

Description	Existing FY 23-24	Year 1 FY 24-25	Year 2 FY 25-26	Year 3 FY 26-27	Year 4 FY 27-28	Year 5 FY 28-29
Increases to Unit Sewer Service Charges:*		15%	15%	15%	15%	10%
Residential						
Single Family	$5.51	$6.34	$7.29	$8.38	$9.64	$10.60
Average Monthly Bill (7HCF)	$42.50	$48.90	$56.22	$64.63	$74.35	$81.76
Multi-family	$5.51	$6.34	$7.29	$8.38	$9.64	$10.60
Trailer Park	$5.51	$6.34	$7.29	$8.38	$9.64	$10.60
Commercial						
Low Strength	$5.79	$6.66	$7.66	$8.81	$10.13	$11.14
Medium Strength	$7.53	$8.66	$9.96	$11.45	$13.17	$14.49
High Strength	$11.31	$13.01	$14.96	$17.20	$19.78	$21.76
Fixed Annual Charge (per account, by water meter size)						
Single Family (all)	$47.13	$54.20	$62.33	$71.68	$82.43	$90.67
Multi-family						
5/8"	$94.26	$108.40	$124.66	$143.36	$164.86	$181.35
3/4"	$141.40	$162.61	$187.00	$215.05	$247.31	$272.04
1"	$235.66	$271.01	$311.66	$358.41	$412.17	$453.39
1-1/2"	$471.34	$542.04	$623.35	$716.85	$824.38	$906.82
2"	$754.12	$867.24	$997.33	$1,146.93	$1,318.97	$1,450.87
3"	$1,413.98	$1,626.08	$1,869.99	$2,150.49	$2,473.06	$2,720.37
All Other Classes						
5/8"	$47.13	$54.20	$62.33	$71.68	$82.43	$90.67
3/4"	$70.70	$81.31	$93.51	$107.54	$123.67	$136.04
1"	$117.83	$135.50	$155.83	$179.20	$206.08	$226.69
1-1/2"	$235.67	$271.02	$311.67	$358.42	$412.18	$453.40
2"	$377.06	$433.62	$498.66	$573.46	$659.48	$725.43
3"	$706.99	$813.04	$935.00	$1,075.25	$1,236.54	$1,360.19

EDU: Equivalent Dwelling Units (per Dwelling Unit or Sewer Connection)

* Per Proposition 218 requirements, for Years 2-5 this is the maximum annual rate increase that may be applied. After Year 1 and annually through Year 5, City Council will receive a reporting of the expenses, revenues, and Capital needs which will allow them to decrease the annual rate for Years 2-5 if they deem it appropriate.

The proposed maximum rate increases for the Encinitas Sanitary Division are as follows:

Table 33
ESD Projection of Recommend Rates

Description	Existing FY 23-24	Year 1 FY 24-25	Year 2 FY 25-26	Year 3 FY 26-27	Year 4 FY 27-28	Year 5 FY 28-29
Increases to Unit Sewer Service Charges:*		**19%**	**19%**	**19%**	**19%**	**19%**
Residential ($/HCF billable water)						
Single Family	$5.19	$6.18	$7.35	$8.75	$10.41	$12.39
Average Monthly Bill (7HCF)	$39.24	$46.73	$55.58	$66.16	$78.71	$93.68
Multi-family	$5.19	$6.18	$7.35	$8.75	$10.41	$12.39
Trailer Park	$5.19	$6.18	$7.35	$8.75	$10.41	$12.39
Commercial ($/HCF billable water)						
CM 2 (low strength)	$5.27	$6.27	$7.46	$8.88	$10.57	$12.58
CM 3 (med strength)	$5.93	$7.06	$8.40	$10.00	$11.90	$14.16
CM 4 (high strength)	$7.24	$8.62	$10.26	$12.21	$14.53	$17.29
Fixed Annual Charge (per account, by water meter size)						
Single Family (all)	$34.97	$41.61	$49.52	$58.93	$70.13	$83.45
Multi-family & Trailer Park						
5/8"	$69.94	$83.23	$99.04	$117.86	$140.25	$166.90
3/4"	$104.90	$124.83	$148.55	$176.77	$210.36	$250.33
1"	$174.84	$208.06	$247.59	$294.63	$350.61	$417.23
1-1/2"	$349.66	$416.10	$495.16	$589.24	$701.20	$834.43
2"	$559.46	$665.76	$792.25	$942.78	$1,121.91	$1,335.07
3"	$1,049.00	$1,248.31	$1,485.49	$1,767.73	$2,103.60	$2,503.28
All Other Classes (Commercial)						
5/8"	$69.94	$83.23	$99.04	$117.86	$140.25	$166.90
3/4"	$52.45	$62.42	$74.28	$88.39	$105.18	$125.16
1"	$87.42	$104.03	$123.80	$147.32	$175.31	$208.62
1-1/2"	$174.83	$208.05	$247.58	$294.62	$350.60	$417.21
2"	$279.73	$332.88	$396.13	$471.39	$560.95	$667.53
3"	$524.50	$624.16	$742.75	$883.87	$1,051.81	$1,251.65

EDU: Equivalent Dwelling Units (per Dwelling Unit or Sewer Connection)

* Per Proposition 218 requirements, for Years 2-5 this is the maximum annual rate increase that may be applied. After Year 1 and annually through Year 5, City Council will receive a reporting of the expenses, revenues, and Capital needs which will allow them to decrease the annual rate for Years 2-5 if they deem it appropriate.

Part I. Cardiff Sanitary Division

This CSD analysis consists of four sections: 1) a multi-year financial plan, 2) a cost-of-service analysis consistent with Proposition 218 requirements, 3) an update of the CSD capacity fees, and 4) recommendations for the sewer rate structure.

Section I. CSD Financial Plan

The purpose of this financial plan (Plan) is to develop a multi-year forecast of the rate-based revenue requirements. The CSD sewer utility system is operated as a stand-alone business enterprise. The utility enterprise is audited; annual reports include a balance sheet, revenue and expenditure itemization, and a sources and uses of funds statement. Non-cash expenses of depreciation are part of the audits; for development of this financial plan the actual flow of funds in the CIP project expenditures is emphasized over non-cash expenses such as depreciation. A five-year projection of expenditures is divided between capital-related expenditures for projects and debt service, and operation and maintenance (O&M) costs. O&M costs include labor and supplies and services, including costs of wastewater treatment by the SEJPA.

In the Plan, we have used inflation costs that vary based upon the type of cost with input from the City, SEJPA, EWA, and Ardurra Groups regional experience. General inflation was applied to O&M costs, Utilities to specific pumpstation costs if available and CIP refers to the Capital Improvement program which is based upon anticipated construction inflation. These projections are as shown in Table A:

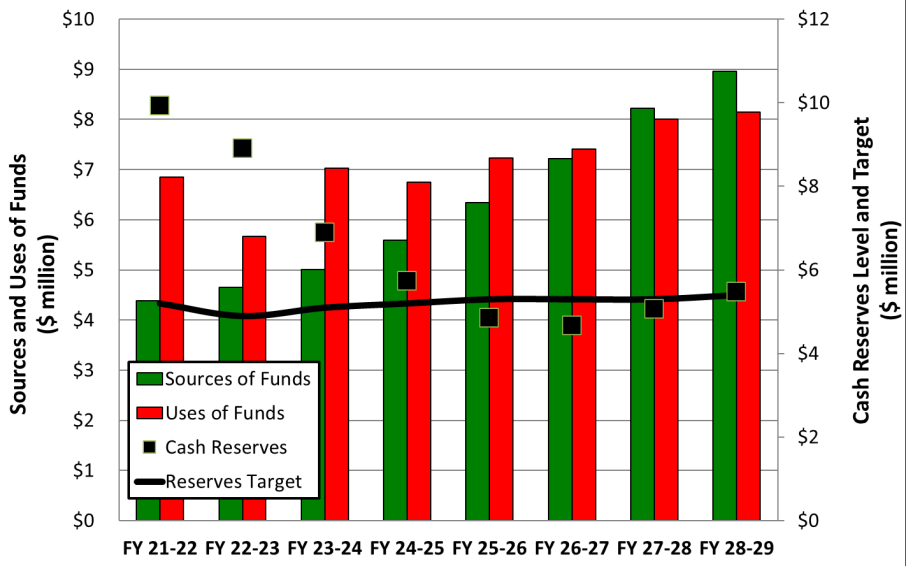
TABLE A - Inflation Assumptions

Inflation	Current	Year 1 FY24-25	Year 2 FY25-26	Year 3 FY26-27	Year 4 FY27-28	Year 5 FY28-29
CIP	10%	10%	8%	6%	5%	4%
Utilities	8%	8%	7%	6%	6%	5%
General	6%	5%	4%	2%	2%	2%

Revenues increases are needed to fund utility operations and maintenance, debt service and capital projects for the projected fiscal years FY 2024-25 (Year 1) through FY 2028-29 (Year 5). The sewer utility enterprise is currently in good financial health, with sufficient revenues for operating expenses, However, due to inflation, increased treatment costs, and increased capital costs, an increase in rate-based revenues is required for each of the next five years to ensure the City continues the financial health of the Division. Rate increases of up to 15% for Years 1,2,3, and 4 and 10% for Year 5 are recommended to be adopted.

As shown in Figure 3, with those increases, the sewer utility enterprise cash reserve levels will remain above or close to target levels for all projected years. It should be noted that rate-based revenue requirement projections in the financial plan are significantly enhanced if the Plan is updated every three to five years because of changes in actual inflation, maintenance and treatment costs, and system maintenance and Capital expenditures.

Figure 3
CSD Annual Sources and Uses of Funds



Through the City Council workshop process, they requested that annually the City review the cash reserves by comparing the year-end levels with the amounts projected in this study. If the projected cash reserve levels are accurate, revenue projections are on track, and no significant changes to the Capital project expenditures are planned, then the Proposition (Prop) 218 approved rate increases would continue. If it is determined through any annual review that the inflation and all system operation, maintenance and Capital costs are significantly under the projections and revenues are above projections, the actual annual rate increase approved can be adjusted down (decreased) without another Prop 218 notificiation by suspending a portion of the approved rates. Rates cannot be adjusted up (increased) above the approved rates during the Years 1-5 period without an associated study and an additional public notification period.

Detailed Financial Plan Tables 1 to 5

The detailed financial plan in this section describes the technical calculations based on a series of tables that model the sources and uses of funds in the Plan. These tables are located at the end of this report.

Table 1 CSD Share of SEJPA O&M Expenditures. Table 1 identifies CSD's share of historical and budgeted SEJPA O&M expenditures. As shown, CSD treatment costs at SEJPA are $2.18 million in FY 2023-24, plus an additional $376,169 per year for operation and maintenance of three sewage pump stations.

Table 2 CSD Capital Projects and Debt Service. The purpose of Table 2 is to summarize CSD's projected annual capital expenditure and debt service funding requirements. As shown, existing debt service averages $689,944 per year. Capital project requirements over the 5-year study consist of $6.63 million in collection system rehabilitation and capacity projects identified

from the Sewer Master Plan, projected from CCTV work being completed, and CSD's $7.4 million share of capital improvements at the SEJPA. As shown, the Sewer Master Plan expenditures average $1.32 million per year over the projected five years ending in FY 2028-29, and CSD's share of capital improvements at the SEJPA are projected at an average of $1.49 million per year.

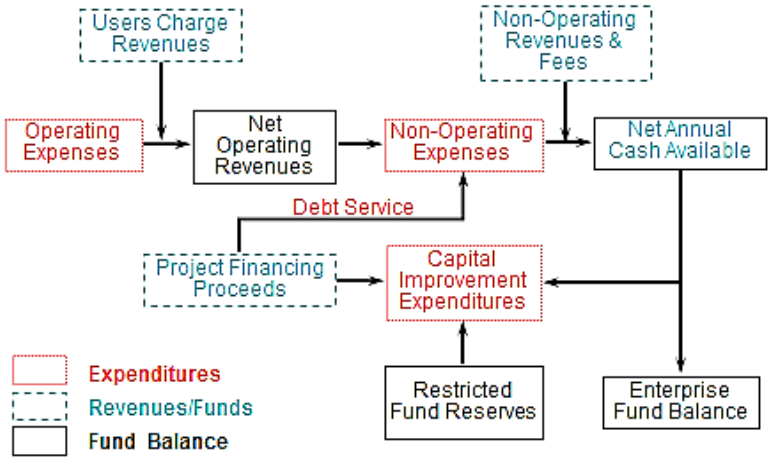
Table 3 CSD Historical Revenues. Table 3 provides CSD's revenues from FY 20-21 through FY 2023-24, as identified in CSD Funds 511, 512 and 513. The largest CSD revenue is sewer service charges billed on the County property tax rolls; these revenues total approximately $4.75 million annually. Only 8 percent of these revenues are from the fixed water meter-based charges, while the remainder are from the variable water use charges; note that the variable charges for residential customers are based on a five-year rolling average of water demands. Therefore, in any one year, a 20 percent change in billable (wintertime) water use will have a four percent change in revenues. This is an important metric for City staff to monitor due to the previous drought conditions causing conservation which resulted in less revenue when rate increases were not occurring. The five-year rolling average does protect the CSD fund from significant revenue swings in any one-year period. The 20 percent decrease in wastewater flows will also reduce the total annual expenditures by two percent. Therefore, when wintertime water use is restricted by 20 percent due to drought-based water shortage conditions, there will be a de minimis one percent increase in rate-based revenue requirements.

Additional revenues from annual charges to tax exempt property customers (Governmental) and miscellaneous other charges total $92,000 per year. Furthermore, interest earnings, contributions, and capacity fee proceeds added approximately $171,000 to the total annual CSD sources of funds of $5.0 million in FY 2022-23 and FY 2023-24.

Table 4 CSD O&M Budget Fund 511. Table 4 identifies CSD's historical and current (FY 20-21 through FY 2023-24) operations and maintenance (O&M) budget. The O&M budget totals $3.5 million in FY2023-24. This includes treatment and pump station maintenance charges from SEJPA of $2.56 million and City of Encinitas allocated internal costs of $319,303 for line maintenance, engineering etc. An estimated 20 percent of the O&M costs vary with the level of sewage flows. Therefore, in any one year a 20 percent change in wastewater flows will have a 4 percent change in O&M costs.

Table 5 CSD Financial Plan. A cash flow analysis is used to project the rate-based revenue requirements and sewer utility financial performance for the next five years and beyond. The calculations are based on a cash flow projection of the annual sources and uses of funds, as illustrated in the flowchart.

Figure 5 – Cash Flow Projection



The purpose of Table 5 is to identify rate-based revenue requirements over the next five years. Table 5 combines the projected debt service, budgeted operating expenses (with inflationary escalations), and capital expenditures of the prior tables. It contrasts these funding requirements with the current annual revenues in an annualized sources and uses of funds analysis. It compares the annual net cash shortfall (or additions) with the cash on hand to calculate the drawdown from (or increase to) the enterprise reserves.

Table 5 combines the sources of funds identified in Table 3 with the uses of funds for O&M and capital expenditures from Tables 2 and 4 to project the annual CSD cash flow and rate-based revenue requirements for the next five years through FY 2028-29. The operating expenditures are escalated for inflation at a projected 3 percent annually, while CIP, Utilities, and General are inflated based upon Table A. Sixty percent of the total uses of funds are O&M costs, which vary with the level of sewage flows as described above. In any one year, a 20 percent change in wastewater flows will have a 4 percent change in the total annual O&M expenditures.

As shown, CSD's current FY 2023-24 charges and other revenues of $5.1-5.2 million, supported by unaudited June 30, 2023 cash reserves of $8.9 million, are not sufficient to sustainably fund the CSD services and a rate increase is required. The recommended cash reserve target level is $4.9-5.3 million, based on the following three fund reserve types:

- Fund 511 Operating Cash reserves equal to 50 percent of the annual CSD O&M expenditures, or $1.9-2.1 million;
- Rate stabilization Fund of $800,000 for cash flow purposes; and
- Fund 512 Contingency reserves for extra-ordinary requirements (such as earthquakes or interruptions to revenue collections), equal to $2.5 million minimum.

Based on the proposed increases to rate-based revenues, in five years by FY 2028-29 the total CSD cash reserves will be $5.4 million, as previously illustrated in Figure 3. The capital contingency fund target is recommended to be held at the current $2.5 million level due to sensitive environmental conditions of the system and anticipated costs that could be incurred during such an event. The reserve policy calls for $2.5 million minimum up to $5.0 million. The model in practicality has a minimum of $5.0 million in place when total reserves are considered.

Included in the final reserve target are funds for rate stabilization. The sewer customer service charges are typically fixed and are billed on the County tax rolls, which minimizes variations in rate-based revenues; however, with water conservation and the timing of revenues from the County, it is still prudent to have some stabilization funds available. Rate changes are spread over several years preventing customer rate shock. By using a multi-year forward looking financial plan to anticipate increases in rate-based revenue requirements, it spreads the increases over several years. The City uses capacity fee proceeds to fund a portion of the facility debt service, and it has been determined that it is available for general capital related expenditures. However, no reserve target is specified for the Connection Fee Fund 513.

Section II. Cost of Service Analysis

The purpose of a cost-of-service analysis (COSA) is to validate that CSD costs of providing sewer service are proportional to the charges billed to the different customer classes served. This COSA is based on the premise that a sewer system is designed to serve a variety of sewer loads from different users, and that the sewer charges to the customer should be proportionate to the costs of these loads. The analysis' objective is to verify that the bills are fair and equitable; fairness in utility service billing to City residents and businesses is a policy of the City and is required by Article XIII D of the California Constitution. The COSA is based on the cost-of-service calculation methodology defined in the Water Environment Federation Manual of Practice No. 27.

The COSA is based on a single audited test year, but the findings will remain reliable over several years for any normally occurring changed conditions, such as minor customer growth, and implementing a CIP. The COSA does not address financial plan issues such as inflation or bond funding of capital. The COSA is based on the CSD operating and capital-related costs from FY 2020-21, the system sewage flows, and the customer discharges. The sewage flows are based on water sales to the sewer customers with a standard estimated reduction for how much water is returned as wastewater and a standard sewage strength for all commercial accounts. Sewage strength affects treatment methods and costs which is why rates are adjusted based on actual commercial businesses on properties with the associated typical wastewater strength. Due to the fact billings and flows have not changed significantly since FY 21 when the most detailed information was available, these values are appropriate to use in the COSA and will provide accurate results. To calculate the sewage discharges from each customer class, a mass balance calculation is used that combines the water sales to

commercial accounts, single-family residences, and multi-family apartments with the recorded sewer flows to the wastewater treatment plant.

COSA Findings

Based on rate setting standards, a cost of service finding within 10 percent of the target level for a customer class with at least 10 percent of the system loads can be considered equitable. Any difference less than 10 percent and/or any class of customers smaller than 10 percent of the total system is too small to be considered reliable for implementing a COSA update. For this reason, the equity findings on customers, while exact, must be treated as general indications of the equity of the current charges rather than as the singular representation of the billing proportionality.

The COSA is based on five utility (City) cost categories:

- Flows: Sewer flow-related costs in moving sewage through the collection system and treatment plant;
- Biochemical Oxygen Demands (BOD): Sewage strength-related costs from the removal of biochemical oxygen demands;
- Total Suspended Solids (TSS): Sewage strength-related costs from the removal of total suspended solids;
- Accounts: Customer billing system accounting costs; and
- Equivalent Meters (EM): Utility system management and administration costs.

These cost categories are cross-referenced to the service functions delivered to each sewer utility customer. Their level of service requirements defines the costs that are proportionally recovered from the customer through their service charges.

The COSA findings for billing proportionality are:

- The 4,618 single-family (SF) standard residence accounts discharged 66 percent of the system loads while paying 66 percent of the costs;
- The 956 multi-family (MF) accounts discharged 20 percent of the system loads and pay 21 percent of the costs;
- The 253 Commercial accounts are divided among low, medium, and high (2, 3 and 4) strength sewage customers and analyzed as a whole because of the small percentages. The combination of commercial and agricultural accounts discharges the remaining system loads of 14 percent, while paying 13 percent of the costs.

In conclusion, the COSD for CSD customers has determined that the current unit rates under the existing rate structure result in fair and equitable user charges to customers. No change to the current system of charges is recommended. The unique sewer service bills for individual

accounts generated by the current system of bills are proportional to each customer's load on the sewer system; the current rates and charges for all customer classifications are in compliance with the proportional billing requirements of state law (California Proposition 218).

Detailed Cost of Service Tables 6 to 10

This section describes the technical calculations developing the adjustments to customer charges for billing equity. The technical calculation tables are located at the end of this report.

Table 6 CSD COSA Test Year Cost Allocations. Table 6 allocates CSD's FY 2020-21 test year expenditures among the five COSA categories noted above.

CSD's FY 2020-21 test year expenditures include all O&M costs; consistent with the cost-of-service analysis procedures promulgated by the national Water Environment Federation for COSA calculations, the annual capital expenditures are represented by the depreciation level of all assets owned by CSD.

As shown, each expenditure item is allocated by the functional purpose of the activity, using a cost-causative basis. The result is the 49 percent of CSD's costs of providing service are allocated to the sewage flows discharged by each customer, 16 percent is allocated to strength-related costs for both BOD and TSS, and the remainder to Accounts and EMs.

Table 7 CSD Accounts & Water Meters. The purpose of Table 7 is to identify the number of accounts and EMs associated with each customer class. As shown, 79 percent of the total accounts and 54 percent of the EMs are with the single-family customers. The multi-family class allocations are 16 percent and 40 percent for the account and EM functions, respectively.

Table 8 CSD Sewage Flow Mass Balance. Table 8 identifies the flow, TSS and BOD function loadings associated with each customer classification. The allocations are determined using a mass-balance calculation of metered water use (and water returned to sewers ratio) and assigned sewage strengths for each customer classification. The approach cross-references the discharges with the average influent loads at the wastewater treatment plant headworks. As shown, approximately 65 and 68 percent of the flows and strengths are with the single-family customers, while the multi-family class allocations are 21 and 20 percent. The remaining classes have far lower shares of the sewage loads.

Table 9 CSD Account Loading Characteristics & Allocations. The functionally-based allocations of customer loading are cross-referenced to CSD's costs of delivering the services associated with each function to determine the total cost CSD incurs in serving each customer class. As shown previously, 56 percent of CSD's costs of service are associated with sewage flows, whether cost is incurred in sewage collection or treatment. As shown in the matrix multiplication of the table, the single-family class is allocated 66 percent of CSD's total costs of providing service. In contrast, only 21 percent of the costs are allocated to the multi-family class, and between 0.4 to 6.0 percent of the costs are assigned to the other four classes.

Also calculated in this table is the average load by function for the standard single-family dwelling customer, also defined as the equivalent dwelling unit (EDU). Based on the flow and strengths calculated in the mass balance, 1.0 EDU discharges an average 84 hundred cubic feet (HCF) of sewage per year. This amount can be lower than the 107 HCF per year of sewage discharged by the median single-family dwelling household calculated in the last sewer rate study done in 2014 and is directly correlated to water conservation efforts and conversions of fixtures to modern low water flow fixtures.

Table 10 CSD Cost of Service Analysis. The results of the COSA are summarized in Table 10, by comparing the COSA percentage allocations of each customer class with the charges billed to each customer class. As shown, the single-family dwelling class charges are 0.2 percent below the COSA findings, and the multi-family customer charges are 2.8% higher than the COSA calculated allocation.

COSA adjustment findings of less than 10 percent, or findings on customers smaller than 10 percent of the customer base, should not be considered material due to the variances in data, assumptions and analysis methodologies. While the remaining commercial classes have COSA findings indicating that the charges are not close to their loads, the findings are not reliable because the classes are less than 10 percent of total customer loads, and therefor lack sufficient sewage volume to be considered material.

Section III. Capacity Fee Update

One-time wastewater capacity fees are charged to developers connecting to the wastewater system for the first time, or for customers seeking to increase the capacity of their existing sewer connection due to a facility expansion. The current capacity fee is $3,417 per 1.0 EDU. It was approved in June 1997.

Updated capacity fees are based solely on system facilities values and system capacity. Currently there are 21 customer billing classifications, each with a unique EDU capacity value.

Findings

The City should increase the current capacity fee for CSD by 97 percent to $6,716 based on the “Future Asset Values At Buildout” calculation approach. This approach uses the Total projected future asset values less debt outstanding assets, plus SEJPA assets net of debt outstanding. The resulting value of $68.0 million is divided by the system build-out demand of 11,456 EDUs to derive $5,939 per EDU. In addition, the current cash reserves and appropriations of $5.5 million are divided by the current customer EDUs of 7,041 to derive $778 per EDU. The two values are combined for the total capacity fee of $6,716 based on the “Future Asset Values At Buildout” methodology.

Note that if the original CSD capacity fees developed in 1997 were escalated based on the inflationary escalations in the costs of construction, the fee would increase by 116% percent to $7,381, plus assets added since 1997.

The City may also consider updating the fee based on the value of the system assets already constructed which is considered a buy-in approach, which includes only existing facilities already in play and not future system needs.

Based on the Council workshop, the Future Asset Values was selected as the recommended Capacity Fees. We additionally recommend it be escalated annually to adjust for construction cost inflation, using the Engineering News Record Construction Cost Index (ENRCCI) applicable to the Southern California Region. This will require a minor change in the ordinance to reflect the escalation.

Finally, we recommend that the City include language in the capacity fee schedule and in City code that all fees are subject to review and validation by the City Engineer for commercial services not specifically identified in the capacity fee schedule. Refer to the appendices for a summary of laws and implementation policies.

Detailed Updated Capacity Fee Tables 11 to 13

This section describes the technical calculations used to determine the updated capacity fees. The technical calculation tables are located at the end of this report.

Table 11 CSD EDUs for Capacity Fees. This table identifies the total loading demands on the system currently and at buildout. As shown, based on the COSA there are currently 7,041 EDUs discharging 1.21 million gallons per day (MGD) of sewage on an annual average dry weather flow basis. The 2011 Sewer Master Plan identified 1.99 MGD of flow at buildout, which is equivalent to approximately 11,456 EDUs that can be expected to ultimately use the sewer system.

Table 12 CSD Capacity Fee Update. This table identifies an updated capacity fee. The City of Encinitas ACFR provides that future build out asset values as of 2021 City investments and SEJPA are $75.5 million and debt principal outstanding is $7.4 million, netting $68.0 million against a capacity of 11,456 EDUs. In addition, cash reserves and appropriated funds for future are $5.4 million, which should be divided among the existing customer base of 7,041 EDUs. As shown, the sum of these two 2021 values derive an updated unit capacity fee of $6,716 per 1.0 EDU. In contrast, the current CSD capacity fee is $3,417 per EDU.

Table 13 CSD Capacity Fee EDUs by Sewer Account Classification. Current City of Encinitas building code identifies the standard EDUs of a variety of customer sub-classifications. Based on the COSA and on the 2010 Census for persons per households for single and multi-family dwellings, the updated sewer system EDUs for multi-family dwelling capacity fees should

be reduced from 0.8 to 0.4 EDUs per dwelling unit. The values for all other sub-classifications are unchanged.

Section IV. Recommended Sewer Rate Structure

No alternative sewer rate structures were evaluated for this study, and the recommended rate structure is to remain the same.

Recommendations

We recommend that the City continue to use the current rate structure and billing process for the next five years. Proposition 218 requires notification to the public for any increases and thus notifications and public hearings are required.

A minor improvement to customer billing is recommended to address customers that have separate irrigation meters from the meters that provide water flow to the house. Those customers that have two meters should have all of the flow from the meter delivering water to the house included in their billings. There should be no adjustment for winter water use nor for any return to sewer percentage because all water delivered to the house will be returned to the sewer because it is assumed that all irrigation water is fed through the separate meter. A 5-year rolling average may still be utilized, but is not as necessary as the majority of conservation occurred in planting and irrigation changes. This modification will require an ordinance update. A draft has been provided to City staff.

Frequency of Water-based Data Updates

Currently the sewer service charges are updated annually and billed in advance to customers on the County assessor's property tax rolls. Unlike water service customers, billing of minor seasonal variations in sewer bills is not required for the overall equity of the charges. Therefore, we recommend that the City should continue its current practice of updating the sewer bills once a year; for residential customers the bills are based on a rolling average of the prior five-years of wintertime water usage. Since the City implemented drought restrictions eight years ago, the water usage and projections have stabilized even though they have not been in place the past few years. An annual check of tax roll billings is a good cross check to confirm revenue projections are on track. An ordinance update is required to reflect the practice that has been occurring. A draft has been provided to City staff.

Detailed Calculation Table 14-15

The following describes the technical calculations used to determine the recommended sewer rate structure. The technical calculation tables are located at the end of this report.

Table 14 CSD Current Rate Schedule. This table lists the existing rate structures and unit rates. As described, almost all periodic sewer service charges are billed annually on the San Diego County Assessor's property tax bill. All sewer service charges have fixed and variable components: the current fixed component is flat at $47.13 annually for single-family dwelling

accounts. For multi-family and trailer park master-metered accounts, and for the three commercial account subclasses (with low, medium and high sewage strengths), the fixed charge varies by the size of the water meter associated with the sewer service account. That fixed charge varies from $47.13 per year for commercial accounts using a 5/8-inch water meter, to $1,413.98 for multi-family accounts being served by a 3-inch water meter.

All sewer service charges have a variable charge component. For commercial accounts, the billed variable charge depends on sewage strength subclass assigned to the account and the total annual water use from the prior year, times a 95 percent water use return to sewer factor. The unit rate for these commercial subclasses varies from $5.79 to $11.31 per HCF of billable water use. For all residential accounts the rate is $5.51 per HCF of the most recent five-year annualized average of lowest and second lowest monthly water meter reads, times a return to sewer ratio of 85 percent, or 300 HCF, whichever is less. As noted in the previous section a recommendation to change the billing for customers with irrigation meters is proposed.

The current sewer service rate structure is relatively complex and requires historical water usage for residential customers. However, the methodology is sound and balanced, similar to many other agencies, and result in fair and equitable customer charges that are proportional to the costs borne by CSD to deliver services to the different customer classes.

The current rates use estimated water use returned to the sewers, and a fixed charge component for customer costs not varying from the level of sewer discharged. The rate structure also takes into account the costs of treating higher strength commercial sewage. Finally, for residential customers it minimizes the effect of water used for landscape irrigation by billing only the lowest wintertime water use averaged over five years along with an annual cap on the maximum level of billable water. New customer accounts are billed at the historical median water use of the assigned customer class until the unique demands of the individual account are identified. For these reasons, the existing rate structure delivers balanced and fair charges at the customer account level for the City's sewer service charges, and no changes are recommended except to clarify billings for customers with irrigation meters.

Table 15 CSD Projection of Recommend Existing Rates. Table 15 projects the recommended unit rates for the next five years. Per Proposition 218 requirements, for Years 2-5 these are the maximum annual rate increases that may be applied. After Year 1 and annually through Year 5, City Council will receive a reporting of the expenses, revenues, and Capital needs which will allow them to decrease the annual rate for Years 2-5 if they deem it appropriate. The City must annually monitor inflation effects on operation and construction prices for CIP projects for the City and the treatment agencies, as well as monitor water usage with associated revenue.

Table 15
CSD Projection of Recommend Existing Rates

Description	Existing FY 23-24	Year 1 FY 24-25	Year 2 FY 25-26	Year 3 FY 26-27	Year 4 FY 27-28	Year 5 FY 28-29
Increases to Unit Sewer Service Charges:*		15%	15%	15%	15%	10%
Residential						
Single Family	$5.51	$6.34	$7.29	$8.38	$9.64	$10.60
Average Monthly Bill (7HCF)	$42.50	$48.90	$56.22	$64.63	$74.35	$81.76
Multi-family	$5.51	$6.34	$7.29	$8.38	$9.64	$10.60
Trailer Park	$5.51	$6.34	$7.29	$8.38	$9.64	$10.60
Commercial						
Low Strength	$5.79	$6.66	$7.66	$8.81	$10.13	$11.14
Medium Strength	$7.53	$8.66	$9.96	$11.45	$13.17	$14.49
High Strength	$11.31	$13.01	$14.96	$17.20	$19.78	$21.76
Fixed Annual Charge (per account, by water meter size)						
Single Family (all)	$47.13	$54.20	$62.33	$71.68	$82.43	$90.67
Multi-family						
5/8"	$94.26	$108.40	$124.66	$143.36	$164.86	$181.35
3/4"	$141.40	$162.61	$187.00	$215.05	$247.31	$272.04
1"	$235.66	$271.01	$311.66	$358.41	$412.17	$453.39
1-1/2"	$471.34	$542.04	$623.35	$716.85	$824.38	$906.82
2"	$754.12	$867.24	$997.33	$1,146.93	$1,318.97	$1,450.87
3"	$1,413.98	$1,626.08	$1,869.99	$2,150.49	$2,473.06	$2,720.37
All Other Classes						
5/8"	$47.13	$54.20	$62.33	$71.68	$82.43	$90.67
3/4"	$70.70	$81.31	$93.51	$107.54	$123.67	$136.04
1"	$117.83	$135.50	$155.83	$179.20	$206.08	$226.69
1-1/2"	$235.67	$271.02	$311.67	$358.42	$412.18	$453.40
2"	$377.06	$433.62	$498.66	$573.46	$659.48	$725.43
3"	$706.99	$813.04	$935.00	$1,075.25	$1,236.54	$1,360.19

EDU: Equivalent Dwelling Units (per Dwelling Unit or Sewer Connection)

* Per Proposition 218 requirements, for Years 2-5 this is the maximum annual rate increase that may be applied. After Year 1 and annually through Year 5, City Council will receive a reporting of the expenses, revenues, and Capital needs which will allow them to decrease the annual rate for Years 2-5 if they deem it appropriate.

Tables 16 & 17 are not utilized in this study

Part II. Encinitas Sanitary Division

This ESD analysis consists of four sections: 1) a multi-year financial plan, 2) a cost of service analysis consistent with Proposition 218 requirements, 3) an update of the ESD capacity fees, and 4) recommendations for the sewer rate structure.

Section I. ESD Financial Plan

The purpose of this financial plan (Plan) is to develop a multi-year forecast of the rate-based revenue requirements. The ESD sewer utility system is operated as a stand-alone business enterprise. The utility enterprise is audited; annual reports include a balance sheet, revenue and expenditure itemization, and a sources and uses of funds statement. Non-cash expenses of depreciation are part of the audits; for development of this financial plan the actual flow of funds in the capital improvement plan project expenditures is emphasized over non-cash expenses such as depreciation. A five-year projection of expenditures is divided between capital-related expenditures for projects and debt service, and operation and maintenance (O&M) costs. O&M costs include labor and supplies and services, including costs of wastewater treatment by the EWA.

In the Plan, we have used inflation costs that vary based upon the type of cost with input from the City, SEJPA, EWA, and Ardurra Groups regional experience. General inflation was applied to O&M costs, Utilities to specific pumpstation costs if available and CIP refers to the Capital Improvement program which is based upon anticipated construction inflation. These projections are as shown in Table A:

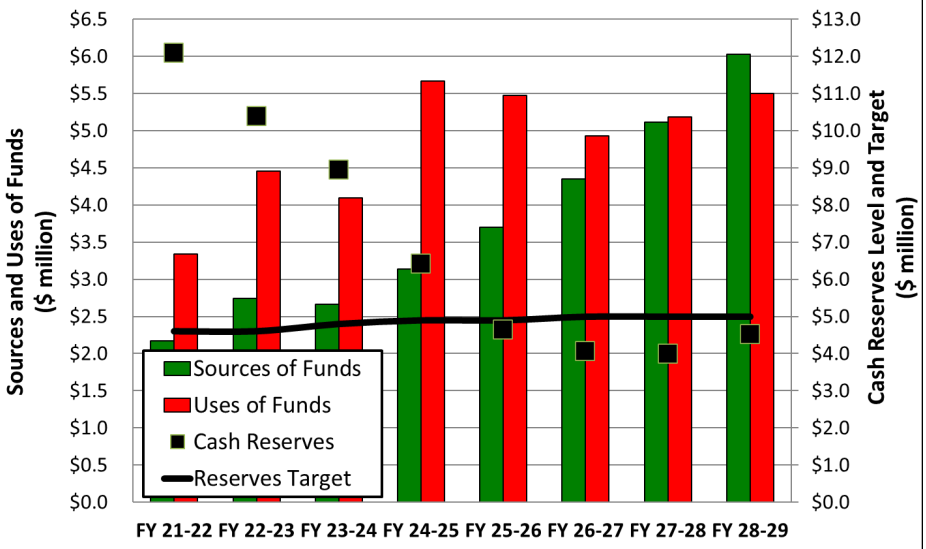
TABLE A - Inflation Assumptions

Inflation	Current	Year 1 FY24-25	Year 2 FY25-26	Year 3 FY26-27	Year 4 FY27-28	Year 5 FY28-29
CIP	10%	10%	8%	6%	5%	4%
Utilities	8%	8%	7%	6%	6%	5%
General	6%	5%	4%	2%	2%	2%

Revenues increases are needed to fund utility operations and maintenance, debt service and capital projects for the projected fiscal years FY 2024-25 (Year 1) through FY 2028-29 (Year 5). The sewer utility enterprise is currently in good financial health, with sufficient revenues for operating expenses. However due to inflation, increased treatment costs, and increased capital costs, an increase in rate-based revenues is required for each of the next five years to ensure the City continues the financial health of the Division. Rate increases of up to 19% per year for each of the five years are recommended to be adopted.

As shown in Figure 4, with those increases, the sewer utility enterprise cash reserve levels will dip below target levels for some years but will end the study near the projected levels with revenue above expenditures. It should be noted that rate-based revenue requirement projections in the financial plan is significantly enhanced if the Plan is updated every three to five years because of changes in actual inflation, maintenance and treatment costs, and system maintenance and capital expenditures. Through the City Council workshop process, they requested that annually the City review the cash reserves by comparing the year-end levels with the amounts projected in this study. If the projected cash reserve levels are accurate, revenue projections are on track, and no significant changes to the capital project expenditures are planned, then the Proposition (Prop) 218 approved rate increases would continue. If it is determined through any annual review that the inflation and all system operation, maintenance and Capital costs are significantly under the projections and revenues are above projections, the actual annual rate increase approved can be adjusted down (decreased) without another Prop 218 notificiation by suspending a portion of the approved rates. Rates cannot be adjusted up (increased) above the approved rates during the Years 1-5 period without an associated study and an additional public notification period.

Figure 4
ESD Annual Sources and Uses of Funds



Detailed Financial Plan Tables 18 to 23

The detailed financial plan in this section describes the technical calculations based on a series of tables that model the sources and uses of funds in the Plan. These tables are located at the end of this report.

Table 18 ESD Share of EWA Projected Expenditures. Table 18 identifies ESDs historical and budgeted capital and O&M expenditures from EWA. As shown, ESD's capital cost share of 4.2 percent of EWA is on average $1.31 million annually, while the treatment O&M cost share is 4.8 percent, or approximately $867,000 per year. In addition, ESD pays for source control costs of $44,497 annually. SEJPA also operate and maintains the Moonlight pump station and the annual expenditures are on average $186,259 for the study period.

Table 19 ESD Share of LWD Expenditures. Table 19 identifies ESD's share of historical and budgeted LWD expenditures for the Batiquitos Pump Station. As shown, ESD's 22.1 percent share of capital costs are $1.24 million in future years, plus an additional $122,423 per year for O&M.

Table 20 ESD Capital Improvement Plan. The purpose of Table 20 is to summarize ESD's projected annual capital expenditures. As shown, capital project requirements consist of $3.96 million in collection system rehabilitation or replacement projects identified from the Sewer Master Plan, the LWD pump station project and ESD's $6.85 million share of capital improvements at the EWA. As shown, the Sewer Master Plan expenditures vary annually but average $791,000 per year over the projected five years ending in FY 2028-29.

Table 21 ESD Historical Revenues. Table 21 provides ESD's revenues from FY 21-22 through FY 2023-24, as identified in ESD Funds 521, 522 and 523. The largest ESD revenue is sewer service charges billed on the County property tax rolls; these revenues total approximately $2.6 million annually. Only 7 percent of these revenues are from the fixed water meter-based charges, while the remainder are from the variable water use billing charges; note that the variable charges for residential customers are based on a five-year rolling average of water demands. Therefore, in any one year a 20 percent change in billable (wintertime) water use will have a 4 percent change in revenues. This is an important metric for City staff to monitor due to the previous drought conditions causing conservation which resulted in less revenue when rate increases were not occurring. The five-year rolling average does protect the ESD fund from significant revenue swings in any one-year period. The 20 percent decrease in wastewater flows will also reduce the total annual expenditures by two percent. Therefore, when wintertime water use is restricted by 20 percent due to drought-based water shortage conditions, there will be a de minimis one percent increase in rate-based revenue requirements.

Additional revenues from manual charges to tax exempt property customers and miscellaneous other charges totaled approximately $24,000 in 23-24. Furthermore, interest earnings, contributions, and capacity fee proceeds added $38,00 to the total annual ESD sources of funds of $2.66 million in FY 2023-24.

Table 22 ESD O&M Budget Fund 521. Table 22 identifies ESD's O&M historical and current budget (FY 2020-21 through FY 2023-24). The budget includes treatment and pump station maintenance charges from EWA, LWD and the Moonlight Pump Station; the total is $1.21 million in FY2023-24. With the addition of the City of Encinitas allocated internal costs of $845,000 average for line maintenance, engineering etc., the annual ESD O&M budget totals $2.651 million in FY 2023-24.

An estimated 17 percent of the O&M costs vary with the level of sewage flows. Therefore, in any one year a 20 percent change in wastewater flows will have a 3 percent change in O&M costs.

Table 23 ESD Financial Plan. A cash flow analysis is used to project the rate-based revenue requirements and sewer utility financial performance for the next five years and beyond. The calculations are based on a cash flow projection of the annual sources and uses of funds, as illustrated in the flowchart.

The purpose of Table 23 is to identify rate-based revenue requirements over the next five years. Table 23 combines the projected debt service, budgeted operating expenses (with inflationary escalations), and capital expenditures of the prior tables. It contrasts these funding requirements with the current annual revenues in an annualized sources and uses of funds analysis. It compares the annual net cash shortfall (or additions) with the cash on hand to calculate the drawdown from (or increase to) the enterprise reserves.

Figure 5 – Cash Flow Projection

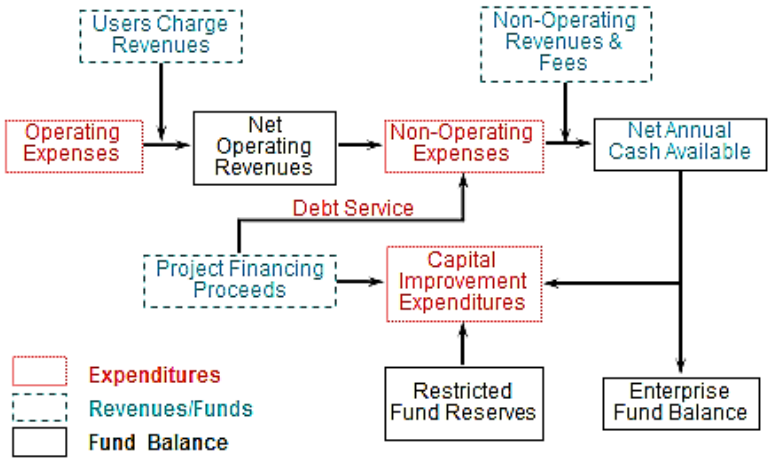


Table 23 combines the sources of funds identified in Table 21 with the uses of funds for O&M and capital expenditures from Tables 22 and 20 to project the annual ESD cash flow and rate-based revenue requirements for the next five years through FY 2028-29. The operating expenditures are escalated for inflation at a projected 3 percent annually, while CIP, Utilities, and General are inflated based upon Table A. Sixty percent of the total uses of funds are O&M costs, which vary with the level of sewage flows as described above. In any one year, a 20 percent change in wastewater flows will have a 3 percent change in the total annual O&M expenditures.

As shown, ESD's current FY 2023-24 charges and other revenues of $2.6 million, supported by unaudited June 30, 2023, cash reserves of $10.3 million, are not sufficient to sustainably fund the ESD services and a rate increase is required. The recommended cash reserve target level is $4.9-5.0 million, based on the following three fund reserve types:

- Fund 521 Operating Cash reserves equal to 50 percent of the annual CSD O&M expenditures, or $1.9-2.1 million;
- Rate stabilization Fund of $800,000 for cash flow purposes; and
- Fund 522 Contingency reserves for extra-ordinary requirements (such as earthquakes or interruptions to revenue collections), equal to $2.5 million minimum.

Based on the proposed increases to rate-based revenues, in five years by FY 2028-29 the total ESD cash reserves will be $4.5 million, as previously illustrated in Figure 4. While this is slightly below the targeted reserve recommended, the revenue being generated with the increases is greater then the expenditures and will continue to add to the cash balance over time. The capital contingency fund target is recommended to be held at the current $2.5 million level due to sensitive environmental conditions of the system and anticipated costs that could be incurred during such an event. The reserve policy calls for $2.5 million minimum up to $5.0 million. The model in practicality has a total of $4.5 million in place when total reserves are considered.

Included in the final reserve target are funds for rate stabilization. The sewer customer service charges are typically fixed and are billed on the County tax rolls, which minimizes variations in rate-based revenues; however, with water conservation and the timing of revenues from the county, it is still prudent to have some stabilization funds available. Rate changes are spread over several years preventing customer rate shock. By using a multi-year forward looking financial plan to anticipate increases in rate-based revenue requirements and spreads the increases over several years. The City uses capacity fee proceeds to fund a portion of the facility debt service, and it has been determined that it is available for general capital related expenditures. However, no reserve target is specified for the Connection Fee Fund 523.

Section II. Cost of Service Analysis

The purpose of a cost-of-service analysis (COSA) is to validate that ESD costs of providing sewer service are proportional to the charges billed to the different customer classes served. This COSA is based on the premise that a sewer system is designed to serve a variety of sewer loads from different users, and that the sewer charges to the customer should be proportionate to the costs of these loads. The analysis' objective is to verify that the bills are fair and equitable; fairness in utility service billing to City residents and business is a policy of the City and is required by Article XIII D of the California Constitution. The cost-of-service analysis is based on the cost-of-service calculation methodology defined in the Water Environment Federation Manual of Practice No. 27.

The COSA is based on a single audited test year, but the findings will remain reliable over several years for any normally occurring changed conditions, such as minor customer growth, and implementing a capital improvement program. The COSA does not address financial plan issues such as inflation or bond funding of capital. The COSA is based on the CSD operating and capital-related costs from FY 2020-21, the system sewage flows, and the customer discharges. The sewage flows are based on water sales to the sewer customers with a standard estimated reduction for how much water is returned as wastewater and a standard sewage strength for all commercial accounts. Sewage strength affects treatment methods and costs which is why rates are adjusted based on actual commercial businesses on properties with the associated typical wastewater strength. Due to the fact billings and flows have not changed significantly since FY 21 when the most and detailed information was available, these values

are appropriate to use in the COSA and will provide accurate results. To calculate the sewage discharges from each customer class, a mass balance calculation is used that combines the water sales to commercial accounts, single-family residences, and multi-family apartments with the recorded sewer flows to the wastewater treatment plant.

The following recommend COSA adjustments are revenue-neutral. In other words, the sum of the COSA-based increases and decreases in rates will not change the total annual revenues to the City. Instead, any charges are for improving sewer service billing equity and proportionality among the different customer classifications.

COSA Findings

Based on rate setting standards, a cost of service finding within 10 percent of the target level for a customer class with at least 10 percent of the system loads can be considered equitable. Any difference less than 10 percent and/or any class of customers smaller than 10 percent of the total system is too small to be considered reliable for implementing a COSA update. For this reason, the equity findings on customers, while exact, must be treated as general indications of the equity of the current charges rather than as the singular representation of the billing proportionality.

The COSA is based on five utility (City) cost categories:

- Flows: Sewer flow-related costs in moving sewage through the collection system and treatment plant;
- Biochemical Oxygen Demands (BOD): Sewage strength-related costs from the removal of biochemical oxygen demands;
- Total Suspended Solids (TSS): Sewage strength-related costs from the removal of total suspended solids;
- Accounts: Customer billing system accounting costs; and
- Equivalent Meters (EM): Utility system management and administration costs.

These cost categories are cross-referenced to the service functions delivered to each sewer utility customer. Their level of service requirements defines the costs that are proportionally recovered from the customer through their service charges.

The COSA findings for billing proportionality are:

- The 2,600 Single-Family (SF) standard residence accounts discharge 46 percent of the system loads and are paying 48 percent of the costs;
- The 522 Multi-family (MF) accounts discharge 27 percent of the system loads and pay 26 percent of the costs;

- The 375 Commercial accounts divided among unmetered, low, medium, and high (0, 2, 3 and 4) strength sewage. Together with the 18 Agricultural (AG) accounts, combined they discharge the remaining 26 percent system loads while paying 26 percent of the costs.

In conclusion, the COSD for ESD customers has determined that the current unit rates under the existing rate structure result in fair and equitable user charges to customers. No change to the current system of charges is recommended. The unique sewer service bills for individual accounts generated by the current system of bills are proportional to each customer's load on the sewer system; the current rates and charges for all customer classifications are in compliance with the proportional billing requirements of state law (California Proposition 218).

Detailed Cost of Service Tables 24 to 28

This section describes the technical calculations developing the adjustments to customer charges for billing equity. The technical calculation tables are located at the end of this report.

Table 24 ESD COSA Test Year Cost Allocations. Table 24 allocates ESD's FY 2020-21 test year expenditures among the five COSA categories noted above.

ESD's FY 2020-21 test year expenditures include all O&M costs; consistent with the cost-of-service analysis procedures promulgated by the national Water Environment Federation for COSA calculations, the annual capital expenditures are represented by the depreciation level of all assets owned by ESD.

As shown, each expenditure item is allocated by the functional purpose of the activity, using a cost-causative basis. The result is the 59 percent of ESD's costs of providing service are allocated to the sewage flows discharged by each customer, 11 percent is allocated to strength-related costs for both BOD and TSS, and the remainder to Accounts and EMs.

Table 25 ESD Accounts & Water Meters. The purpose of Table 25 is to identify the number of accounts and EMs associated with each customer class. As shown, 74 percent of the total accounts and 46 percent of the EMs are with the single-family customers. The multi-family class allocations are 15 percent and 38 percent for the account and EM functions, respectively.

Table 26 ESD Sewage Flow Mass Balance. Table 26 identifies the flow, TSS and BOD function loadings associated with each customer classification. The allocations are determined using a mass-balance calculation of metered water use (and water returned to sewers ratio) and assigned sewage strengths for each customer classification. The approach cross-references the discharges with the average influent loads at the wastewater treatment plant headworks. As shown, approximately 44 and 48 percent of the flows and strengths are with the single-family customers, while the multi-family class allocations are 26 and 28 percent. The remaining classes have far lower shares of the sewage loads.

Table 27 ESD Account Loading Characteristics & Allocations. The functionally-based allocations of customer loading are cross-referenced to CSD's costs of delivering the services

associated with each function to determine the total cost ESD incurs in serving each customer class. As shown previously, 59 percent of ESD's costs of service are associated with sewage flows, whether cost is incurred in sewage collection or treatment. As shown in the matrix multiplication of the table, the single-family class is allocated 48 percent of ESD's total costs of providing service. In contrast, only 26 percent of the costs are allocated to the multi-family class, and between 0.4 to 12.0 percent of the costs are assigned to the other four classes.

Also calculated in this table is the average load by function for the standard single-family dwelling customer, also defined as the equivalent dwelling unit (EDU). Based on the flow and strengths calculated in the mass balance, 1.0 EDU discharges an average 68 HCF of sewage per year. This amount can be lower than the 78 HCF per year of sewage discharged by the median single-family dwelling household calculated in the last sewer rate study done in 2014 and is directly correlated to water conservation efforts. ESD has more newer homes then CSD with low flow fixtures and irrigation so the reduction in flows have not been as dramatic.

Table 28 ESD Cost of Service Analysis. The results of the COSA are summarized in Table 28, by comparing the COSA percentage allocations of each customer class with the charges billed to each customer class. As shown, the single-family dwelling class charges are 3.7 percent above the COSA findings, and the multi-family customer charges are 5.3% lower than the COSA calculated allocation. Commercial low strength customer charges are 3.2% higher than the COSA calculated allocation.

COSA adjustment findings of less than 10 percent, or findings on customers smaller than 10 percent of the customer base, should not be considered material due to the variances in data, assumptions, and analysis methodologies. While the remaining commercial classes have COSA findings indicating that the charges are not close to their loads, the findings are not reliable because the classes are less than 10 percent of total customer loads, and therefor lack sufficient sewage volume to be considered material.

Section III. Capacity Fee Update

One-time wastewater capacity fees are charged to developers connecting to the wastewater system for the first time, or for customers seeking to increase the capacity of their existing sewer connection due to a facility expansion. The current capacity fee is $2,680 per 1.0 EDU. It was approved in 2013.

Updated capacity fees are based solely on system facilities values and system capacity. Currently there are 21 customer billing classifications, each with a unique EDU capacity value.

Findings

The City should increase the current capacity fee for ESD by 197 percent to $7,952 based on the "Future Asset Values At Buildout" calculation approach. This approach uses the Total projected future asset values less debt outstanding assets, plus EWA assets. The resulting

value of $37.9 million is divided by the system build-out demand of 6,583 EDUs to derive $5,754 per EDU. In addition, the current cash reserves and appropriations of $11.9 million are divided by the current customer EDUs of 5,398 to derive $2,198 per EDU. The two values are combined for the total capacity fee of $7,952 based on the "Future Asset Values At Buildout" methodology.

Note that if the original ESD capacity fees developed in 1997 were escalated to 2022 based on the inflationary escalations in the costs of construction, the fee would increase by 116% percent to $5,789, plus assets added since 1997.

The City may also consider updating the fee based on the value of the system assets already constructed which is considered a buy-in approach, which includes only existing facilities already in play and not future system needs.

Based on the Council workshop, the Future Asset Values was selected as the recommended Capacity Fee methodology. We additionally recommend they be escalated annually to adjust for construction cost inflation, using the Engineering News Record Construction Cost Index (ENRCCI) applicable to the Southern California Region. This will require a minor change in the ordinance to reflect the escalation.

Finally, we recommend that the City include language in the capacity fee schedule and in City code that all fees are subject to review and validation by the City Engineer for commercial services not specifically identified in the capacity fee schedule. Refer to the appendices for a summary of laws and implementation policies.

Detailed Updated Capacity Fee Tables 29 to 31

This section describes the technical calculations used to determine the updated capacity fees. The technical calculation tables are located at the end of this report.

Table 29 ESD EDUs for Capacity Fees. This table identifies the total loading demands on the system currently and at buildout. As shown, based on the COSA there are currently 5,398 EDUs discharging 0.98 MGD of sewage on an annual average dry weather flow basis. The Sewer Master Plan identified 1.2 MGD of flow at buildout, which is equivalent to approximately 6,583 EDUs that can be expected to ultimately use the sewer system.

Table 30 ESD Capacity Fee Update. This table identifies an updated capacity fee. The City of Encinitas ACFR provides that future build out asset values as of 2019 City investments are $14.4 million plus investments and CIP planned, netting $37.9 million against a capacity of 6,583 EDUs. In addition, cash reserves and appropriated funds for future are $11.8 million, which should be divided among the existing customer base of 5,398 EDUs. As shown, the sum of these two values derives an updated unit capacity fee of $7,952 per 1.0 EDU. In contrast, the current ESD capacity fee is $2,680 per EDU.

Table 31 ESD Capacity Fee EDUs by Sewer Account Classification. Current City of Encinitas building code identifies the standard EDUs of a variety of customer sub-classifications.

Based on the COSA and on the 2010 Census for persons per households for single and multi-family dwellings, the updated sewer system EDUs for multi-family dwelling capacity fees should be reduced from 0.8 to 0.5 EDUs per dwelling unit. The values for all other sub-classifications are unchanged.

Section IV. Recommended Sewer Rate Structure

No alternative sewer rate structures were evaluated for this study, and the recommended rate structure is recommended to remain the same.

Recommendations

We recommend that the City continue to use the current rate structure and billing process for the next five years. Proposition 218 requires notification to the public for any increases and thus notifications and public hearings are required.

A minor improvement to customer billing is recommended to address customers that have separate irrigation meters from the meters that provide water flow to the house. Those customers that have two meters, would have only the meter delivering water to the house included in their billings. There should be no adjustment for winter water use nor for any return to sewer percentage because all water delivered to the house will be returned to the sewer because it is assumed that all irrigation water is fed through the separate meter. A 5-year rolling average may still be utilized but is not as necessary as the majority of conservation occurred in planting and irrigation changes. This modification will require an ordinance update. A draft has been provided to City staff.

Frequency of Water-based Data Updates

Currently the sewer service charges are updated annually and billed in advance to customers on the county assessor's property tax rolls. Unlike water service customers, billing of minor seasonal variations in sewer bills is not required for the overall equity of the charges. Therefore, we recommend that the City should continue its current practice of updating the sewer bills once a year; for residential customers the bills are based on a rolling average of the prior five-years of wintertime water usage. Since the City implemented drought restrictions eight years ago, the water usage and projections have stabilized even though they have not been in place the past few years. An annual check of tax roll billings is good cross check to confirm revenue projections are on track. An ordinance update is required to reflect the practice that has been occurring. A draft has been provided to City staff.

Detailed Calculation Tables 32-33

The following describes the technical calculations used to determine the recommended sewer rate structure. The technical calculation tables are located at the end of this report.

Table 32 ESD Current Rate Schedule. This table lists the existing rate structures and unit rates. As described, almost all periodic sewer service charges are billed annually on the San

Diego County Assessor's property tax bill. All sewer service charges have fixed and variable components: the current fixed component is flat at $34.97 annually for single-family dwelling accounts. For multi-family and trailer park master-metered accounts, and for the three commercial account subclasses (with low, medium, and high sewage strengths), the fixed charge varies by the size of the water meter associated with the sewer service account. That fixed charge varies from $34.97 per year for commercial accounts using a 5/8-inch water meter, to $1,049.00 for multi-family accounts being served by a 3-inch water meter.

All sewer service charges have a variable charge component. For commercial accounts, the billed variable charge depends on sewage strength subclass assigned to the account and the total annual water use from the prior year, times a 95 percent water use return to sewer factor. The unit rate for these commercial subclasses varies from $5.27 to $7.24 per HCF of billable water use. For all residential accounts the rate is $5.19 per HCF of the most recent five-year annualized average of lowest and second lowest monthly water meter reads, times a return to sewer ratio of 85 percent, or 300 HCF, whichever is less. As noted in the previous paragraph a recommendation to change the billing for customers with irrigation meters is proposed.

The current sewer service rate structure is relatively complex and requires historical water usage for residential customers. However, the methodology is sound and balanced, similar to many other agencies, and results in fair and equitable customer charges that are proportional to the costs borne by ESD to deliver services to the different customer classes.

The current rates use estimated water use returned to the sewers, and a fixed charge component for customer costs not varying from the level of sewer discharged. The rate structure also takes into account the costs of treating higher strength commercial sewage. Finally, for residential customers it minimizes the effect of water used for landscape irrigation by billing only the lowest wintertime water use averaged over five years along with an annual cap on the maximum level of billable water. New customer accounts are billed at the historical median water use of the assigned customer class until the unique demands of the individual account are identified. For these reasons, the existing rate structure delivers balanced and fair charges at the customer account level for the City's sewer service charges, and no changes are recommended except to clarify billings for customers with irrigation meters.

Table 33 ESD Projection of Recommend Existing Rates. Table 33 projects the recommended unit rates for the next five years. Per Proposition 218 requirements, for Years 2-5 these are the maximum annual rate increases that may be applied. After Year 1 and annually through Year 5, City Council will receive a reporting of the expenses, revenues, and Capital needs which will allow them to decrease the annual rate for Years 2-5 if they deem it appropriate. The City must annually monitor inflation effects on operation and construction prices for CIP projects for the City and the treatment agencies, as well as monitor water usage with associated revenue.

Table 33
ESD Projection of Recommend Rates

Description	Existing FY 23-24	Year 1 FY 24-25	Year 2 FY 25-26	Year 3 FY 26-27	Year 4 FY 27-28	Year 5 FY 28-29
Increases to Unit Sewer Service Charges:*		**19%**	**19%**	**19%**	**19%**	**19%**
Residential ($/HCF billable water)						
Single Family	$5.19	$6.18	$7.35	$8.75	$10.41	$12.39
Average Monthly Bill (7HCF)	$39.24	$46.73	$55.58	$66.16	$78.71	$93.68
Multi-family	$5.19	$6.18	$7.35	$8.75	$10.41	$12.39
Trailer Park	$5.19	$6.18	$7.35	$8.75	$10.41	$12.39
Commercial ($/HCF billable water)						
CM 2 (low strength)	$5.27	$6.27	$7.46	$8.88	$10.57	$12.58
CM 3 (med strength)	$5.93	$7.06	$8.40	$10.00	$11.90	$14.16
CM 4 (high strength)	$7.24	$8.62	$10.26	$12.21	$14.53	$17.29
Fixed Annual Charge (per account, by water meter size)						
Single Family (all)	$34.97	$41.61	$49.52	$58.93	$70.13	$83.45
Multi-family & Trailer Park						
5/8"	$69.94	$83.23	$99.04	$117.86	$140.25	$166.90
3/4"	$104.90	$124.83	$148.55	$176.77	$210.36	$250.33
1"	$174.84	$208.06	$247.59	$294.63	$350.61	$417.23
1-1/2"	$349.66	$416.10	$495.16	$589.24	$701.20	$834.43
2"	$559.46	$665.76	$792.25	$942.78	$1,121.91	$1,335.07
3"	$1,049.00	$1,248.31	$1,485.49	$1,767.73	$2,103.60	$2,503.28
All Other Classes (Commercial)						
5/8"	$69.94	$83.23	$99.04	$117.86	$140.25	$166.90
3/4"	$52.45	$62.42	$74.28	$88.39	$105.18	$125.16
1"	$87.42	$104.03	$123.80	$147.32	$175.31	$208.62
1-1/2"	$174.83	$208.05	$247.58	$294.62	$350.60	$417.21
2"	$279.73	$332.88	$396.13	$471.39	$560.95	$667.53
3"	$524.50	$624.16	$742.75	$883.87	$1,051.81	$1,251.65

EDU: Equivalent Dwelling Units (per Dwelling Unit or Sewer Connection)

* Per Proposition 218 requirements, for Years 2-5 this is the maximum annual rate increase that may be applied. After Year 1 and annually through Year 5, City Council will receive a reporting of the expenses, revenues, and Capital needs which will allow them to decrease the annual rate for Years 2-5 if they deem it appropriate.

Laws Affecting Sewer Capacity Fees

This section provides descriptions and various opinions of laws affecting sewer capacity fees. These descriptions and opinions cannot be relied upon for making legal determinations, and we cannot provide legal advice or opinions. The City must consult its legal counsel before taking any financial action recommended in this study.

Capacity fees are one-time fees typically paid when applying for new or increased service and are imposed on development projects by local agencies. The purpose of a capacity fee is to assure that growth in the number of customers served will pay for itself, without excessive burdens on existing customers. The fee should help fund a new customer's proportionate share of existing utility's assets, including cash assets and contract capacity. New development and infill customers are placed on an even playing field by not giving new development a free pass on the system value contributed by existing customers through previous payments. The capacity fees cannot be assessed for any cost associated with ongoing operation and maintenance of facilities.

To guide the widespread imposition of such charges, the State Legislature adopted the Mitigation Fee Act ("Act') with Assembly Bill 1600 in 1987 and subsequent amendments. The Act, contained in California Government Code (beginning with Section 66000), establishes requirements on local agencies for the imposition and administration of fee and charge programs. The Act requires local agencies to document the basis for the capacity fee prior to adopting an updated charge. The five findings in the Act required for adoption of the maximum justified fees documented in this report are: 1) Purpose of fee, 2) Use of fee revenues, 3) Benefit relationship, 4) Burden relationship, and 5) Proportionality.

California Government Code Section § 66000 et seq, commonly referred to as AB 1600, addresses development impact fees and codifies their legal requirements. AB 1600 applies to all local agencies in California, including all general law and charter cities. However, sewer connection fees are treated differently than are other fees and are not subject to the findings and accounting requirements contained in §§ 66000-66009. However, they are subject to the provisions of Sections 66013 (basis), § 66016 (notice), § 66022 (legal challenge), and § 66023 (audits).

In 1997, the legislature provided for specific statutory authority for agencies to impose and collect certain charges (designated as "capacity charges") to allow for financing and capital cost recovery for facilities (new or existing) to meet the demands imposed on such system from new users.

Certain sewer utility agencies have adopted the opinion that if a capacity fee is based on buying into a current system with sufficient capacity, then fee proceeds may be used for funding that

existing but unused capacity, including facility improvements and payments on debt service costs on that capacity. Also, many agencies choose not to implement the highest calculated fee permitted by law, but instead opt to offer a lower fee to encourage community development.

Of note, capacity fees are legally excluded when an Accessory Dwelling Unit (ADU) application is made that is less than 750 square feet per Gov Code §65852.2. However, the units can be charged annual sewer fees and the City can change both a flat rate single-family and a multi-family fee to a property with an ADU on it. Additionally, a property with an ADU will normally have additional water use which will result in additional sewage flow charges.

Reserve Fund Recommendations

The City currently has Administrative Manual Reserve Policies “F022” for Cardiff Sanitary Division– Reserves and “F023” for Encinitas Sanitary Division – Reserves. Each are attached in Appendix I.

These policies do not match the funds that are currently being collected or managed in the City’s system.

For CSD there are currently three Reserve type funds including:

- Fund 511 Operating Reserve
- Fund 512 Capital Reserve for Contingency
- Fund 513 Capacity Fees

For ESD there are currently three Reserve type funds including:

- Fund 521 Operating Reserve
- Fund 522 Removal and Replacement Capital Reserve
- Fund 523 Capacity Fees

The Reserve policies are identical except for the amount of the minimums to be kept in each of the different divisions. They both include explanations for the use of the reserve funds and additional fund “Rate Stabilization Fund”.

Both reserve policies should be updated to reflect the current recommended levels noted in the study and funds transferred into the associated funds to meet the reserve amounts.

Fund 513 and 523 Capacity Fees are technically not Reserve funds. They were established to hold capacity fees collected so that developers impact to the system would pay for the cost of the impacts. Based upon a review by the City Attorney, those funds can be used to pay for any system improvements needed and should be dedicated to the Capital needs of the system to draw down those funds.

Glossary

The technical terms and abbreviations used in the Study tables and documentation are:

AC	Annual Comprehensive Financial Report
AD	Accessory Dwelling Unit
AD	Average Day Wastewater Flow
BO	Biochemical Oxygen Demand
CC	Hundred cubic feet
CF	Cubic feet per second
CI	Capital improvement program
CO	Chemical Oxygen Demand
CO	Cost of service analysis
C	Commercial
EM	Equivalent 5/8" by 3/4" water meter
EN	Engineering News Record Construction Cost Index
ED	Equivalent Dwelling Unit (SF dwelling)
FY	Fiscal Year
HC	Hundred cubic feet
Lb	Pounds
M	Maximum Day
MF	Multi-Family
M	Million Gallons per Day
O&	Operations and Maintenance
Op	Operations
pp	Parts per million
PS	Pump Station
Re	Revenues
SF	Single Family
TS	Total Suspended Solids
W	Water Environment Federation
W	Wastewater Treatment Plant

Tables and Appendices

This section provides the technical calculation tables of the Study. It is divided among two parts: the first part has CSD calculation tables, the second part has ESD calculation tables:

Part I. CSD Calculation Tables

Section I. Financial Plan

Table 1 CSD Share of SEJPA O&M Expenditures
Table 2 CSD Capital Projects and Debt Service
Table 3 CSD Historical Revenues Funds 511, 512 & 513
Table 4 CSD O&M Budget Fund 511
Table 5 CSD Financial Plan

Section II. Cost of Service Analysis

Table 6 CSD COSA Test Year Cost Allocations
Table 7 CSD Accounts Wastewater Strength & Water Use
Table 8 CSD Sewage Flow Mass Balance
Table 9 CSD Account Loading Characteristics & Allocations
Table 10 CSD Cost of Service Analysis

Section III. Capacity Fee Update

Table 11 CSD EDUs for Capacity Fees
Table 12 CSD Capacity Fee Update
Table 13 CSD EDU Determination for Capacity Fees

Section IV. Sewer Rate Recommendations

Table 14 CSD Current Rate Schedule
Table 15 CSD Projection of Recommend Existing Rates
Table 16 Not Used
Table 17 Not Used

Part II. ESD Calculation Tables

Section I. Financial Plan

Table 18 ESD Share of EWA Projected Expenditures
Table 19 ESD Share of LWD Expenditures
Table 20 ESD Capital Improvement Plan Fund 52, 523
Table 21 ESD Revenues
Table 22 ESD O&M Budget Fund 521
Table 23 ESD Financial Plan

Section II. Cost of Service Analysis

Table 24 ESD Test Year
Table 25 ESD Accounts Wastewater Strength & Water Use
Table 26 ESD Sewage Flow Mass Balance
Table 27 ESD Account Loading Characteristics & Allocations
Table 28 ESD Cost of Service Analysis

Section III. Capacity Fee Update

Table 29 ESD Projected EDUs for Capacity Fee Update
Table 30 ESD Capacity Fee Update
Table 31 ESD Capacity Fee EDUs by Sewer Account Classification

Section IV. Sewer Rate Recommendations

Table 32 ESD Rate Schedule
Table 33 ESD Projected Existing Rates

Table 1
CSD Share of SEJPA O&M Expenditures

Description	Actual FY 21-22	Est Actual FY 22-23	Proposed FY 23-24
CSD Share of SEJPA Treatment Expenditures			
CSD Treatment (a)	$1,287,060	$1,413,309	$1,730,712
CSD Lab & Outfall Charges	$412,305	$463,360	$444,686
Adjustment	$0	$0	
Total	$1,699,365	$1,876,669	$2,175,398
Pump Station Maintenance Contract			
Olivenhain PS	$149,697	$180,466	$178,648
Cardiff PS	$100,375	$106,053	$134,082
Coast PS	$50,472	$52,537	$63,439
Total PS	$300,544	$339,056	$376,169

Source: Encina Budget book
a. CSD Treatment Capacity at SEJPA: 2.5 mgd & 8.8% of Outfall.

Table 2
CSD Capital Projects and Debt Service

Description	Proposed FY 23-24	Year 1 FY 24-25	Year 2 FY 25-26	Year 3 FY 26-27	Year 4 FY 27-28	Year 5 FY 28-29	Grand Total (Years 1 to 5)
Collection System Rehabilitation Projects: Asset Management Plan Recommendations							
Olivenhain Trunk Sewer	$700,000						
Cardiff Pump Station/SEJPA Force Main	$376,169						
Other Collection System Rehabilitation	$300,000	$500,000	$500,000	$500,000	$1,000,000	$1,000,000	$3,500,000
Subtotal	$1,376,169	$500,000	$500,000	$500,000	$1,000,000	$1,000,000	$3,500,000
Existing Capital Project Commitments							
Condition Assessment	$75,000	$75,000					$75,000
Capacity Projects		$150,000	$600,000	$600,000	$600,000	$600,000	$2,550,000
On Call Engineering Services	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$500,000
SEJPA Projects	$1,247,444	$1,450,116	$1,403,434	$1,497,304	$1,516,103	$1,576,747	$7,443,704
Grand Total	$2,798,613	$2,275,116	$2,603,434	$2,697,304	$3,216,103	$3,276,747	$14,068,704
Debt Service (from SEJPA)							
ST Debt Service	$669,088	$ 669,463	$669,838	$670,213	$670,588	$670,964	$3,351,065
Leasing Charges	$18,405	$18,865	$19,337	$19,820	$20,316	$20,316	$98,654
Total	$687,493	$688,328	$689,175	$690,033	$690,904	$691,280	$4,137,212

Capital Projects are in Funds 511/512/513

Source: City of Encinitas 5 Year CIP Budget and Asset Management Plan rehabilitation projects as of March 2023
a. Refer to the Financial Plan notes for cash available for project appropriations. The projects already funded from appropriated cash are not included in financial plan revenue requirements.

Table 3
CSD Historical Revenues

Description	Actual FY 20-21	Actual FY 21-22	Budget FY 22-23	Actual Billings FY 23-24
Sewer Service Charges (511)				
AG Class	$14,307			$0
CM 2 (low strength)	$287,555			$285,912
CM 3 (med. strength)	$186,153			$140,293
CM 4 (high strength)	$164,647			$135,866
MF	$975,893			$769,196
SF	$3,125,055			$3,411,180
Other adjustments	$15,723			$3,156
County Assessor	$4,769,333	$4,495,201	$4,781,469	$4,745,603
Manual Charges	$128,444	$128,444	$100,000	$92,570
Other	$150,334	$32,120		
Total	$5,048,111	$4,655,765	$4,881,469	$4,838,173
Portion of Fixed Sewer Service Charges from Table 7		$400,167		8%
Uses of Money & Other Revenues (Earnings)		CAFR		
Pooled Investments (511)	$482,404	($289,022)	$171,205	$171,205
Other/One-Time/Contributions (511)	$98,880			
Investments (512)	$0			
Contributions (513 Cash)	$73,874			
Total	$655,158	($289,022)	$171,205	$171,205
Total Revenues	$5,703,269	$4,366,743	$5,052,674	$5,009,378
budget book		$5,031,758	$5,031,758	

CSD Revenues include Funds 511, 512 R&R & 513

Table 4
CSD O&M Budget Fund 511

Description	Actual FY 20-21	Actual FY 21-22	Budget FY 22-23	Budget FY 23-24	Variable Costs (b)
Personnel (BOD)		$3,520	$3,520	$3,520	0%
Contract & Services					
Prof Svc Contracts	$14,189	$14,511	$17,390	$23,489	0%
General Ops	$458,110	$301,442		$34,000	0%
PS Maintenance Contracts	$300,544	$300,544	$339,056	$376,169	10%
Interagency Agmt	$2,761	$4,330	$3,985	$3,735	0%
Treatment	$1,520,097	$1,805,216	$1,876,669	$2,175,398	30%
Utilities	$30,748	$7,814	$9,068	$32,220	70%
Insurance& Claims	$47,384	$91,767	$107,354	$69,565	0%
OTHER ESTIMATED EXP				$200,000	
Depreciation	$454,813	$576,187	$600,944	$25,500	0%
Total	$2,828,646	$3,105,331	$2,957,986	$3,216,697	
Internal Cost Allocations					
Internal Costs (a)	$213,173	$213,173	$213,173	$319,303	0%
Line Maintenance Support					10%
Engineering Support					0%
Total	$213,173	$213,173	$213,173	$319,303	
Grand Total	$3,041,819	$3,322,024	$3,174,679	$3,539,520	20%

Contract O&M costs are listed under contracts/services.

a.Other Internal Costs (Interfund Transfers) include administration and support services.
b. Variable costs represent cost that change with sewage flows.

Table 5
CSD Financial Plan

Description	FROM ACFR FY 21-22	Estimated FY 22-23	BUDGET FY 23-24	Year 1 FY 24-25	Year 2 FY 25-26	Year 3 FY 26-27	Year 4 FY 27-28	Year 5 FY 28-29
Revenues	**Increases to Unit Sewer Service Charges:**			15%	15%	15%	15%	10%
Charges Billed through County Assessor (a)	$4,641,880	$4,495,201	$4,745,603	$5,409,988	$6,167,386	$7,030,820	$8,015,135	$8,736,497
Manual & Other Charges		$160,564	$92,570	$106,455	$122,423	$140,787	$161,905	$178,096
Investments, Earning & Interest	($289,022)		$171,205	$68,960	$57,306	$48,464	$48,464	$46,616
Contributions from Capacity Fees (513 Cash)	$32,120	$0	$0	$0	$0	$0	$0	$0
Total Sources of Funds	$4,384,978	$4,655,765	$5,009,378	$5,585,403	$6,347,116	$7,220,071	$8,225,504	$8,961,208
Expenditures								
Total O&M	$3,830,877	$3,174,679	$3,539,520	$3,787,286	$3,938,778	$4,017,553	$4,097,904	$4,179,863
SEJPA Debt Service & Leasing	$668,113	$683,476	$687,493	$688,328	$689,175	$690,033	$690,904	$691,280
Capital Expenditures	$2,355,792	$1,607,000	$2,798,613	$2,275,116	$2,603,434	$2,697,304	$3,216,103	$3,276,747
Total Uses of Funds	$6,854,782	$5,465,155	$7,025,626	$6,750,730	$7,231,386	$7,404,890	$8,004,911	$8,147,889
Net Change in Cash Balance	($2,469,804)	($809,390)	($2,016,248)	($1,165,327)	($884,270)	($184,819)	$220,592	$813,319
Year End Cash Balance								
Fund 511 Operating Reserve	$2,089,378	$2,965,952						
Fund 512 R&R Capital	$6,116,808	$4,211,667						
Fund 513 Connection Fees (b)	$1,722,639	$1,734,599		$0	$0	$0	$0	$0
Total YE Cash Balance	$9,928,825	$8,912,218	$6,895,970	$5,730,642	$4,846,372	$4,661,553	$5,066,964	$5,474,872
Cash Reserve Target Policies			**Recommended**					
Fund 511 Operating Reserve	50%	50%	50%	50%	50%	50%	50%	50%
Fund 511 Operating Reserve (O&M of following FY)	$1,900,000	$1,600,000	$1,800,000	$1,900,000	$2,000,000	$2,000,000	$2,000,000	$2,100,000
Rate Stabilization Fund	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000
Fund 512 Capital Reserves for Contingencies (c)	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000
Total YE Cash Reserve Target	$5,200,000	$4,900,000	$5,100,000	$5,200,000	$5,300,000	$5,300,000	$5,300,000	$5,400,000

a. The annual escalation in charges, if any, is based on the annual growth rate in new customer accounts, and is a function in the drop in billable water use, if any.
b. Fund 513 capacity fee proceeds have been determined to be available for general capital-related expenditures.
c. The Fund 512 capital reserves for contingencies is targeted at $1 million.

Table 6
CSD COSA Test Year Cost Allocations

Description	Test Year FY 20-21	Functional Cost Allocations Flows	TSS	BOD	Accounts	EMs	Total
Contract & Services							
Prof Svc Contracts	$17,390	80%	10%	10%	0%	0%	100%
Maintenance Contracts	$343,041	100%					100%
Treatment	$1,876,669	50%	25%	25%			100%
Utilities	$9,068	80%	10%	10%	0%	0%	100%
Insurance	$107,354	0%	0%	0%	0%	100%	100%
Claims	$600,944				100%	0%	100%
Internal Cost Allocations	$213,173	50%			30%	20%	100%
Depreciation							
Local	$269,655	100%					100%
Joint Venture (SEJPA)	$1,154,694	50%	25%	25%			100%
Grand Total	$4,591,988	$2,256,130	$760,487	$760,487	$664,896	$149,989	$4,591,988
Total Cost of Service Allocations		**49%**	**17%**	**17%**	**14%**	**3%**	**100%**

Table 7
CSD Accounts & Water Meters

Customer Class	No Water Meter	Water Meter Size (inches) 5/8"	3/4"	1"	1-1/2"	2"	3"	Grand Total Accounts		Grand Total EMs	
AG	6	6		5	7	3		27	0.5%	78	0.9%
CM 2 (low strength)	67	21	12	19	15	14		148	2.5%	274	3.2%
CM 3 (med. strength)	41	10	5	8	12	6		82	1.4%	146	1.7%
CM 4 (high strength)	2	8	3	5	3	2		23	0.4%	56	0.7%
MF	114	340	258	140	74	28	2	956	16%	3,402	40%
SF	82	1664	2229	603	29	11		4,618	79%	4,618	54%
Total Accounts	312	2,049	2,507	780	140	64	2	5,854	100%		
Equivalent Meters (EMs) are based on fixed annual										8,573	100%
Total Charges	$0.00	$112,594	$142,948	$65,772	$44,966	$31,060	$2,828			$400,167	
Annual Fixed Charge for calculating EMs (FY 2020-21)											
CM	$0.00	$47.13	$70.70	$117.83	$235.67	$377.06	$706.99				
MF	$0.00	$94.26	$141.40	$235.66	$471.34	$754.12	$1,413.98				
SF	$0.00	$47.13	$47.13	$47.13	$47.13	$47.13	$47.13				

Equivalent Meters (EM) are based on fixed annual charges for sewer services, with 1.0 EM equal to the annual single family charge.

Table 8
CSD Sewage Flow Mass Balance

Customer Class	5-Yr Avg Water Use (HCF/yr, a)	Water Use Return to Sewer	Sewage Flow (MGD)		Sewage TSS Strength (PPM)	Sewage TSS Strength (Lbs/day)		Sewage BOD Est. Strength (PPM, c)	Sewage BOD Strength (Lbs/day)	
AG	2,770	95%	0.005	*0.4%*	180	8	*0.3%*	172	8	*0.3%*
CM 2 (low strength)	48,926	95%	0.095	*7.8%*	180	143	*4.6%*	172	136	*5.8%*
CM 3 (med. strength)	26,820	95%	0.052	*4.3%*	202	88	*2.8%*	198	86	*3.7%*
CM 4 (high strength)	14,148	95%	0.028	*2.3%*	667	153	*4.9%*	900	207	*8.8%*
MF	174,874	70%	0.25	*21%*	297	622	*20%*	276	578	*25%*
SF	720,416	54%	0.79	*65%*	319	2,108	*68%*	203	1,341	*57%*
Total	987,954		1.22	*100%*		3,121	*100%*		2,356	*100%*
WWTP ADWF Influent (b)			1.22		306	3,121		231	2,356	

a. Billable water use is based on a five year historical average water use ending in FY 2018-19 for FY 2020-21 charges. Residential water use is the wintertime minimum demands. Water use is estimated where no meter exists.
c. BOD is set equal to CBOD
b. ADWF value is from SEJPA

Table 9
CSD Account Loading Characteristics & Allocations

Description	Sewage Flows	Sewage TSS	Sewage BOD	Accounts	EMs	Weighted Total
CSD Cost Allocations	49%	17%	17%	14%	3%	100%
Load per 1.0 EDU	171	0.46	0.29	1.0	1.0	
EDU Load Units	GPD	PPD	PPD	Account	5/8" Meter	
Load per 1.0 EDU	84	319	203	1.0	1.0	
EDU Load Units	HCF/Yr	ppm	ppm	Account	5/8" Meter	
Customer Class						
AG	0.4%	0.3%	0.3%	0.5%	0.9%	**0.4%**
CM 2 (low strength)	7.8%	4.6%	5.8%	2.5%	3.2%	**6.0%**
CM 3 (med. strength)	4.3%	2.8%	3.7%	1.4%	1.7%	**3.4%**
CM 4 (high strength)	2.3%	4.9%	8.8%	0.4%	0.7%	**3.5%**
MF	21%	20%	25%	16%	40%	**21%**
SF	65%	68%	57%	79%	54%	**66%**
Total	100%	100%	100%	100%	100%	**100%**

EDU: Equivalent dwelling Unit

Table 10
CSD Cost of Service Analysis

Customer Class	FY 20-21 Bills	Charge Allocations (FY19-20)	Cost of Service Allocations	COSA Rate Adjustment
AG	$14,307	0.3%	0.4%	36%
CM 2 (low strength)	$287,555	6.0%	6.0%	-1%
CM 3 (med. strength)	$186,153	3.9%	3.4%	-12%
CM 4 (high strength)	$164,647	3.5%	3.5%	0%
Total CM	$638,355	14%	13%	
MF	$975,893	21%	21%	2.8%
SF	$3,125,055	66%	66%	-0.2%
Grand Total	$4,753,610	100.00%	100.00%	0%

COSA adjustment findings of less than 10%, or findings on customers smaller than 10% of the customer base, are not material based on the variances in data, assumptions and analysis methodologies.

Table 11
CSD EDUs for Capacity Fees

Customer Class	Cost of Service Allocations	FY 2020-21 Capacity-based COSA EDUs (b)	Build out EDUs (a)
AG	0.4%	29	
CM 2 (low strength)	6.0%	424	
CM 3 (med. strength)	3.4%	241	
CM 4 (high strength)	3.5%	243	
Total CM	13%	937	
MF	21%	1,486	
SF	66%	4,618	
Total	100%	7,041	11,456
Increase to Build out			63%
Total Sewer Flow (MGD)		1.22	1.99

EDU: Equivalent Dwelling Units
a. 2021 Sewer Master Plan Update (ADWF)
b. The COSA-based EDUs represents the number of EDUs based on proportional-capacity cost allocations.

Table 12
CSD Capacity Fee Update

Description	Current (Buy-in)	Future Asset Values at Buildout
Existing Assets		
Original Cost (Assets as of 2019)	$20,688,543	$20,688,543
Accumulated Depreciation	$3,732,313	$3,732,313
Total OCLD	$16,956,230	$16,956,230
Investments in SEJPA	$33,525,279	$33,525,279
CWIP (2020)		$3,571,843
CIP through FY 25-26		$21,425,099
Total Asset Value	$50,481,509	$75,478,451
Less Debt Outstanding to SEJPA	$7,443,704	$7,443,704
Net Asset Value	$43,037,804	$68,034,747
System Capacity (EDUs)	11,456	11,456
Subtotal Fee ($/EDU)	$3,757	$5,939
Plus Current Cash Reserves & Appropriated Funds	$8,206,186	$5,474,872
Current Customers (EDUs)	7,041	7,041
Subtotal Fee ($/EDU)	$1,166	$778
Updated Unit Capacity Fee ($/EDU)	$4,922	$6,716
Current Capacity Fee ($/EDU, a)	$3,417	$3,417
Increase	44%	97%

EDU: Equivalent Dwelling Units
CWIP: Construction work in process
CIP: capital improvement plan

a. The current CSD capacity fees were approved in June 1997. Between 1997 and 2022 the cost of construction (ENRCCI) has increased by 116%. If the current capacity fee had been escalated for inflation, it would currently be $7,381 (plus assets added since 1997).

Table 13
CSD Capacity Fee EDUs by Sewer Account Classification

Residential	Muni Code 18.08.025 (EDUs)	Updated COSA (EDUs)
Single Family (SF)	1.0	1.0
Multi-family (MF, a)	0.8	0.4
Mobile Home/Trailer Park Space	0.5	0.5
Commercial		
Food Service Establishments	3.0	3.0
Hotel/Motel Units w/ kitchens	0.4	0.4
Hotel/Motel Units w/out kitchens	0.6	0.6
Buildings Not Otherwise Listed		
First 1,000 Square Feet	1.2	1.2
Additional 1,000 Square Feet	0.7	0.7
Self service Laundry, per washer	1.0	1.0
Churches, Theaters & Auditoriums		
Capacity (per 10 seats)	0.1	0.1
Additional 1,000 Square Feet	0.7	0.7
Schools (EDUs per ADA)		
Elementary	0.020	0.020
Junior High	0.025	0.025
High School	0.042	0.042
Convalescent Homes (EDUs per Bed)		
Skilled Nursing Care Facilities	0.7	0.7
Care Facilities w/ more than 6 beds	0.5	0.5
Care Facilities w/ less than 7 beds	1.0	1.0
Gas Stations w/ less than 5 pumps	2.0	2.0
Gas Stations w/ more than 4 pumps	3.0	3.0
Gas Stations Floor Drain (each)	0.5	0.5
Warehouse (EDU per fixture unit)	0.25	0.25

EDU: Equivalent Dwelling Units

The City Engineer shall determine the capacity fee for new connections not applicable to the above classifications.

a. The new EDUs are available for MF dwellings only, based on Appendix G evaluating the wastewater discharged for current MF versus SF households.

Table 14
CSD Current Rate Schedule

Rate Classification	Sub Category	Flow Rate ($/HCF)	Return Ratio	Notes
Residential			85%	Historical Median sewage discharge as of FY 2020-21 (HCF/yr)
Single Family	SF	$5.51		87.2
Multi-family	MF	$5.51		67.7
Trailer Park	TP	$5.51		67.7
Commercial	**Group**		95%	Median sewage discharge: see appendix
Unmetered	AG 0	Varies		SF median discharge equivalent
Low Strength	CM 2	$5.79		
Medium Strength	CM 3	$7.53		
High Strength	CM 4	$11.31		

Fixed Annual		**Water Meter Size (inches)**					
Charge (all classes)	Unmetered	**5/8"**	**3/4"**	**1"**	**1-1/2"**	**2"**	**3"**
Single Family	$0.00	$47.13	$47.13	$47.13	$47.13	$47.13	$47.13
Multi-family	$0.00	$94.26	$141.40	$235.66	$471.34	$754.12	$1,413.98
All Other Classes	$0.00	$47.13	$70.70	$117.83	$235.67	$377.06	$706.99

Sanitation Charge Formula

Charges are billed annually on the County Assessor's Property Tax Bill
Charges include the fixed annual charge based on the water meter size plus the water usage charge
Billed Water Usage Charges
- Non-residential: Fiscal year-round water use times return (to sewer) ratio
- Residential: Annualized most recent five year average of lowest and second lowest water meter reads times return (to sewer) ratio, or 300 HCF whichever less

Customers without a water usage history are billed a flat rate based on median usage
See appendix for commercial users in each group

Table 15
CSD Projection of Recommend Rates

Description	Existing FY 23-24	Year 1 FY 24-25	Year 2 FY 25-26	Year 3 FY 26-27	Year 4 FY 27-28	Year 5 FY 28-29
Increases to Unit Sewer Service Charges:*		15%	15%	15%	15%	10%
Residential						
Single Family	$5.51	$6.34	$7.29	$8.38	$9.64	$10.60
Average Monthly Bill (7HCF	$42.50	$48.90	$56.22	$64.63	$74.35	$81.76
Multi-family	$5.51	$6.34	$7.29	$8.38	$9.64	$10.60
Trailer Park	$5.51	$6.34	$7.29	$8.38	$9.64	$10.60
Commercial						
Low Strength	$5.79	$6.66	$7.66	$8.81	$10.13	$11.14
Medium Strength	$7.53	$8.66	$9.96	$11.45	$13.17	$14.49
High Strength	$11.31	$13.01	$14.96	$17.20	$19.78	$21.76
Fixed Annual Charge (per account, by water meter size)						
Single Family (all)	$47.13	$54.20	$62.33	$71.68	$82.43	$90.67
Multi-family						
5/8"	$94.26	$108.40	$124.66	$143.36	$164.86	$181.35
3/4"	$141.40	$162.61	$187.00	$215.05	$247.31	$272.04
1"	$235.66	$271.01	$311.66	$358.41	$412.17	$453.39
1-1/2"	$471.34	$542.04	$623.35	$716.85	$824.38	$906.82
2"	$754.12	$867.24	$997.33	$1,146.93	$1,318.97	$1,450.87
3"	$1,413.98	$1,626.08	$1,869.99	$2,150.49	$2,473.06	$2,720.37
All Other Classes						
5/8"	$47.13	$54.20	$62.33	$71.68	$82.43	$90.67
3/4"	$70.70	$81.31	$93.51	$107.54	$123.67	$136.04
1"	$117.83	$135.50	$155.83	$179.20	$206.08	$226.69
1-1/2"	$235.67	$271.02	$311.67	$358.42	$412.18	$453.40
2"	$377.06	$433.62	$498.66	$573.46	$659.48	$725.43
3"	$706.99	$813.04	$935.00	$1,075.25	$1,236.54	$1,360.19

EDU: Equivalent Dwelling Units (per Dwelling Unit or Sewer Connection)

* Per Proposition 218 requirements, for Years 2-5 this is the maximum annual rate increase that may be applied. After Year 1 and annually through Year 5, City Council will receive a reporting of the expenses, revenues, and Capital needs which will allow them to decrease the annual rate for Years 2-5 if they deem it appropriate.

Table 18
ESD Share of EWA Projected Expenditures

Description	Actual FY 21-22	Projected FY 22-23	Proposed FY 23-24	Year 1 FY 24-25	Year 2 FY 25-26	Year 3 FY 26-27	Year 4 FY 27-28
EWA EWPCF Capital Expenditures (CIP, a)							
Capital Improvements	$21,312,394	$20,900,000	$19,245,000	$23,910,000	$26,110,000	$29,480,000	$29,480,000
Asset Replacements	$1,057,691	$1,156,000	$1,534,200	$1,156,000	$1,214,000	$1,275,000	$1,275,000
Capital Acquisitions	$388,650	$356,000	$368,000	$356,000	$363,000	$381,000	$381,000
Personnel Expenses	$2,663,590	$2,911,786	$2,084,320	$2,995,000	$3,091,000	$3,190,000	$3,190,000
Total EWA CIP	$25,422,325	$25,323,786	$23,231,520	$28,417,000	$30,778,000	$34,326,000	$34,326,000
ESD Share of EWA EWPCF Capital Expenditures							
ESD Share (a)	4.26%	4.16%	4.34%	4.22%	4.22%	4.22%	4.22%
Total ESD Capital Expenses	$1,082,842	$1,053,090	$1,007,443	$1,200,499	$1,300,229	$1,450,116	$1,450,116
San Elijo PS Operating expenses	$142,988	$148,206	$167,777	$176,166	$183,212	$186,877	$190,614
ESD Share of EWPCF Treatment & Source Control O&M Expenses							
EWPCF Operating Budget	$14,568,030	$16,898,471	$18,650,287				
ESD Share	$701,254	$772,595	$867,227				
EWPCF Source Control Costs	$889,245	$885,646	$1,019,627				
ESD Share Source Control	$46,781	$44,610	$44,497				
*EWPCF Pension Paydown							
ESD Share Pension Paydown							
Total ESD Share of O&M	$748,035	$817,205	$911,724				

EWA O&M costs are listed under ESD contracts/services.
a. City of Encinitas payments per EWA FY21 Recommended Budget Doc

Table 19
ESD Share of LWD Expenditures

Description	Annual Change	Actual FY 21-22	Projected FY 22-23	Proposed FY 23-24	Year 1 FY 24-25	Year 2 FY 25-26	Year 3 FY 26-27	Year 4 FY 27-28	Year 5 FY28-29
LWD Capital Expenditures (Batiquitos PS)		$1,053,898	$159,440	$1,060,000	$2,129,500	$1,044,000	$564,589	$564,589	$564,589
ESD Share of Capital Expenditures		22.14%	22.14%	22.14%	22.14%	22.14%	22.14%	22.14%	22.14%
ESD Charges		$233,333	$35,300	$260,400	$431,730	$431,730	$125,000	$125,000	$125,000
LWD O&M Expenses (Batiquitos PS)		$523,192	$490,859	$551,377	$578,946	$602,104	$614,146	$626,429	$638,957
ESD O&M Exp. Share of Bat PS		20%	20%	20%	20%	20%	20%	20%	20%
ESD Charges		$104,600	$98,200	$110,300	$115,789	$120,421	$122,829	$125,286	$127,791

Sources: Leucadia Wastewater District FY 2024 Budget, ESD Draft CIP
LWD O&M costs are listed under ESD contracts/services. Year 1-5 values are estimates.
inflation for O&M Set at General inflation rates

Table 20
ESD Capital Improvement Plan

Description	Proposed FY 23-24	Year 1 FY 24-25	Year 2 FY 25-26	Year 3 FY 26-27	Year 4 FY 27-28	Year 5 FY 28-29	Grand Total
CAPITAL COST OF MOONLIGHT BEACH PS	$ 600,000		$ 250,000				
Collection System Rehabilitation Projects		$250,000	$250,000	$300,000	$500,000	$750,000	$2,050,000
Existing Capital Project Commitments							
ESD Share of LWD Bat PS Capital Expenditures	$260,400	$431,730	$431,730	$125,000	$125,000	$125,000	$1,238,460
ESD Share of EWA Capital Expenditures	$1,007,443	$1,200,499	$1,300,229	$1,450,116	$1,450,116	$1,450,116	$6,851,076
Cottonwood Creek Sewer Improvements		$830,000	$500,000				$1,330,000
On Call Engineering	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$500,000
Condition Assessment	$75,000	$75,000					$75,000
Grand Total	$1,442,843	$2,887,229	$2,581,959	$1,975,116	$2,175,116	$2,425,116	$12,044,536

FROM ACFR

Construction Work in Progress		
Total New Assets through FY 18-19 Including CWIP as of June 30, 2019 for addition to Fixed Assets	$13,466,828	$17,612,273

Capital Outlay/Leasing	$0	$0	$0	$0	$0	$0	

Source: City of Encinitas 5 Year CIP Budget and discussions with Staff

Table 21
ESD Historical Revenues

Description	Actual FY 21-22 (a)	Actual FY 22-23	Actual FY23-24
Sewer Service Charges (521)			
AG	$8,542		
CM 0 (unmetered)	$38,747		$23,412
CM 2 (low strength)	$336,987		$282,081
CM 3 (med strength)	$239,996		$186,235
CM 4 (high strength)	$147,764		$138,410
MF	$791,154		$337,963
SF	$1,355,193		$1,633,432
Adjustment	($194,220)		
County Assessor	$2,724,163	$2,517,372	$2,601,534
Manual Charges	$33,600	$33,600	$24,644
Other			
Total	$2,757,763	$2,550,972	$2,626,178
Portion of Fixed Sewer Service Charges from Table 25			0%
Uses of Money & Other Revenues (Earnings)			
Pooled Investments & Interest (521)	($364,734)	$189,511	$38,001
Other/One-Time/Contributions (521)			
Investments (522)			
Contributions (Fund 523 Cash)			
Total	($364,734)	$189,511	$38,001
Total Revenues	$2,393,029	$2,740,483	$2,664,179

ESD Revenues are from Funds Ops, Replacement & Expense Funds 521, 522 R&R &
County Assessor charges are based on prior year customer characteristics
a. The FY 19-20 customer charges are based on calculated FY18-19.

Table 22
ESD O&M Budget Fund 521

Description	Actual FY 20-21	Actual FY 21-22	Proposed FY 22-23	Proposed FY 23-24	Variable Costs
Contract & Services					
Prof Svc Contracts	$9,299	$9,471	$12,695	$16,663	0%
Maintenance Contracts					
Bat PS (LWD)	$104,600	$92,494	$92,494	$110,300	0%
Moonlight PS (SEJPA)	$187,469	$135,464	$155,720	$167,777	10%
Other & Gen Ops (MH raising, etc)	$6,694	$5,115	$39,000	$24,200	10%
Interagency Agmt	$1,674	$1,913	$2,495	$2,500	0%
EWA Source Control & Treatment	$748,035	$817,205	$817,205	$911,724	25%
Insurance	$41,040	$57,602	$92,094	$126,875	0%
Claims	$10,500	$25,500	$25,500	$50,000	0%
Depreciation		$472,377	$396,888	$396,888	
Total	$1,109,311	$1,617,141	$1,634,091	$1,806,927	
Internal Cost Allocations (a)					
Internal Costs (Admin & support servic	$130,298	$130,298	$135,510	$135,510	0%
Line Maintenance Support	$371,173	$330,436	$544,917	$676,222	10%
Engineering Support	$36,525	$33,051	$148,140	$33,051	0%
Total	$537,996	$493,785	$828,567	$844,783	
Grand Total	$1,647,307	$2,110,926	$2,462,658	$2,651,710	12%

Source: Detailed Budget Reports by Category, YE Revenue & Expenditure Report
Contract O&M costs are listed under ESD contracts/services.

a. Interfund costs except for engineering and line maintenance support are flat from one-year to the next.

Table 23
ESD Financial Plan (100% CIP)

Description	Annual Change	FROM ACFR FY 21-22	Estimated FY 22-23	BUDGET FY 23-24	Year 1 FY 24-25	Year 2 FY 25-26	Year 3 FY 26-27	Year 4 FY 27-28
Revenues	**Increases to Unit Sewer Charges:**				19%	19%	19%	19%
Charges through County Assessor (a)	Growth & Wtr Use	$2,513,921	$2,517,372	$2,601,534	$3,069,810	$3,622,376	$4,274,404	$5,043,796
	0%		$33,600	$24,644	$24,644	$24,644	$24,644	$24,644
Investments, Earning & Interest	Earnings Rate	($364,734)	$189,511	$38,001	$40,946	$56,715	$54,776	$49,287
Contrib from Capacity Fees (523 Cash)	0%	$25,728	$0	$0	$0	$0	$0	$0
Total Sources of Funds		$2,174,915	$2,740,483	$2,664,179	$3,135,400	$3,703,735	$4,353,824	$5,117,727
Expenditures	Annual Escalation	Inflation			5%	4%	2%	2%
Total O&M		$2,144,916	$2,110,926	$2,651,710	$2,784,296	$2,895,667	$2,953,581	$3,012,652
Capital Outlay/Leasing		$0	$0	$0	$0	$0	$0	$0
Capital Expenditures		$1,196,334	$1,088,390	$1,442,843	$2,887,229	$2,581,959	$1,975,116	$2,175,116
Total Uses of Funds		$3,341,250	$3,199,316	$4,094,553	$5,671,525	$5,477,626	$4,928,697	$5,187,768
Net Change in Cash Balance		($1,166,335)	($458,833)	($1,430,374)	($2,536,125)	($1,773,891)	($574,873)	($70,041)
Year End Cash Balance								
Fund 521 Operating Reserve	Varies	$3,005,464	$3,166,800	$1,300,000	$1,400,000	$1,400,000	$1,500,000	$1,500,000
Fund 522 R&R Capital		$7,562,735	$5,237,460	$5,673,885	$3,037,761	$1,263,869	$588,997	$518,956
Subtotal		$10,568,199	$8,404,259	$6,973,885	$4,437,761	$2,663,869	$2,088,997	$2,018,956
Fund 523 Capacity Fees (b)		$1,525,572	$1,977,380	$1,977,380	$1,977,380	$1,977,380	$1,977,380	$1,977,380
Adjustment for Changes in AR, Accurals etc		$0	$0					
Total YE Cash Balance		$12,093,771	$10,381,639	$8,951,265	$6,415,140	$4,641,249	$4,066,377	$3,996,336
Cash Reserve Target Policies				Recommended				
Fund 521 Operating Reserve (O&M of following FY)		50%	50%	50%	50%	50%	50%	50%
Fund 521 Operating Reserve		$1,100,000	$1,100,000	$1,300,000	$1,400,000	$1,400,000	$1,500,000	$1,500,000
Rate Stabilization Fund		$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Fund 522 Capital Reserves for Contingencies (c)		$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000
Total YE Cash Reserve Target		$4,600,000	$4,600,000	$4,800,000	$4,900,000	$4,900,000	$5,000,000	$5,000,000

a. The annual escalation in charges is based on the annual growth rate in new customer accounts and drop in water use, if any.

b. Fund 523 capacity fee proceeds may be used general capital-related expenditures.
c. The Fund 522 capital reserves for contingencies is targeted at $2 million.

Table 24
ESD Test Year

Description	Test Year FY 20-21	Functional Cost Allocations					
		Flows	TSS	BOD	Accounts	EMs	Total
Contract & Services							
Prof Svc Contracts	$9,471	80%	10%	10%	0%	0%	100%
Maintenance Contracts	$233,073	100%	0%	0%	0%	0%	100%
Interagency Agmt	$1,913	30%	30%	30%	0%	10%	100%
Treatment	$817,205	50%	25%	25%	0%	0%	100%
Insurance	$57,602	0%	0%	0%	100%	0%	100%
Claims	$25,500	0%	0%	0%	100%	0%	100%
Internal Cost Allocations	$844,783	50%	0%	0%	30%	20%	100%
Depreciation							
Local (est from fixed assets)	$378,923	100%	0%	0%	0%	0%	100%
EWA JPA	$464,825	50%	25%	25%	0%	0%	100%
Grand Total	$2,833,295	$1,683,553	$322,029	$322,029	$336,537	$169,148	$2,833,295
Total Cost of Service Allocations		**59%**	**11%**	**11%**	**12%**	**6%**	**100%**

Table 25
ESD Accounts & Water Meters

Customer Class	5-Yr Avg Water Use (HCF/yr, a)	No Water Meter	Water Meter Size (inches) 5/8"	3/4"	1"	1-1/2"	2"	3"	Grand Total Accounts		Grand Total EMs	
AG	1,794	8	2			2	6		18	0.5%	60	1.1%
CM 0 (unmetered)	0	79							79	2.2%	0	0.0%
CM 2 (low strength)	64,229	4	75	32	20	27	16		174	5.0%	436	7.7%
CM 3 (med strength)	40,860	3	21	2	35	16	10	1	88	2.5%	286	5.1%
CM 4 (high strength)	20,937	6	11	1	4	6	5	1	34	1.0%	107	1.9%
MF (2,948 dwellings)	123,704	47	244	78	79	30	42	2	522	15%	2,149	38%
SF	290,714	15	1,314	1,071	181	14	5		2,600	74%	2,600	46%
Total Accounts	542,238	162	1,667	1,184	319	95	84	4	3,515	100%		
Equivalent Meters (EM)											5,639	100%
Total Charges		$0.00	$66,828	$47,471	$25,300	$19,896	$34,022	$3,147			$196,663	

Annual Fixed Charge for calculating EMs (FY 2020-21)							
CM	$0.00	$34.97	$52.45	$87.42	$174.83	$279.73	$524.50
MF	$0.00	$69.94	$104.90	$174.84	$349.66	$559.46	$1,049.00
SF	$0.00	$34.97	$34.97	$34.97	$34.97	$34.97	$34.97

Equivalent Meters (EM) are based on fixed annual charges for sewer services, with 1.0 EM equal to the annual single family charge.
a. Billable water use is based on a five year historical average water use ending in FY 2018-19. Residential water use is the wintertime minimum demands. Water use is estimated where no meter exists.

Table 26
ESD Sewage Flow Mass Balance

Customer Class	5-Yr Avg Water Use (HCF/yr, b)	Water Use Return to Sewer	Sewage Flow (MGD)		Sewage TSS Strength (PPM)	Sewage TSS Strength (Lbs/day)		Sewage BOD Strength (PPM, est, a)	Sewage BOD Strength (Lbs/day)	
AG	1,794	85%	0.003	*0.4%*	352	9	*0.4%*	376	10	*0.4%*
CM 0 (unmetered)	0	95%	0.000	*0.0%*	352	0	*0.0%*	376	0	*0.0%*
CM 2 (low strength)	64,229	95%	0.125	*15.2%*	181	189	*8.3%*	199	207	*8.0%*
CM 3 (med strength)	40,860	95%	0.080	*9.7%*	203	135	*5.9%*	229	152	*5.9%*
CM 4 (high strength)	20,937	95%	0.041	*4.9%*	671	228	*10.0%*	1,042	354	*13.7%*
MF	123,704	85%	0.216	*26%*	352	632	*28%*	376	676	*26%*
SF	290,714	60%	0.360	*44%*	364	1,094	*48%*	398	1,195	*46%*
Total	542,238		0.824	*100%*		2,287	*100%*		2,594	*100%*
Adjustments			0.160		1,248	1,666		1,085	1,448	
WWTP EWA Influent (c)			0.984		482	3,952		493	4,043	

a. BOD is estimated to equal 45% of CBOD
b. Billable water use is based on a five year historical average water use ending in FY 2018-19. Residential water use is the wintertime minimum demands. Water use is estimated where no meter exists.
c. EWA value is from EWA

Table 27
ESD Account Loading Characteristics & Allocations

Customer Class	Flows	TSS	BOD	Accounts	EMs	Weighted Total
Loading Allocations	**59%**	**11%**	**11%**	**12%**	**6%**	**100%**
Load per 1.0 EDU	138	0.42	0.46	1.0	1.0	
EDU Load Units	GPD	PPD	PPD	Account	5/8" Meter	
Load per 1.0 EDU	68	364	398	1.0	1.0	
EDU Load Units	HCF/Yr	ppm	ppm	Account	5/8" Meter	
Customer Class						
AG	0.4%	0.4%	0.4%	0.5%	1.1%	**0.4%**
CM 0 (unmetered)	0.0%	0.0%	0.0%	2.2%	0.0%	**0.3%**
CM 2 (low strength)	15.2%	8.3%	8.0%	5.0%	7.7%	**12%**
CM 3 (med strength)	9.7%	5.9%	5.9%	2.5%	5.1%	**7.7%**
CM 4 (high strength)	4.9%	10.0%	13.7%	1.0%	1.9%	**5.9%**
MF	26%	28%	26%	15%	38%	**26%**
SF	44%	48%	46%	74%	46%	**48%**
Total	100%	100%	100%	100%	100%	**100%**

Table 28
ESD Cost of Service Analysis

Customer Class	FY 21-22 Bills	Charge Allocations (FY18-19)	Cost of Service Allocations	COSA Rate Adjustments
AG	$8,542	0.3%	0.4%	50%
CM 0 (unmetered)	$38,747	1.3%	0.3%	-80%
CM 2 (low strength)	$336,987	11.5%	11.9%	3.2%
CM 3 (med strength)	$239,996	8.2%	7.7%	-7%
CM 4 (high strength)	$147,764	5.1%	5.9%	16%
Total CM	$763,494	26%	26%	
MF	$791,154	27%	26%	-5.3%
SF	$1,355,193	46%	48%	3.7%
Total	$2,918,383	100%	100%	0%

COSA adjustment findings of less than 10%, or findings on customers smaller than 10% of the customer base, are not material based on the variances in data, assumptions and analysis methodologies.

Table 29
ESD Projected EDUs for Capacity Fee Update

Customer Class	Cost of Service Allocations	FY 2020-21 Capacity-based COSA EDUs (b)	Build out Flows (a)
AG	0.4%	24	
CM 0 (unmetered)	0.3%	14	
CM 2 (low strength)	11.9%	643	
CM 3 (med strength)	7.7%	414	
CM 4 (high strength)	5.9%	316	
Total CM	26%	1,412	
MF	26%	1,386	
SF	48%	2,600	
Total	100%	5,398	6,583
Increase to Buildout			22%
Total Sewer Flow (MGD)		0.98	1.2

EDU: Equivalent Dwelling Units

a. 2011 Sewer Master Plan Update (ADWF)

b. The COSA-based EDUs represents the number of EDUs based on proportional-capacity cost allocations."

Table 30
ESD Capacity Fee Update

Description	Current (Buy-in)	Future Asset Values at Buildout
Existing Assets		
Asset Valuation as of 2019	$20,079,680	$20,079,680
Accumulated Deprecation	$5,668,758	$5,668,758
Total OCLD	$14,410,923	$14,410,923
Investments in EWA JPA	$5,856,980	$5,856,980
CWIP (2022)		$3,036,504
CIP through FY 28-29		$14,575,769
Total Asset Value (original cost)	$20,267,903	$37,880,176
System Capacity (EDU)	6,583	6,583
Subtotal Fee ($/EDU)	$3,079	$5,754
Plus Cash Reserves	$10,568,199	$11,864,279
Current Customers (EDUs)	5,398	5,398
Subtotal Fee ($/EDU)	$1,958	$2,198
Updated Capacity Fee	$5,037	$7,952
Current Capacity Fee (a)	$2,680	$2,680
Change (decrease)	88%	197%

ESD has a capacity/ownership of 5% & 4.74% in EWA 38 MGD liquid & solids assets, respectively.

a. The current CSD capacity fees were approved in June 1997. Between 1997 and 2022 the cost of construction (ENRCCI) has increased by 116%. If the current capacity fee had been escalated for inflation, it would currently be $5,789 (plus assets added since 1997).

Table 31
ESD Capacity Fee EDUs by Sewer Account Classification

Residential	Muni Code 18.08.025 (EDUs)	Updated COSA (EDUs)
Single Family	1.0	1.0
Multi-family	0.8	0.5
Mobile Home/Trailer Park Space	0.5	0.5
Commercial		
Food Service Establishments	3.0	3.0
Hotel/Motel Units w/ kitchens	0.4	0.4
Hotel/Motel Units w/out kitchens	0.6	0.6
Buildings Not Otherwise Listed		
First 1,000 Square Feet	1.2	1.2
Additional 1,000 Square Feet	0.7	0.7
Self service Laundry, per washer	1.0	1.0
Churches, Theaters & Auditoriums		
Capacity (per 10 seats)	0.1	0.1
Additional 1,000 Square Feet	0.7	0.7
Schools (EDUs per ADA)		
Elementary	0.020	0.020
Junior High	0.025	0.025
High School	0.042	0.042
Convalescent Homes (EDUs per Bed)		
Skilled Nursing Care Facilities	0.7	0.7
Care Facilities w/ more than 6 beds	0.5	0.5
Care Facilities w/ less than 7 beds	1.0	1.0
Gas Stations w/ less than 5 pumps	2.0	2.0
Gas Stations w/ more than 4 pumps	3.0	3.0
Gas Stations Floor Drain (each)	0.5	0.5
Warehouse (EDU per fixture unit)	0.25	0.25

EDU: Equivalent Dwelling Units
The City Engineer shall determine the capacity fee for new connections not applicable to the above classifications.
The new EDUs are available for MF dwellings only.
Appendix H evaluating the wastewater discharged for current MF versus SF households

Table 32
ESD Rate Schedule

Rate Classification	Sub Category	Flow Rate ($/HCF)	Return Ratio	Notes
Residential			85%	Historical Median sewage discharge (HCF/yr)
Single Family	SF	$5.19		84.7
Multi-family	MF	$5.19		43.1
Trailer Park	TP	$5.19		43.1
Commercial	**Group**		95%	Median sewage discharge: see appendix
CM 0 (unmetered)	AG or CM 0	Varies		Typically SF median discharge equivalent
CM 2 (low strength)	CM 2	$5.27		
CM 3 (med strength)	CM 3	$5.93		
CM 4 (high strength)	CM 4	$7.24		

Fixed Annual		Water Meter Size (inches)					
Charge (all classes)	Unmetered	**5/8"**	**3/4"**	**1"**	**1-1/2"**	**2"**	**3"**
Single Family	$0.00	$34.97	$34.97	$34.97	$34.97	$34.97	$34.97
Multi-family	$0.00	$69.94	$104.90	$174.84	$349.66	$559.46	$1,049.00
Other	$0.00	$34.97	$52.45	$87.42	$174.83	$279.73	$524.50

Sanitation Charge Formula

Charges are billed annually on the County Assessor's Property Tax Bill
Charges include the fixed annual charge based on the water meter size plus the water usage charge
Billed Water Usage Charges
- Non-residential: Fiscal year-round water use times return (to sewer) ratio
- Residential: Annualized most recent five year average of lowest and second lowest water meter reads times return (to sewer) ratio, or 300 HCF whichever less

Customers without a water usage history are billed a flat rate based on median usage
See appendix for commercial users in each group

Table 33
ESD Projection of Recommend Rates

Description	Existing FY 23-24	Year 1 FY 24-25	Year 2 FY 25-26	Year 3 FY 26-27	Year 4 FY 27-28	Year 5 FY 28-29
Increases to Unit Sewer Service Charges:*		**19%**	**19%**	**19%**	**19%**	**19%**
Residential ($/HCF billable water)						
Single Family	$5.19	$6.18	$7.35	$8.75	$10.41	$12.39
Average Monthly Bill (7HCF)	$39.24	$46.73	$55.58	$66.16	$78.71	$93.68
Multi-family	$5.19	$6.18	$7.35	$8.75	$10.41	$12.39
Trailer Park	$5.19	$6.18	$7.35	$8.75	$10.41	$12.39
Commercial ($/HCF billable water)						
CM 2 (low strength)	$5.27	$6.27	$7.46	$8.88	$10.57	$12.58
CM 3 (med strength)	$5.93	$7.06	$8.40	$10.00	$11.90	$14.16
CM 4 (high strength)	$7.24	$8.62	$10.26	$12.21	$14.53	$17.29
Fixed Annual Charge (per account, by water meter size)						
Single Family (all)	$34.97	$41.61	$49.52	$58.93	$70.13	$83.45
Multi-family & Trailer Park						
5/8"	$69.94	$83.23	$99.04	$117.86	$140.25	$166.90
3/4"	$104.90	$124.83	$148.55	$176.77	$210.36	$250.33
1"	$174.84	$208.06	$247.59	$294.63	$350.61	$417.23
1-1/2"	$349.66	$416.10	$495.16	$589.24	$701.20	$834.43
2"	$559.46	$665.76	$792.25	$942.78	$1,121.91	$1,335.07
3"	$1,049.00	$1,248.31	$1,485.49	$1,767.73	$2,103.60	$2,503.28
All Other Classes (Commercial)						
5/8"	$69.94	$83.23	$99.04	$117.86	$140.25	$166.90
3/4"	$52.45	$62.42	$74.28	$88.39	$105.18	$125.16
1"	$87.42	$104.03	$123.80	$147.32	$175.31	$208.62
1-1/2"	$174.83	$208.05	$247.58	$294.62	$350.60	$417.21
2"	$279.73	$332.88	$396.13	$471.39	$560.95	$667.53
3"	$524.50	$624.16	$742.75	$883.87	$1,051.81	$1,251.65

EDU: Equivalent Dwelling Units (per Dwelling Unit or Sewer Connection)

* Per Proposition 218 requirements, for Years 2-5 this is the maximum annual rate increase that may be applied. After Year 1 and annually through Year 5, City Council will receive a reporting of the expenses, revenues, and Capital needs which will allow them to decrease the annual rate for Years 2-5 if they deem it appropriate.