

**Water, Sewer, and Refuse Rate Study  
for  
Del Rey Community Services District**

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**Prepared by:**

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# **Water, Sewer, and Refuse Rate Study for Del Rey Community Services District**

## **Purpose**

The purpose of this cost-of-service rate study is to review and modify the existing rate structure such that customers pay rates in proportion to the cost to provide specific services. As a part of this study, overall operating costs and revenue have been analyzed to evaluate reasonableness of costs, and the need to increase overall revenue. These steps are conducted to be consistent with the requirements of California's Proposition 218.

## **WATER RATES**

Attachment 1 shows historical and projected water revenues and expenses. The water enterprise has had negative cash flow over the past several years. For this Fiscal Year 2023-24, the projected negative cash flow is approximately \$258,000. The water enterprise has no available cash balance and has been utilizing restricted funds to cover expenses.

The cost for Sustainable Groundwater Management Act (SGMA) compliance is the largest increasing cost component, projected to be \$225,000 next year. Beyond inflationary increases, a cost component is included for unpaid customer bills equal to eight percent of revenue. A cost component is also included for equipment replacement, such as pumps, equal to \$20,000 per year.

The revenue and expense table shows revenue needing to increase 200 percent to balance expenses. This increases existing revenue by three times. However, the cost allocation table below shows more of the cost increase being assigned to other-than-single-family, 117 percent single-family versus 241 percent other. This is because the non-metered fixed monthly cost currently charged to single-family is closer to cost than the rates charged to other customers.

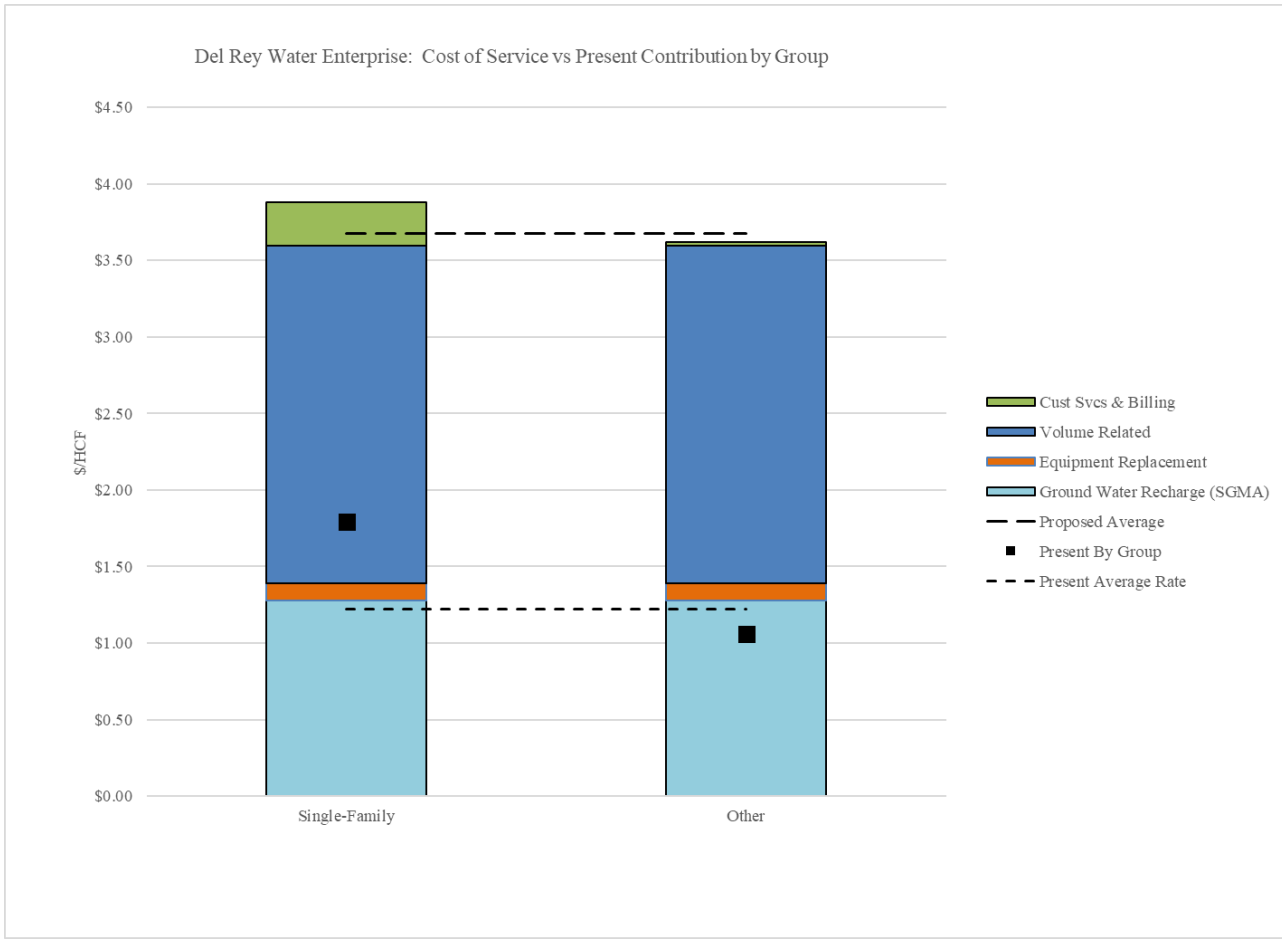
The bar chart below the table illustrates present versus proposed rates, including the cost components within the proposed rates. Notice the significance of the SGMA charges. Notice also that the current volumetric rate of \$0.85 per hundred cubic feet (HCF) doesn't even cover the SGMA cost component for non-single-family customers. Further, the average rate collected presently is far below the actual cost of operation.

The calculated average overall system rate is lower than the proposed rate for single-family, and higher than the proposed rate for other customers. This is because of the higher billing and customer service cost for single-family compared to other customers that tend to use greater volumes of water.

The following is the summary presentation of the cost allocation table for the water enterprise. Attachment 1A shows the source data for the summary results below.

Water Enterprise Revenue Requirement Allocation Table			
	Total	Single-Family	Other
Volume Related	\$389,300	\$85,016	\$304,284
Ground Water Recharge (SGMA)	\$225,000	\$49,136	\$175,864
Equipment Replacement	\$20,000	\$4,368	\$15,632
Cust Svcs & Billing	\$13,700	\$10,968	\$2,732
Revenue Requirement	\$648,000	\$149,487	\$498,513
Revenue at Present Rates	\$215,000	\$69,000	\$146,000
Excess/(Deficiency) of Funds	(\$433,000)	(\$80,487)	(\$352,513)
	200%	117%	241%
Quantity Delivered (HCF)	176,306	38,502	137,804
Average by Class (\$/HCF)	\$3.68	\$3.88	\$3.62
<b>Summary Statistics</b>			
Present Total by Class (\$/HCF)		\$1.79	\$1.06
Present Average Rate	\$1.22	\$1.22	\$1.22
Volume Related		\$2.21	\$2.21
Ground Water Recharge (SGMA)		\$1.28	\$1.28
Equipment Replacement		\$0.11	\$0.11
Cust Svcs & Billing		\$0.28	\$0.02
Total by Class (\$/HCF)		\$3.88	\$3.62
Proposed Average	\$3.68	\$3.68	\$3.68

The bar chart below illustrates the results shown in the table above.



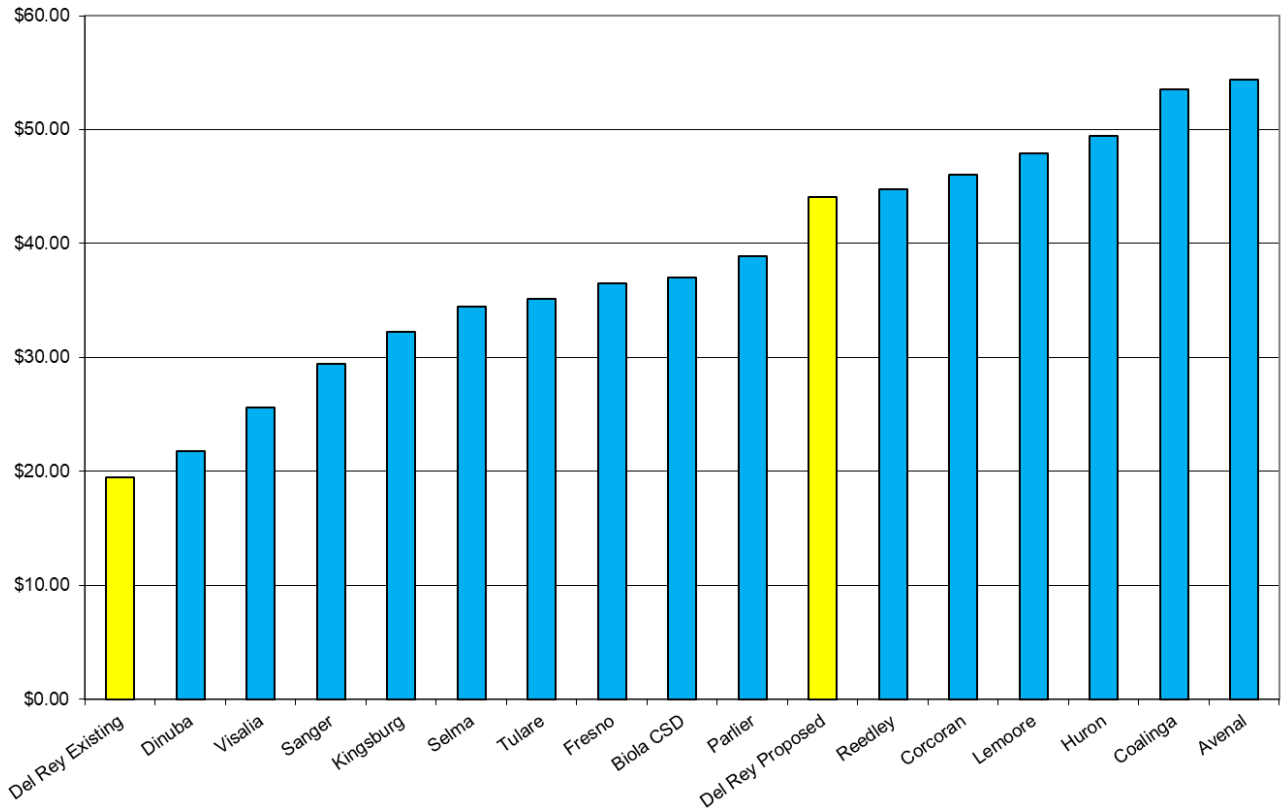
The following proposed rates are consistent with the cost-of-service calculations. Some additional work is needed to identify the meter sizes associated with the commercial customer codes, and to address special rates that must be adjusted to be consistent with the overall proposed rate structure.

Commercial and industrial customers have been charged a monthly amount of \$6.66 per account as a savings fund for meter replacement. The total amount collected each year is approximately \$2,800. Considering the relatively small amount of this additional amount and the overall large increases to cover operating costs, this monthly add-on amount is proposed to be ended.

Del Rey CSD Water Rates and Charges							
	Current Rates	Proposed Rates					
		3/1/2024		3/1/2025	3/1/2026	3/1/2027	3/1/2028
		Percent Change	New Rate	3%	3%	3%	3%
<b>Unmetered Customers (\$/Mo)</b>							
Single-Family	\$20.29	117%	\$44.03	\$45.35	\$46.71	\$48.11	\$49.55
Small Commercial	\$32.16	117%	\$69.79	\$71.88	\$74.04	\$76.26	\$78.55
<b>Metered Customer Fixed Charge (\$/Mo)</b>							
Commercial 1	\$13.98	241%	\$47.67	\$49.10	\$50.57	\$52.09	\$53.65
Commercial 3	\$44.68	241%	\$152.36	\$156.93	\$161.64	\$166.49	\$171.48
Commercial 4	\$102.74	241%	\$350.34	\$360.85	\$371.68	\$382.83	\$394.31
Commercial 5	\$139.60	241%	\$476.04	\$490.32	\$505.03	\$520.18	\$535.79
Commercial 6	\$558.34	241%	\$1,903.94	\$1,961.06	\$2,019.89	\$2,080.49	\$2,142.90
<b>Metered Customer Volume Charge (\$/HCF)</b>	\$0.85	241%	\$2.90	\$2.99	\$3.08	\$3.17	\$3.27
<b>Commercial/Industrial Meter Charge (\$/Mo)</b>	\$6.66	Ended					

The cost comparison below show single-family water costs for a home using 8,000 gallons per month. Del Rey moves from the lowest to middle-right area on the chart. Del Rey's higher costs are caused by it having a small number of customers, but still having necessary overhead costs associated with a larger water system. This is also true for the sewer system.

Single-Family Residential Water Cost Comparison  
Median Customer at 8,000 Gallons / Month



Unbilled water for Del Rey appears very high. This could be unmetered water to parks, commercial and industrial meters registering low, water use at the wastewater plant, system leaks, theft, or other reasons. The water balance shown below is based on estimated billing during fiscal year 2022-23 against water production over the past 12 months, a more recent period, so the comparison is not the exact same 12-month period. Single-family usage is based on average usage of 8,000 gallons per month since single-family homes are not yet metered. Even so, unmetered water is shown to be 42 percent of water produced. This is significant for Del Rey because water enterprise revenue is likely being missed, and more relevant, the district must pay for SGMA water based on what is produced from wells, rather than what it billed to customers. More work is needed in this area to reduce unbilled water. The first steps, beyond checking for leaks, is to check larger customers meters to assure they are measuring correctly, and to account for all unmetered services.

Del Rey Water Production vs Amounts Billed		
Production by Month		
Nov-22	24,712,900	gallons
Dec-22	24,770,500	
Jan-23	20,657,600	
Feb-23	11,404,000	
Mar-23	11,914,200	
Apr-23	13,212,600	
May-23	15,647,900	
Jun-23	18,096,300	
Jul-23	20,237,300	
Aug-23	19,398,300	
Sep-23	19,304,900	
Oct-23	26,517,700	
Total Production	225,874,200	gallons
	30,197,086	cubic feet
Total Billed (Estimate)	17,630,709	cubic feet
Unbilled	12,566,376	cubic feet
	42%	

## SEWER RATES

Attachment 2 shows historical and projected sewer revenues and expenses. The sewer enterprise has not had a significant negative cash flow; however, increasing costs will cause a negative cash flow if revenue is not increased. Historically, unpaid customer bill costs have been assigned to sewer and refuse, and not to water. The amount assigned to the sewer enterprise in FY22/23 appears to be about \$99,000, or 15 percent of sewer revenue. The amount going forward is set at eight percent, as with water. The sewer enterprise includes \$50,000 per year for equipment replacement. The sewer enterprise has no available cash balance.

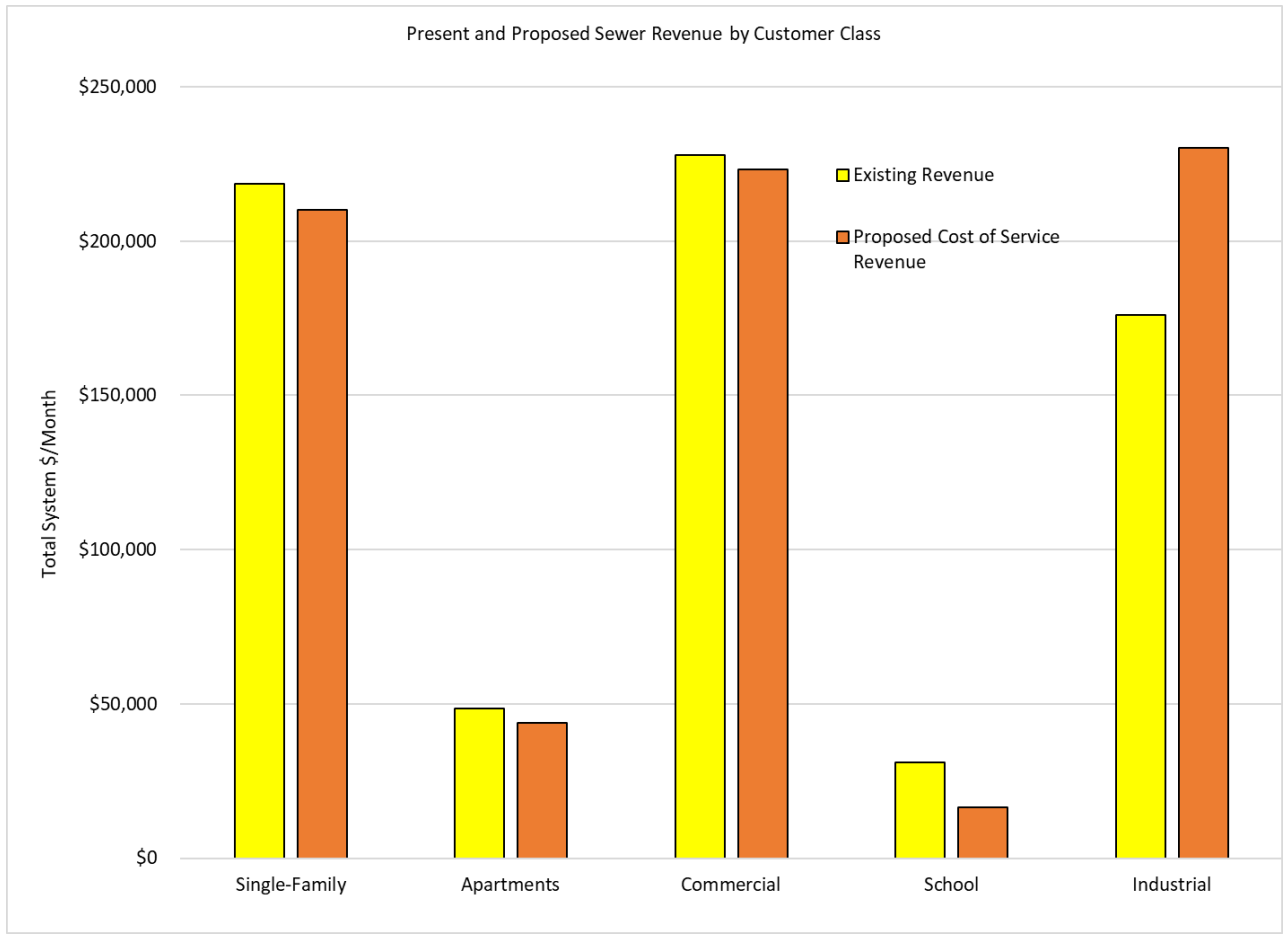
The revenue and expense table shows a needed five percent increase for FY24/25 over FY23/24. In the cost-of-service rate model, five percent translates to three percent, to achieve \$724,000 based on current monthly income.

The cost-of-service results show single-family, apartments, and commercial customers to be close already to the cost to serve. However, the sewer rate for the school should be reduced substantially, based on a reasonable cost per student, and the cost for the one industrial customer discharging into the industrial plant should be increased substantially, based on the high concentration discharge from the customer. Attachments 2A through 2D provide the supporting data and calculations for the summary results below.

Sewer Enterprise Revenue Requirement Allocation Table						
Cost Component (\$/yr)	Total	Single-Family	Apartments	Commercial	School	Industrial
Collection and Treatment	<b>\$547,030</b>	\$125,994	\$35,224	\$183,215	\$12,485	\$190,112
Debt Service	<b>50,970</b>	\$11,740	\$3,282	\$17,071	\$1,163	\$17,714
Equipment Replacement	<b>50,000</b>	\$11,516	\$3,220	\$16,746	\$1,141	\$17,377
Billing & Cust Svc	<b>76,000</b>	60,727	2,182	6,182	1,818	5,091
<b>Total Revenue from Rates</b>	<b>\$724,000</b>	\$209,977	\$43,908	\$223,215	\$16,607	\$230,293
<b>Revenues at Present Rates</b>	<b>\$702,000</b>	\$218,500	\$48,500	\$228,000	\$31,000	\$176,000
<b>Balance/(Deficiency) of Funds</b>	<b>(\$22,000)</b>	\$8,523	\$4,592	\$4,785	\$14,393	(\$54,293)
	3%	-4%	-9%	-2%	-46%	31%
<b>Summary Statistics</b>		<b>Dwelling Units</b>				<b>TG</b>
Customer Units	40,341	279	78			2,776
Existing Cost per Unit	\$17.40	\$65.37	\$51.82			\$63.40
Calculated Cost per Unit	\$17.95	\$62.82	\$46.91			\$82.96
Percent change		-4%	-9%			
Percent of total						
Total Gallons Treated (TG)	40,341					
Collection and Treatment	\$13.56					
Debt Service	\$1.26					
Equipment Replacement	\$1.24	\$16.06				
Billing & Cust Svc	\$1.88	\$1.88				
<b>Overall Average cost per TG</b>	<b>\$17.95</b>	<b>\$17.95</b>				



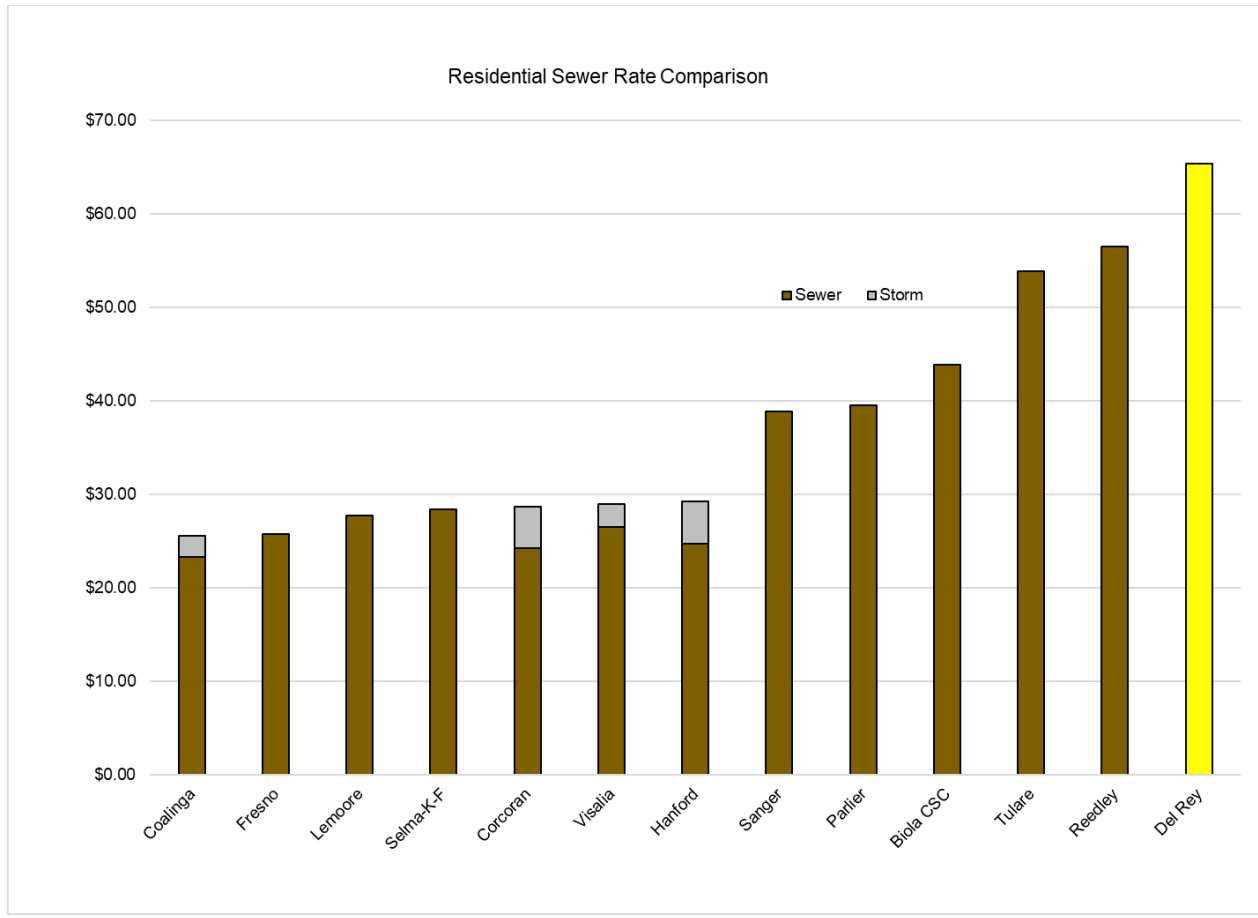
The bar chart below illustrates the cost comparison on a gross revenue-requirement basis.



The following proposed rates are consistent with the cost-of-service calculations; however, rather than decrease some rates marginally, the approach is to hold them constant until inflation catches up. The exception is the school because the existing rate must be reduced substantially to achieve cost-of-service equity. Some additional work is needed to identify the service levels associated with the commercial customer codes. These customers should be transferred to the metered sewer rate shown in the rate table. The volumetric sewer rates are based on discharge volume of sewage, not on metered potable water. To the extent a commercial customer is using potable water for irrigation, cooling tower, or other non-sewer purpose, billed volumes must be adjusted accordingly.

<b>Del Rey CSD Sewer Rates and Charges</b>											
	<b>Current Rates</b>	<b>Proposed Rates</b>									
		<b>3/1/2024</b>		<b>3/1/2025</b>		<b>3/1/2026</b>		<b>3/1/2027</b>		<b>3/1/2028</b>	
		Percent Change	Rate	Percent Change	Rate	Percent Change	Rate	Percent Change	Rate	Percent Change	Rate
<b>Single-Family</b>	\$65.37	0%	\$65.37	0%	\$65.37	2%	\$66.68	3%	\$68.68	3%	\$70.74
<b>Duplex</b>	\$130.74	0%	\$130.74	0%	\$130.74	2%	\$133.35	3%	\$137.36	3%	\$141.48
<b>Apartments (per dwelling unit)</b>	\$51.82	0%	\$51.82	0%	\$51.82	0%	\$51.82	1%	\$52.34	3%	\$53.91
<b>Commercial Rates</b>											
Commercial 2	\$127.82	0%	\$127.82	1%	\$129.10	3%	\$132.97	3%	\$136.96	3%	\$141.07
Commercial 3	\$1,289.96	0%	\$1,289.96	1%	\$1,302.86	3%	\$1,341.95	3%	\$1,382.20	3%	\$1,423.67
Commercial 5	\$1,661.66	0%	\$1,661.66	1%	\$1,678.28	3%	\$1,728.62	3%	\$1,780.48	3%	\$1,833.90
Commercial 6	\$2,353.22	0%	\$2,353.22	1%	\$2,376.75	3%	\$2,448.05	3%	\$2,521.50	3%	\$2,597.14
Commercial 4	\$10,225.60	0%	\$10,225.60	1%	\$10,327.86	3%	\$10,637.69	3%	\$10,956.82	3%	\$11,285.53
<b>School</b>											
Per Student (based on 270 students)	\$9.48	-39%	\$5.46	0%	\$5.46	0%	\$5.46	0%	\$5.46	0%	\$5.46
<b>Sewer Metered (based on discharge volume)</b>											
Fixed Charge (\$/Mo)	\$15.42	324%	\$65.37	3%	\$67.33	3%	\$69.35	3%	\$71.43	3%	\$73.57
Volume Charge (\$/HCF) over 700 CF	\$2.90	125%	\$6.53	3%	\$6.73	3%	\$6.93	3%	\$7.14	3%	\$7.35
<b>Industrial Rates</b>											
Fixed Charge (\$/Mo)			\$500.00	3%	\$515.00	3%	\$530.45	3%	\$546.36	3%	\$562.75
Volume Charge (\$/HCF)			\$4.81	3%	\$4.95	3%	\$5.10	3%	\$5.26	3%	\$5.41
Biochemical Oxygen Demand (\$/lb-BOD)	Custom		\$1.05	3%	\$1.08	3%	\$1.11	3%	\$1.15	3%	\$1.18
Total Suspended Solids (\$/lb-TSS)			\$2.83	3%	\$2.91	3%	\$3.00	3%	\$3.09	3%	\$3.19

Del Rey's single-family sewer rates are at the top of the comparison scale, as shown below. A good comparison to Del Rey is Biola Community Services District, West of Fresno, approximately the same size. It should be noted that Biola is will soon begin their own rate increase process for both sewer and water.



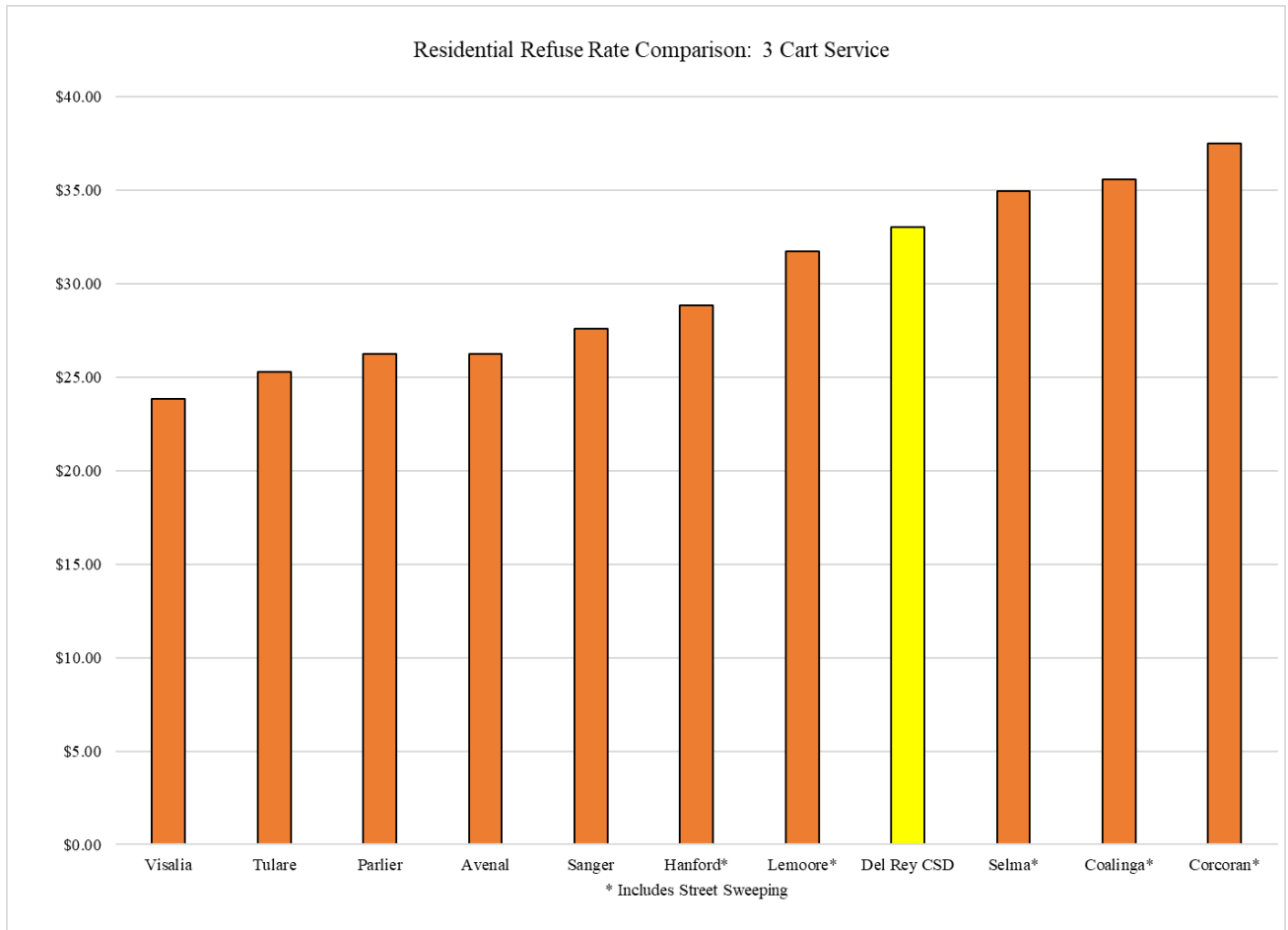
## REFUSE RATES

Refuse services for Del Rey are provided by a private company, Industrial Waste & Salvage Co. (IWS). The current agreement was effective July 1, 2020, for an initial term of five years. The agreement includes a consumer price index (CPI) adjustment after the first two years, then annually thereafter. Therefore, the first CPI adjustment was on July 1, 2022, and the second on July 1, 2023. IWS bills Del Rey monthly for services provided based on the fee schedule in the agreement, now escalated. Del Rey bills its customers on a separate, higher, rate schedule to cover internal costs of administration.

Del Rey's role for the refuse enterprise is billing, payment collection, and limited customer services. The differences between Del Rey's rates and fees paid IWS cover a portion of Del Rey's billing, customer services, and general overhead.

Attachment 3 shows revenues and expenses for the refuse enterprise. It appears that during FY22/23, the amount of unpaid customer bills assigned to refuse was 11 percent of refuse revenue, or \$17,000. The same is assumed for this fiscal year. Subtracting payments to IWS from revenue yields approximately \$25,000 to cover district expenses, or 25 percent of the amount paid IWS.

Single-family, three-cart rates are presently \$33.04 per month, and will continue increasing with the annual CPI updates. Considering the district's existing 25% for administrative, and the comparison chart below, it is not recommended to change refuse rates.



# ATTACHMENT 1: Water Revenue, Expense, and Projected Fund Balance

<b>DEL REY WATER ENTERPRISE FUND</b>												
<b>Historical and Projected Revenues and Expenses</b>												
	FY20/21	FY21/22	FY22/23	1		2		3		4		5
				Audited	FY21/22 Audited	Unaudited	FY23/24 Projected	FY24/25 Projected	FY25/26 Projected	FY26/27 Projected	FY27/28 Projected	
<b>Revenues:</b>												
Residential	\$71,830	\$72,370										
Commercial	40,009	43,654	\$216,000	\$216,000	\$648,000	\$667,000	\$667,000	\$687,000	\$708,000	\$729,000		
Industrial	141,912	149,020										
Property tax refunds		\$5,989										
Taxes	37,246	40,905	37,174	43,000	43,000	44,000	44,000	45,000	46,000	47,000		3.0%
\$6.66 meter charge (terminate)	3,482	-	2,800	2,800	-	-	-	-	-	-		
Unpaid Bills / Bad Debt (Estimates)			-	-	(51,840)	(53,360)	(54,960)	(56,640)	(58,320)	(60,000)		
<b>Total Operating Revenue</b>	<b>\$294,479</b>	<b>\$305,949</b>	<b>\$261,963</b>	<b>\$261,800</b>	<b>\$639,160</b>	<b>\$657,640</b>	<b>\$677,040</b>	<b>\$697,360</b>	<b>\$717,680</b>	<b>\$717,680</b>		
			\$261,515									
Unpaid Bills: Percent of Billed Amount			0%	0%	8%	8%	8%	8%	8%	8%		
<b>Operation &amp; Maintenance Expenses:</b>												
Salaries and wages	71,122	73,652	55,535	55,535	60,000	61,800	63,700	65,600	67,600	69,600		3.0%
Employee benefits and payroll taxes	18,442	26,539	25,000	25,000	25,000	25,800	26,600	27,400	28,200	29,000		3.0%
Pension expense (recovery)	10,827	-	-	-	-	-	-	-	-	-		
Other Post Employment Benefits (OPEB)	18,807	13,856	13,000	13,000	19,000	19,600	20,200	20,800	21,400	22,000		3.0%
Directors' fees	2,021	1,583	1,614	1,600	1,600	1,600	1,600	1,600	1,600	1,600		3.0%
Professional fees	40,590	29,895	57,166	60,000	60,000	61,800	63,700	65,600	67,600	69,600		3.0%
Utilities	113,770	100,688	100,000	110,000	121,000	127,100	133,500	140,200	147,200	154,200		5.0%
<b>Sustainable Ground Water</b>												
Repair, maintenance, and testing	64,950	57,824	75,857	75,857	75,000	77,300	79,600	82,000	84,500	87,000		3.0%
License and permits	2,896	3,194	5,176	5,200	5,200	5,400	5,600	5,800	6,000	6,200		3.0%
Insurance	8,331	8,611	10,460	11,000	12,000	12,400	12,800	13,200	13,600	14,000		3.0%
General and administrative	13,705	13,180	13,500	13,700	14,000	14,400	14,800	15,200	15,600	16,000		3.0%
<b>Total Operating Expenses</b>	<b>\$365,461</b>	<b>\$367,475</b>	<b>\$464,308</b>	<b>\$519,892</b>	<b>\$617,800</b>	<b>\$639,000</b>	<b>\$660,900</b>	<b>\$683,400</b>	<b>\$706,800</b>	<b>\$706,800</b>		
<b>Operating Gain (Loss) excluding depreciation</b>	<b>(\$70,982)</b>	<b>(\$61,526)</b>	<b>(\$202,345)</b>	<b>(\$258,092)</b>	<b>\$21,360</b>	<b>\$18,640</b>	<b>\$16,140</b>	<b>\$13,960</b>	<b>\$11,880</b>	<b>\$10,880</b>		
Equipment Replacement												
TCP Grant Revenue		\$259,229										
ARPA Grant Fresno County			\$52,540									
Interest income (restricted)	\$142,380	\$120,843	667									
	\$142,380	\$380,072	\$53,207	\$0	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)		
<b>Total Gain (Loss) excluding depreciation</b>	<b>\$71,398</b>	<b>\$318,546</b>	<b>(\$149,138)</b>	<b>(\$258,092)</b>	<b>\$1,360</b>	<b>(\$1,360)</b>	<b>(\$3,860)</b>	<b>(\$6,040)</b>	<b>(\$9,120)</b>	<b>(\$9,120)</b>		
<b>Notes:</b>												

## ATTACHMENT 1A: Water Cost Allocations by Customer Group

Del Rey Water Cost-of-Service Inputs				
<b>Allocations by Function to Customer Groups</b>				
		Total	SF	Other
<b>Volume</b>				
Treated Sales (TG/Yr)		176,306	38,502	137,804
Volume %		100%	22%	78%
<b>Sustainable Ground Water Management (SGMA)</b>				
Volume % (from above)		100%	22%	78%
<b>Four-Year Avg Cost</b>	\$225,000	\$225,000	\$49,136	\$175,864
Allocated based on Volume				
<b>Equipment Replacement</b>				
Volume % (from above)		100%	22%	78%
	\$50,000	\$50,000	\$10,919	\$39,081
Allocated based on Volume				
<b>Customer Services and Billing Costs (Count of bills issued)</b>				
		Total	SF	Other
Customer Count	307	307	273	34
Customer %			89%	11%
Multiplier			1	2
Weighted Count		341	273	68
Allocations %		100%	80%	20%
Cust Svcs & Billing Cost	\$13,700			
<b>Cust Svcs and Billing Results</b>		<b>\$13,700</b>	<b>\$10,968</b>	<b>\$2,732</b>
<b>Volume Costs</b>				
		Total	SF	Other
Total COS from Rates	\$648,000			
Less SGMA	(\$225,000)			
Less Equipment Replacement	(\$50,000)			
Less Cust Svs & Billing	(\$13,700)			
Balance to Volume	\$359,300			
Volume % (from above)		100%	22%	78%
<b>Volume Results</b>		<b>\$359,300</b>	<b>\$78,464</b>	<b>\$280,836</b>

## ATTACHMENT 2: Sewer Revenue, Expense, and Projected Fund Balance

DEL REY SEWER ENTERPRISE FUND														
Historical and Projected Revenues and Expenses														
	FY20/21	FY21/22	FY22/23	FY23/24	1		2		3		4		5	
	Audited	Audited	Unaudited	Projected	FY24/25	Projected	FY25/26	Projected	FY26/27	Projected	FY27/28	Projected	FY28/29	Projected
Revenues:				Revenue Increases:										
														Inflation Factors
Residential	\$445,380	\$240,902	\$225,282	\$228,592										
Commercial	95,814	106,102	\$109,579	\$111,189	\$724,000		\$746,000		\$768,000		\$791,000		\$815,000	
Industrial	267,894	320,249	\$344,556	\$349,619										
Taxes	37,245	40,904	37,174	37,000	37,000		37,000		37,000		37,000		37,000	
Del Rey Packing Caustic Soda	-	-	11,956	12,000	12,500		12,900		13,300		13,700		14,100	3.0%
Sequoia Pumping	-	-	4,750	-	-		-		-		-		-	
Reimbursements	8,590	-	5,989	-	-		-		-		-		-	
Unpaid Bills / Bad Debt (Estimates)			(\$99,309)	(22,859)	(57,920)		(59,680)		(61,440)		(63,280)		(65,200)	
<b>Total Operating Revenue</b>	<b>\$854,923</b>	<b>\$708,157</b>	<b>\$639,977</b>	<b>\$715,541</b>	<b>\$761,000</b>		<b>\$783,000</b>		<b>\$805,000</b>		<b>\$828,000</b>		<b>\$852,000</b>	
Unpaid Bills: Percent of Billed Amount			15%	10%	8%		8%		8%		8%		8%	
<b>Operation &amp; Maintenance Expenses:</b>														
Salaries and wages	92,894	97,308	95,000	95,000	95,000		97,900		100,800		103,800		106,900	3.0%
Employee benefits and payroll taxes	24,088	35,125	35,000	35,000	35,000		36,100		37,200		38,300		39,400	3.0%
Pension expense (recovery)	14,142	-	-	-	-		-		-		-		-	
OPEB expense	37,615	27,712	25,000	25,000	25,000		25,800		26,600		27,400		28,200	3.0%
Directors' fees	4,041	3,165	4,506	4,000	4,000		4,100		4,200		4,300		4,400	3.0%
Professional fees	81,179	59,790	75,643	76,000	76,000		78,300		80,600		83,000		85,500	3.0%
Utilities	135,440	118,199	147,837	163,000	179,000		188,000		197,400		207,300		217,700	5.0%
Repair, maintenance, and testing	120,668	107,386	120,222	120,000	120,000		123,600		127,300		131,100		135,000	3.0%
License and permits	36,754	42,432	46,583	46,000	46,000		47,400		48,800		50,300		51,800	3.0%
Insurance	26,383	27,267	30,510	32,000	32,000		33,000		34,000		35,000		36,100	3.0%
Sustainable Ground Water	-	43,683	-	-	-		-		-		-		-	
General and administrative	42,408	59,583	32,214	40,000	40,000		41,200		42,400		43,700		45,000	3.0%
<b>Total Operating Expenses</b>	<b>\$615,612</b>	<b>\$621,650</b>	<b>\$612,515</b>	<b>\$636,000</b>	<b>\$652,000</b>		<b>\$675,400</b>		<b>\$699,300</b>		<b>\$724,200</b>		<b>\$750,000</b>	
Principal Paid	\$25,000	\$26,000	\$28,000	\$29,000	\$30,000		\$31,000		\$33,000		\$34,000		\$36,000	
Interest expense	\$25,054	\$25,670	\$23,535	\$22,275	\$20,970		\$19,620		\$18,225		\$16,740		\$15,210	
<b>Total with P Principal and Interest</b>	<b>\$665,666</b>	<b>\$673,320</b>	<b>\$664,050</b>	<b>\$687,275</b>	<b>\$702,970</b>		<b>\$726,020</b>		<b>\$750,525</b>		<b>\$774,940</b>		<b>\$801,210</b>	
Equipment Replacement					\$50,000		\$50,000		\$50,000		\$50,000		\$50,000	
<b>Total with Equipment Replacement</b>					<b>\$752,970</b>		<b>\$776,020</b>		<b>\$800,525</b>		<b>\$824,940</b>		<b>\$851,210</b>	
<b>Total Gain (Loss)</b>	<b>\$189,257</b>	<b>\$34,837</b>	<b>(\$24,073)</b>	<b>\$28,266</b>	<b>\$8,030</b>		<b>\$6,980</b>		<b>\$4,475</b>		<b>\$3,060</b>		<b>\$790</b>	

## ATTACHMENT 2A: Sewer Cost Allocations by Customer Group

Del Rey CSD Sewer Cost Allocation by Customer Group						
Volume Allocations	SF+Dupl.	MF	Commercial	Schools	Industrial	Total
Count of units	279	78		270	Measured Volume	
TG/Mo/Unit	5.40	5.40		3.41		
TG/Mo	1,507	421				
TG/Yr	18,079	5,054	13,511	920.7	2,776	40,341
Volume Allocation %	<b>45%</b>	<b>13%</b>	<b>33%</b>	<b>2.28%</b>	<b>7%</b>	<b>100%</b>
<b>Collection and Treatment Allocations</b>						
Customer Units	SF 279	MF 78	Commercial 6	Schools 1	Industrial 6	370
Allocated cost per unit	\$534.95	\$534.95				
Volume			\$217,033	\$14,789	\$17,836	
BOD					\$158,147	
TSS					\$49,219	
	\$149,250	\$41,726	\$217,033	\$14,789	\$225,202	<b>\$648,000</b>
				\$457,024		
				Allocate to SF, MF: Total - Com, Sch, Ind		
				\$190,976		
	\$44.58		Total SF, MF	357		
				Cost per living unit per year		
				\$534.95		
<b>Collection and Treatment Adjusted</b>	<b>23%</b>	<b>6%</b>	<b>33%</b>	<b>2%</b>	<b>35%</b>	<b>100%</b>
<b>Finance/Billing/Cust Svc</b>						
Billing Units	Single-Family 167	Multi-Family 2	Commercial 17	Schools 5	Industrial 7	Totals 198
Weighting Factor	1.0	3.0	1.0	1.0	2.0	
Result	167	6	17	5	14	209
Allocation	79.9%	2.9%	8.1%	2.4%	6.7%	100%



## ATTACHMENT 2B: Wastewater Treatment BOD and TSS Allocations

<b>Del Rey Wastewater Treatment BOD and TSS Allocations</b>									
<b>Costs to Assign to Collection and Treatment</b>									
Collection and Treatment									\$547,030
Debt Service									\$50,970
Capital Repair									\$50,000
									\$648,000
<b>Annual System Totals</b>									
Flow (TG)	40,341	% of Cost	40%	Assigned Cost	\$259,200	\$/TG	\$/Gal	\$/CF	\$/HCF
BOD (mg/L)			35%	\$226,800	\$5.62	\$0.00562	\$0.04205		\$4.21
TSS (mg/L)			25%	\$162,000	\$4.02	\$0.00402	\$0.03004		\$3.00
System Totals			100%	\$648,000					
<b>Residential/Commercial Allocation</b>									
Flow (MG)	37,565		93%	\$241,364					
BOD (mg/L)	209		30%	\$68,653					
TSS (mg/L)	127		70%	\$112,781					
Res/Com Total				\$422,798	65%	\$11.26	\$0.01126	\$0.08419	\$8.42
<b>Commercial Volume Rate</b>									
									Less Billing
									-\$1.88
									\$6.53
<b>Industrial Allocation</b>									
Flow (TG)	2,776		7%	\$17,836		\$6.43	\$0.00643	\$0.04806	\$4.81
BOD (mg/L)	6,515		70%	\$158,147					
TSS (mg/L)	750		30%	\$49,219					
Industrial Total				\$225,202	35%	\$81.12			
Combined Total				\$648,000	100%				
<b>Modeling Crosschecks</b>									
Flow	0		0%	\$0					

## ATTACHMENT 2C: Wastewater BOD and TSS Allocations Based on Samples

Del Rey Wastewater Treatment Cost Allocations based on Samples											
Flow Allocation		TG	%	\$	\$/MG	\$/TG					
Dom		37,565	93%								
Ind		2,776	7%								
		40,341	100%	\$0	\$0.00	\$0.00					
BOD Allocation		mg/L	L/gal	mg/gal	mg/lb	lbs/gal	lbs/TG	TG	Total lbs	\$/lb	\$
Dom		209	3.78541	791	453.592	0.00174	1.74	37,565	65,521	\$1.0478	\$68,653
Ind		6,515	3.78541	24,662	453.593	0.05437	54.37	2,776	150,932	\$1.0478	\$158,147
								40,341	216,452		\$226,800
								BOD Allocated Cost:		\$226,800	
										<b>BOD \$/lb</b>	<b>\$1.05</b>
TSS Allocation		mg/L	L/gal	mg/gal	mg/lb	lbs/gal	lbs/TG	TG	Total lbs	\$/lb	\$
Dom		127	3.78541	481	453.592	0.00106	1.06	37,565	39,814	\$2.8327	\$112,781
Ind		750	3.78541	2,839	453.593	0.00626	6.26	2,776	17,375	\$2.8327	\$49,219
								40,341	57,189		\$162,000
								BOD Allocated Cost:		\$162,000	
										<b>BOD \$/lb</b>	<b>\$2.83</b>

## ATTACHMENT 2D: Wastewater Plant Treatment Data

Del Rey Wastewater Plant Treatment Data						
	Volume Gallons		BOD		TSS	
	Domestic	Industrial	Domestic	Industrial	Domestic	Industrial
Sep-22	3,157,070	231,000	125	7,800	58	1,600
Oct-22	3,441,008	231,000	170	11,000	95	1,700
Nov-22	3,337,375	320,400	190	6,750	120	640
Dec-22	3,662,222	221,571	190	4,500	120	420
Jan-23	3,563,784	228,209	245	12,800	385	745
Feb-23	2,705,703	223,751	245	9,300	175	750
Mar-23	3,417,000	218,699	465	11,000	148	1,150
Apr-23	1,909,605	212,851	175	3,345	85	207
May-23	2,721,524	200,404	200	875	41	114
Jun-23	2,978,036	238,858	150	4,030	78	755
Jul-23	3161809	245,537	145	2,250	151	580
Aug-23	3508473	205,221	205	4,535	68	336
<b>Tot/Avg</b>	<b>37,563,609</b>	<b>2,777,501</b>	<b>209</b>	<b>6,515</b>	<b>127</b>	<b>750</b>
	<b>40,341,110</b>					
	<b>93%</b>	<b>7%</b>				

## ATTACHMENT 3: Refuse Revenue and Expense

DEL REY SOLID WASTE ENTERPRISE FUND						
Historical and Projected Revenues and Expenses						
	FY20/21 <u>Audited</u>	FY21/22 <u>Audited</u>	FY22/23 <u>Unaudited</u>	FY23/24 <u>Projected</u>		
<b>Revenues:</b>						
Residential	\$76,356	\$75,665				
Commercial	1,520	1,818				
Industrial	25,067	27,466	\$147,867	\$148,000		
Other	0	11,826				
Unpaid Bills / Bad Debt (Estimates)			(\$17,000)	(\$17,000)		
<b>Total Operating Revenue</b>	<b>\$102,943</b>	<b>\$116,775</b>	<b>\$130,867</b>	<b>\$131,000</b>		
Unpaid Bills: Percent of Billed Amount			11%	11%		
<b>Operation &amp; Maintenance Expenses:</b>						
Salaries and wages	16,588	17,330	6,942	7,360		
Employee benefits and payroll taxes	4,301	6,244	1,000	908		
Pension expense (recovery)	2,525	-	-	-		
OPEB expense	5,015	3,695	4,000	4,000		
Directors' fees	539	422	202	360		
Professional fees	10,824	7,972	4,199	3,330		
General and administrative	3,049	13,769	9,640	8,770		
Solid waste contract services	89,231	91,377	99,090	104,400		
<b>Total Operating Expenses</b>	<b>\$132,072</b>	<b>\$140,809</b>	<b>\$125,073</b>	<b>\$129,128</b>		
<b>Total Gain (Loss)</b>	<b>(\$29,129)</b>	<b>(\$24,034)</b>	<b>\$5,794</b>	<b>\$1,872</b>		
<b>Percentage collected for Del Rey Administrative Services</b>	<b>15%</b>	<b>28%</b>	<b>32%</b>	<b>25%</b>		
Notes:						
	FY21/22 Pension expense (recovery) of (\$25,199) removed as non-cash credit.					