

MEMORANDUM

DATE:	JUNE 26, 2024	PROJECT:	P943
TO:	Kyle Shaw, Rodney Armstrong	FILE:	
CC:	Beth Brooks		
FROM:	Hayitbay Mahmudov		
SUBJECT:	Utility Revenue Requirement and Rates Analysis Update		

Following the final report submission to the City of Courtenay (the City) in November 2023, the City requested that, once the 2024-2028 financial plan and supporting data becomes available, InterGroup update the utility rate analysis to reflect the following:

1. Update the revenue requirement and revenue projections to the 2024-2028 financial plan.
2. Re-calculate average rate adjustments for the utility rate and frontage tax, using a similar approach as in the report (i.e. apply declining average rate increases to water utility – higher rate increase in 2025 followed by lower increases in subsequent years).
3. Update cost of service analysis to reflect the new projections.
4. Re-calculate user fees for water and sewer customers under the following scenarios:
 - a. Rate adjustments targeting full cost recovery (i.e. 100% RCC ratio) by customer class over a 5-year period
 - b. Rate adjustments targeting full cost recovery by customer class over an 8-year period
 - c. Rate adjustments targeting full cost recovery by customer class over 10-year period
5. Prepare a technical memo summarizing and comparing rate impacts for each scenario, including supporting tables.

The City provided the information required for the updated analysis in May-June 2024. Rate analysis was updated to incorporate the following information:

- 2024-2028 Water and Sewer Financial Plan
- 2024-2028 Water and Sewer Capital Budget and Funding Sources
- Water and Sewer Capital Reserve Balances
- Updated billing determinants (connections and consumption) for revenue projections
- 2024 Approved User Fees for Water and Sewer

This memo summarizes the findings of the updated analysis and compares the requested rate options for Water and Sewer utilities.

1.0 WATER RATE ANALYSIS UPDATE

Table 1 shows the updated revenue requirement reflecting the City’s 2024-2028 financial plan.

Table 1: Forecast Water Utility Revenue Requirement (\$000)

Line	Component	2024	2025	2026	2027	2028	2029
1	Comox Valley Regional District - Supply Costs	\$6,303	\$6,623	\$6,952	\$7,292	\$7,642	\$8,029
	Comox Valley Regional District - Rate Increases	4.2%	4.0%	4.0%	4.0%	4.1%	4.1%
2	Transmission and Distribution	\$1,731	\$1,726	\$1,760	\$1,770	\$1,804	\$1,822
3	General Administration	\$2,061	\$2,076	\$2,121	\$2,163	\$2,217	\$2,240
4	Debt Costs	\$29	\$29	\$25	\$20	\$68	\$68
5=Sum(5a:5f)	Capital Expenditures [net cash needs]	\$192	\$178	\$571	\$430	\$100	\$481
5a	Renewal	\$50	\$103	\$391	\$1,145	\$500	\$630
5b	New Infrastructure	\$400	\$75	\$480	\$875	\$400	\$416
5c	Funded by reserves	-\$200	\$0	-\$300	-\$790	-\$800	-\$565
5d	Funded by reserve for future expenditures	-\$58	\$0	\$0	\$0	\$0	\$0
5e	Funded by other contributions	\$0	\$0	\$0	\$0	\$0	\$0
5f	Funded through financing	\$0	\$0	\$0	-\$800	\$0	\$0
6=Sum(1:5)	Total Operating and Capital Costs	\$10,316	\$10,632	\$11,429	\$11,675	\$11,831	\$12,639
7	Water Machinery and Equipment Reserve	\$30	\$70	\$90	\$100	\$105	\$109
8=Sum(8a:8d)	Reserve Provisions Funded by Frontage Tax	\$1,286	\$1,514	\$1,781	\$2,095	\$2,465	\$2,900
8a	Asset Management Reserve	\$1,223	\$1,447	\$1,713	\$2,026	\$2,394	\$2,830
8b	Water Utility Reserve	\$64	\$66	\$67	\$69	\$70	\$70
8c	MFA Reserve Fund	\$0	\$0	\$0	\$0	\$0	\$0
8d	Carbon Offsets Reserve	\$0	\$0	\$0	\$0	\$0	\$0
9=6+7+8	Gross Revenue Requirement	\$11,632	\$12,215	\$13,300	\$13,869	\$14,401	\$15,648
10	Other Revenues [Contributions, Permits]	\$106	\$106	\$106	\$106	\$106	\$106
11	Revenues from Frontage Tax	\$1,286	\$1,513	\$1,781	\$2,095	\$2,465	\$2,900
12	Revenues from Parcel Tax	\$8	\$8	\$8	\$8	\$8	\$0
13=9-10-11-12	Net Revenue Required from Rates	\$10,231	\$10,587	\$11,405	\$11,660	\$11,822	\$12,643
14	Total Revenues at 2024 Rates (existing rates)	\$9,685	\$9,721	\$9,755	\$9,790	\$9,855	\$9,920
14a	Rate Revenues [flat, metered, meter rental]	\$9,317	\$9,353	\$9,388	\$9,422	\$9,487	\$9,552
14b	Revenues from Parks	\$168	\$168	\$168	\$168	\$168	\$168
14c	Revenues from Fire Protection	\$200	\$200	\$200	\$200	\$200	\$200
15=14-13	Revenue Surplus/(Shortfall)	-\$546	-\$867	-\$1,650	-\$1,870	-\$1,967	-\$2,723
16	Required Annual Average Rate Increase	0.0%	8.0%	6.0%	4.0%	3.5%	3.5%
16a	Increase related to CVRD Cost Increases		3.4%	3.5%	3.6%	3.7%	4.1%
16b	Courtenay internal O&M and capital cost		4.6%	2.5%	0.4%	-0.2%	-0.6%
17	Revenues after Rate Increase	\$9,685	\$10,498	\$11,168	\$11,656	\$12,139	\$12,643
18=17-13	Revenue Surplus/(Shortfall) after Increase	-\$546	-\$89	-\$237	-\$4	\$317	\$0
	Utility Reserves						
19	Opening Balance	\$2,742	\$3,316	\$4,815	\$6,156	\$7,567	\$9,665
20=18	Surplus/(Shortfall)	-\$546	-\$89	-\$237	-\$4	\$317	\$0
21=7+8	Reserve Provisions	\$1,316	\$1,584	\$1,871	\$2,195	\$2,570	\$3,009
22=5c	Capital funded by Reserves	-\$200	\$0	-\$300	-\$790	-\$800	-\$565
23	Interest on Reserve Balance	\$4	\$5	\$7	\$9	\$11	\$14
24=Sum(19:23)	Closing Balance	\$3,316	\$4,815	\$6,156	\$7,567	\$9,665	\$12,124

The updated forecast revenue requirement based on the 2024-2028 financial plan indicates that the following average rate increases are required for the water utility for the period from 2025 to 2029:

- 2025: 8.0%
- 2026: 6.0%
- 2027: 4.0%
- 2028-2029: 3.5% per year.

The higher rate increases compared to the 2023 rate analysis are driven by material CVRD water purchase rate increases, which the 2024-2025 financial plan estimates at about 4.0% per year (compared to zero increase in the 2023 analysis).

Required frontage fee revenue increase to build capital reserve balance is estimated at 18% per year (vs 19% in the 2023 analysis).

Table 2 provides a summary of the water utility RCC ratio by customer class based on the updated COSA results.

Table 2: Forecast 2029 Water Utility Revenue to Cost Coverage Ratios

Customer Type	Number of Customers	2029 Forecast		
		Revenue Forecast with Equal % Rate Increase (\$000)	COS Results (\$000)	RCC Ratio
		A	B	C=A/B
Residential	8,925	6,398	7,478	86%
Multi-Family unmetered	491	297	425	70%
Multi-Family metered	5,306	2,778	1,677	166%
Commercial unmetered	435	298	288	104%
Commercial metered	2,041	2,333	1,742	134%
Parks	1	214	642	33%
RD bulk/ Standpipe/ Playfields	2	71	63	113%
Fire Protection		255	328	78%
Total	17,201	12,643	12,643	100%

The updated COSA results show significant overpayment by multi-family metered and commercial metered customers and underpayment residential, multi-family unmetered, Parks and Fire Protection customers.

As per the scope of work, water user fees were re-calculated to target full cost recovery by customer class over a 5, 8 and 10-year periods. The resulting rate adjustment estimates are provided in Table 3.

Note that the overall revenue requirement rate adjustments were calculated for the first 5 years, as rate increase estimates beyond the first five years are unreliable. As such, the 8-year and 10-year scenarios target the same overall revenue as the 5th year of the period, but different revenue by customers class reflecting the rate rebalancing approach.

Table 3: Water User Fees Required Adjustments Targeting Full Cost Recovery

	Rate Increases at 5-year rate rebalancing				
	2025	2026	2027	2028	2029
Residential	11.3%	9.3%	9.3%	6.8%	6.8%
Multi-Family unmetered	15.8%	13.8%	13.8%	11.3%	11.3%
Multi-Family metered	-5.1%	-5.1%	-5.1%	-5.1%	-5.1%
Commercial unmetered	7.3%	5.3%	5.3%	2.7%	2.7%
Commercial metered	-1.0%	-1.0%	-1.0%	-1.0%	-1.0%
Parks	33.84%	31.84%	31.8%	29.30%	29.3%
RD bulk/ Standpipe/ Playfields	5.5%	3.5%	3.5%	1.0%	1.0%
Fire Protection	13.4%	11.4%	11.4%	8.9%	8.9%

Rate Increases at 8-year rate rebalancing					
	2025	2026	2027	2028	2029
Residential	6.9%	6.9%	6.9%	6.9%	6.9%
Multi-Family unmetered	9.6%	9.6%	9.6%	9.6%	9.6%
Multi-Family metered	-3.2%	-3.2%	-3.2%	-3.2%	-3.2%
Commercial unmetered	4.5%	4.5%	4.5%	4.5%	4.5%
Commercial metered	-0.6%	-0.6%	-0.6%	-0.6%	-0.6%
Parks	19.7%	19.7%	19.7%	19.7%	19.7%
RD bulk/ Standpipe/ Playfields	3.5%	3.5%	3.5%	3.5%	3.5%
Fire Protection	8.2%	8.2%	8.2%	8.2%	8.2%

Rate Increases at 10-year rate rebalancing					
	2025	2026	2027	2028	2029
Residential	6.5%	6.5%	6.5%	6.5%	6.5%
Multi-Family unmetered	8.6%	8.6%	8.6%	8.6%	8.6%
Multi-Family metered	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%
Commercial unmetered	4.6%	4.6%	4.6%	4.6%	4.6%
Commercial metered	-0.5%	-0.5%	-0.5%	-0.5%	-0.5%
Parks	16.6%	16.6%	16.6%	16.6%	16.6%
RD bulk/ Standpipe/ Playfields	3.8%	3.8%	3.8%	3.8%	3.8%
Fire Protection	7.5%	7.5%	7.5%	7.5%	7.5%

Focusing on the initial five years of rate adjustments for consistency of comparisons, the 5-year rate rebalancing option results in:

- approximately 4-6% higher annual rate increases for residential, multi-family unmetered customers and Fire Protection as compared to the 8-year rebalancing option and 5-7% higher rate increases for these classes as compared to the 10-year rebalancing option.
- approximately 0.4-2% lower annual rate reductions to multi-family and commercial metered customers as compared to the 8-year rebalancing option and 0.5-2.5% lower rate reductions for these classes as compared to the 10-year rebalancing option.

The resulting water utility RCC ratios are shown in Table 4.

Table 4: Forecast 2029 Water Utility Revenue to Cost Coverage Ratios at Target RCC

2029 Forecast -Recommended Rates			
	Revenue Forecast with COS Rate Increase (\$000)	COS Results (\$000)	RCC Ratio
	D	E	F=D/E
Residential	7,478	7,478	100%
Multi-Family unmetered	425	425	100%
Multi-Family metered	1,677	1,677	100%
Commercial unmetered	288	288	100%
Commercial metered	1,742	1,742	100%
Parks	642	642	100%
RD bulk/ Standpipe/ Playfields	63	63	100%
Fire Protection	328	328	100%
	12,643	12,643	100%

2.0 SEWER RATE ANALYSIS UPDATE

Table 5 shows the updated sewer revenue requirement reflecting the City's 2024-2028 financial plan.

Table 5: Forecast Sewer Utility Revenue Requirement (\$'000)

Line	Component	2024	2025	2026	2027	2028	2029
1	Comox Valley Regional District Sewer Requisition	\$6,264	\$6,612	\$6,960	\$6,960	\$7,200	\$7,272
	CVRD Rate increases %	18.8%	5.6%	5.3%	0.0%	3.4%	1.0%
2	Collection	\$928	\$821	\$818	\$818	\$832	\$840
3	General Administration	\$1,721	\$1,778	\$1,781	\$1,847	\$1,868	\$1,887
4	Debt Costs	\$408	\$916	\$1,346	\$1,635	\$1,935	\$1,935
5=Sum(5a:5f)	Capital Expenditures Provision [net cash needs]	\$1,167	\$949	\$955	\$704	\$0	\$755
5a	Renewal	\$9,547	\$11,697	\$4,815	\$11,240	\$500	\$7,560
5b	New Infrastructure	\$0	\$0	\$0	\$0	\$0	\$0
5c	Funded by reserves	-\$1,460	\$0	\$0	-\$790	-\$500	-\$550
5d	Funded through financing	-\$6,000	-\$6,000	-\$3,000	-\$5,000	\$0	-\$4,000
5e	Funded by reserve for future expenditures	-\$565	\$0	\$0	\$0	\$0	-\$113
5f	Funded through Other Contributions	-\$355	-\$4,748	-\$860	-\$4,747	\$0	-\$2,142
6=Sum(1:5)	Total Operating and Capital Costs	\$10,487	\$11,075	\$11,860	\$11,963	\$11,835	\$12,689
7	Sewer Machinery and Equipment Reserve	\$125	\$150	\$160	\$165	\$171	\$171
8=Sum(8a:8c)	Reserve Provisions Funded by Frontage Tax	\$2,211	\$2,561	\$2,561	\$2,561	\$2,561	\$2,561
8a	Asset Management Reserve	\$2,210	\$2,560	\$2,560	\$2,560	\$2,560	\$2,560
8b	MFA Reserve Fund	\$1	\$1	\$1	\$1	\$1	\$1
8c	Carbon Offsets Reserve	\$0	\$0	\$0	\$0	\$0	\$0
9=6+7+8	Gross Revenue Requirements	\$12,823	\$13,786	\$14,581	\$14,688	\$14,566	\$15,420
10	Other Revenues [Connection Fee and Contributions]	\$60	\$60	\$60	\$60	\$60	\$60
11	Revenues from Frontage Tax	\$2,211	\$2,561	\$2,561	\$2,561	\$2,561	\$2,561
12	Revenues from Parcel Tax	\$12	\$12	\$12	\$12	\$12	\$12
13=9-10-11-12	Net Revenue Required from Rates	\$10,540	\$11,153	\$11,948	\$12,056	\$11,934	\$12,788
14	Total Revenues at 2024 Rates (existing rates)	\$7,494	\$7,522	\$7,549	\$7,577	\$7,605	\$7,633
15=14-13	Revenue Surplus/(Shortfall)	-\$3,046	-\$3,631	-\$4,399	-\$4,479	-\$4,329	-\$5,154
16	Required Annual Average Rate Increase	0.0%	10.9%	10.9%	10.9%	10.9%	10.9%
16a	Increase related to CVRD Cost Increases		4.6%	4.6%	0.0%	3.2%	0.9%
16b	Courtenay internal O&M and capital cost		6.2%	6.3%	10.9%	7.7%	9.9%
17	Revenues after Rate Increase	\$7,494	\$8,339	\$9,280	\$10,326	\$11,491	\$12,788
18=17-13	Revenue Surplus/(Shortfall) after Increase	-\$3,046	-\$2,814	-\$2,668	-\$1,730	-\$443	\$0
	Utility Reserves						
19	Opening Balance	\$4,287	\$2,123	\$2,023	\$2,078	\$2,288	\$4,080
20=18	Surplus/(Shortfall)	-\$3,046	-\$2,814	-\$2,668	-\$1,730	-\$443	\$0
21=7+8	Reserve Provisions	\$2,336	\$2,711	\$2,721	\$2,726	\$2,732	\$2,732
22=5c	Capital funded by Reserves	-\$1,460	\$0	\$0	-\$790	-\$500	-\$550
23	Interest	\$6	\$3	\$3	\$3	\$3	\$6
24=Sum(19:23)	Closing Balance	\$2,123	\$2,023	\$2,078	\$2,288	\$4,080	\$6,268

The updated forecast revenue requirement based on the 2024-2028 financial plan indicates that an average rate increase of 10.9% per year is required for the sewer utility for the period from 2025 to 2029. This is 2.8% higher than an 8.1% annual rate increase estimated in the 2023 analysis.

The higher rate increases compared to the 2023 rate analysis are driven by:

- material CVRD requisition rate increases in 2025 and 2026 (5.6% and 5.3% as compared to zero in the 2023 rate analysis); and
- significant increase in debt service costs, projected to increase to \$1.935 million by 2028 as compared to only \$0.751 million in the 2023 rate analysis.

Required frontage fee revenue increase to build capital reserve balance is estimated at 16% in 2025 (vs 21% for 2024 in the 2023 analysis).

Table 6 provides a summary of the sewer utility RCC ratio by customer class based on the updated COSA results.

Table 6: Forecast 2029 Sewer Utility Revenue to Cost Coverage Ratios

Customer Type	Number of Customers	2029 Forecast		
		Revenue Forecast with Equal % Rate Increase (\$000)	COS Results (\$000)	RCC Ratio
		A	B	C=A/B
Residential Users	14,211	10,716	9,856	109%
Commercial Users	2,090	1,434	2,446	59%
Institutional Users	574	638	485	132%
Total	16,875	12,788	12,788	100%

The updated COSA shows results similar to the 2023 rate analysis with commercial class RCC ratio well below the range of reasonableness at only 59% cost recovery.

As per the scope of work, sewer user fees were re-calculated to target full cost recovery by customer class over -5, 8 and 10-year periods, except institutional users, which will target 110% cost recovery. The resulting rate adjustment estimates are provided in Table 7.

Table 7: Sewer User Fees Required Adjustments Targeting Full Cost Recovery

	Rate Increases at 5-year rate rebalancing				
	2025	2026	2027	2028	2029
Residential Users	8.9%	8.9%	8.9%	8.9%	8.9%
Commercial Users	23.0%	23.0%	23.0%	23.0%	23.0%
Institutional Users	7.7%	7.7%	7.7%	7.7%	7.7%
	Rate Increases at 8-year rate rebalancing				
	2025	2026	2027	2028	2029
Residential Users	9.8%	9.8%	9.8%	9.8%	9.8%
Commercial Users	17.8%	17.8%	17.8%	17.8%	17.8%
Institutional Users	7.7%	7.7%	7.7%	7.7%	7.7%
	Rate Increases at 10-year rate rebalancing				
	2025	2026	2027	2028	2029
Residential Users	10.0%	10.0%	10.0%	10.0%	10.0%
Commercial Users	16.4%	16.4%	16.4%	16.4%	16.4%
Institutional Users	7.7%	7.7%	7.7%	7.7%	7.7%

Focusing on the initial five years of rate adjustments for consistency of comparisons, the 5-year rate rebalancing option results in:

- approximately 1% lower annual rate increase to residential users as compared to the 8-year and 10-year rebalancing options.
- approximately 5% higher annual rate increase commercial users as compared to the 8-year rebalancing option and 6.5% higher rate increase for this class as compared to the 10-year rebalancing option.

The resulting RCC ratios are shown in Table 8.

Table 8: Forecast 2029 Sewer Utility Revenue to Cost Coverage Ratios at Target RCC

2029 Forecast- Recommended Rate Option			
	Revenue Forecast with COS Rate Increase (\$000)	COS Results (\$000)	RCC Ratio
Residential Users	9,808	9,856	100%
Commercial Users	2,446	2,446	100%
Institutional Users	533	485	110%
	12,788	12,788	100%