

CAPITAL REGIONAL DISTRICT

2025 BUDGET

Debt - Core Area Wastewater Capital

COMMITTEE REVIEW

Service: 3.798C Debt - Core Area Wastewater Capital	Committee: Core Area Liquid Waste Management
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DEFINITION:

Infrastructure improvements and capital work to all wastewater functions of the Capital Regional District.

PARTICIPATION:

Cost apportionment is based on capacity allocated to each participant.

MAXIMUM LEVY:

N/A

MAXIMUM CAPITAL DEBT:

	<u>Authorized</u>	<u>Borrowed</u>	<u>Remaining</u>
Authorized:			
LA Bylaw 3887	\$ 100,000,000	\$ 6,100,000	93,900,000
LA Bylaw 4204	665,000,000	95,000,000	570,000,000
LA Bylaw 4374	22,700,000	10,470,000	12,230,000
LA Bylaw 4375	34,300,000	-	34,300,000
Remaining:	<u>\$ 822,000,000</u>	<u>\$ 111,570,000</u>	<u>\$ 710,430,000</u>

CORE AREA WASTEWATER TREATMENT PLANT

COST SHARING ALLOCATION - DESIGN CAPACITY BENEFIT:

<u>Location</u>	<u>Allocation of Debt</u> <u>Servicing Costs</u>
Colwood	4.24%
Esquimalt	6.60%
Langford	12.63%
Oak Bay	6.39%
Saanich	30.34%
Victoria	35.95%
View Royal	3.18%
Songhees Nation	0.60%
Esquimalt Nation	0.07%
Total	<u>100.00%</u>

Bylaw 4304

FUNDING:

Requisition

Change in Budget 2024 to 2025

Service: 3.798C Debt-Core Area Wastewater Capital

Total Expenditure

Comments

2024 Budget

21,075,195

Changes:

Transfer to Capital Reserve
CAWW Debt
Other

504,041
1,750,877
167,124

Increasing annual capital reserve to partially restore to original plan
Increase debt servicing cost as some debt funded capital projects transition from planning stage to the construction phrase
Interest expense and debt reserve contribution increase

Total Other Changes

2,422,042

2025 Budget

23,497,237

Summary of % Expense Increase

Capital Reserve Transfer 2.4%
CAWW Debt 8.3%
Other 0.8%
% expense increase from 2024: **11.5%**

% Requisition increase from 2024 (if applicable): **11.9%**

Requisition funding is 97.3% of service revenue

Overall 2024 Budget Performance

(expected variance to budget and surplus treatment)

Breakeven

3.798C - Debt - Core Area Wastewater Capital	2024		BUDGET REQUEST				FUTURE PROJECTIONS			
	BOARD BUDGET	ESTIMATED ACTUAL	CORE BUDGET	ONGOING	ONE-TIME	TOTAL	2026	2027	2028	2029
<u>CAPITAL / RESERVE</u>										
Transfer to RTF Capital	5,529,745	5,529,745	5,529,745	-	-	5,529,745	5,529,745	5,529,745	5,529,745	5,529,745
Transfer to Capital Replacement Reserve	1,617,078	1,617,078	2,121,119	-	-	2,121,119	3,121,119	3,121,119	4,121,119	5,521,119
Transfer to WTP Debt Retirement Reserve	5,346,360	5,346,360	5,418,160	-	-	5,418,160	5,489,960	5,561,760	5,633,560	5,994,778
TOTAL CAPITAL / RESERVES	12,493,183	12,493,183	13,069,024	-	-	13,069,024	14,140,824	14,212,624	15,284,424	17,045,642
CAWTP Debt	6,698,640	6,782,582	6,722,164	-	-	6,722,164	6,640,040	6,568,240	6,496,440	4,735,222
CAWW Debt	1,711,709	1,627,678	3,457,939	-	-	3,457,939	4,661,985	5,918,164	6,959,381	8,190,010
<u>Total Debt Expenditures</u>	8,410,349	8,410,260	10,180,103	-	-	10,180,103	11,302,025	12,486,404	13,455,821	12,925,232
MFA Debt Reserve	171,663	171,663	248,110	-	-	248,110	104,860	135,110	149,360	60,860
Debt Repayment	-	-	-	-	-	-	-	-	10,283,553	41,134,212
TOTAL OPERATING COSTS	21,075,195	21,075,106	23,497,237	-	-	23,497,237	25,547,709	26,834,138	39,173,158	71,165,946
*Percentage Increase over prior year			11.49%			11.49%	8.73%	5.04%	45.98%	81.67%
FUNDING SOURCES (REVENUE)										
Surplus / (Deficit)										
Surplus Balance carry forward	-	-	-	-	-	-	-	-	-	-
Transfer from Own funds	-	-	-	-	-	-	-	-	-	-
Transfer from Reserve	-	-	-	-	-	-	-	-	(10,283,553)	(41,134,212)
Grants in Lieu of Taxes	(617,059)	(616,970)	(616,971)	-	-	(616,971)	(617,115)	(617,115)	(617,115)	(617,115)
Revenue - Interest and Debt Reserve	(20,870)	(20,870)	(20,870)	-	-	(20,870)	(20,870)	(20,870)	(20,870)	(20,870)
TOTAL REVENUE	(637,929)	(637,840)	(637,841)	-	-	(637,841)	(637,985)	(637,985)	(10,921,538)	(41,772,197)
REQUISITION	(20,437,266)	(20,437,266)	(22,859,396)	-	-	(22,859,396)	(24,909,724)	(26,196,153)	(28,251,620)	(29,393,749)
*Percentage increase over prior year			11.85%			11.85%	8.97%	5.16%	7.85%	4.04%
PARTICIPANTS: Victoria, Oak Bay, Esquimalt, Saanich View Royal, Colwood, Langford										

**CAPITAL REGIONAL DISTRICT
FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2025 to 2029**

Service No.	3.798C Debt - Core Area Wastewater Treati	Carry Forward from 2024	2025	2026	2027	2028	2029	TOTAL
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EXPENDITURE

Buildings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$50,000	\$250,000	\$0	\$0	\$0	\$0	\$300,000
Land	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Engineered Structures	\$10,399,000	\$30,511,000	\$11,350,000	\$14,175,000	\$15,700,000	\$6,250,000	\$6,250,000	\$77,986,000
Vehicles	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$10,399,000	\$30,561,000	\$11,600,000	\$14,175,000	\$15,700,000	\$6,250,000	\$6,250,000	\$78,286,000

SOURCE OF FUNDS

Capital Funds on Hand	\$375,000	\$375,000	\$0	\$0	\$0	\$0	\$0	\$375,000
Debenture Debt (New Debt Only)	\$7,763,000	\$23,175,000	\$8,850,000	\$11,875,000	\$13,300,000	\$4,450,000	\$4,450,000	\$61,650,000
Equipment Replacement Fund	\$636,000	\$736,000	\$800,000	\$500,000	\$600,000	\$300,000	\$300,000	\$2,936,000
Grants (Federal, Provincial)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Donations / Third Party Funding	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reserve Fund	\$1,625,000	\$6,275,000	\$1,950,000	\$1,800,000	\$1,800,000	\$1,500,000	\$1,500,000	\$13,325,000
	\$10,399,000	\$30,561,000	\$11,600,000	\$14,175,000	\$15,700,000	\$6,250,000	\$6,250,000	\$78,286,000

APPENDIX B

CAPITAL REGIONAL DISTRICT

5 YEAR CAPITAL PLAN

2025 - 2029

Service #: 3.798C
 Service Name: Debt - Core Area Wastewater Treatment Program

PROJECT DESCRIPTION				PROJECT BUDGET & SCHEDULE										
Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward from 2024	2025	2026	2027	2028	2029	5 - Year Total	
MCLOUGHLIN WASTEWATER TREATMENT PLANT														
25-01	New	Secondary Odour Collection System Upgrade - pre-filter	Replacement of existing pre-filter to further optimize odour treatment and extend the life of carbon treatment.	\$ 750,000	S	Debt	\$ -	\$ 750,000	\$ -	\$ -	\$ -	\$ -	\$ 750,000	
PUMP STATIONS														
21-01	Renewal	Lang Cove Electrical and Building Upgrades	Renewals based upon Delcan's condition assessment and EIC inspections. Work includes electrical (replace PLC, SCADA pack, communications), and building upgrades.	\$ 1,200,000	S	Res	\$ 400,000	\$ 900,000	\$ -	\$ -	\$ -	\$ -	\$ 900,000	
21-02	Renewal	Marigold Electrical and Building Upgrades	Renewals are based upon Delcan's condition assessment and EIC inspections. Work includes electrical (replace MCC, PLC, VFD's, 480v to 600v upgrade, etc) and building upgrades.	\$ 5,850,000	S	Debt	\$ 2,000,000	\$ 2,000,000	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000	
21-03	Renewal	Currie Major Electrical and Seismic Upgrades	Renewals based upon Delcan's condition assessment and EIC inspections. Work includes electrical (replace VFDs, PLC, SCADA pack, communications), seismic upgrades and driveway repairs.	\$ 2,300,000	S	Debt	\$ 1,000,000	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000	
21-05	Replacement	Harling PS - Complete Replacement	Based on Delcan's condition assessment and the age of this facility, replacement of Harling Point PS is required.	\$ 2,500,000	S	Debt	\$ 200,000	\$ 2,290,000	\$ -	\$ -	\$ -	\$ -	\$ 2,290,000	
22-05	Replacement	Lang Cove Discharge Isolation Valves	Replace seized, direct buried isolation valves on at the Lang Cove pump station with new valves in a manhole.	\$ 400,000	S	ERF	\$ 400,000	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ 400,000	
25-04	Renewal	Pump Station Mechanical and Electrical Renewal Program	Mechanical and electrical upgrades to multiple pump stations based on previous condition assessments and EIC inspections.	\$ 5,500,000	S	Debt	\$ -	\$ 200,000	\$ 1,500,000	\$ 1,000,000	\$ 2,100,000	\$ 700,000	\$ 5,500,000	
25-05	New	Bioxide dosing system upgrade	Replacement of biioxide skids at multiple locations, which are at the end of their useful life. Piloting is underway and if successful trials are completed, implementation to follow.	\$ 350,000	S	Debt	\$ -	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ 350,000	
GRAVITY SEWERS AND MANHOLES														
21-06	Renewal	Shoreline Trunk Sewer Upgrade	The hydraulic model and capacity assessment of the system by KWL in 2018-19, has identified that the Shoreline Trunk must be twinned to prevent overflows into Portage Inlet during peak storm events.	\$ 3,400,000	S	Debt	\$ 340,000	\$ 2,900,000	\$ -	\$ -	\$ -	\$ -	\$ 2,900,000	
21-07	New	Western Trunk Sewer Twinning	The hydraulic model and capacity assessment of the system by KWL in 2018-19, has identified that the Western Trunk Sewer must be twinned from Aldene to Craigflower PS to prevent overflows upstream of Parson's siphon during peak storm events.	\$ 25,000,000	S	Debt	\$ 370,000	\$ 370,000	\$ -	\$ -	\$ -	\$ -	\$ 370,000	
21-07	New	Western Trunk Sewer Twinning		\$ 400,000	S	Res	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ 400,000	
21-09	Renewal	Bowker Sewer Rehabilitation Ph1	Based on results of CCTV inspection about 2,000m of sewer along Shelbourne, Kings and from Trent PS to Newport needs to be relined.	\$ 8,600,000	S	Cap	\$ 375,000	\$ 375,000	\$ -	\$ -	\$ -	\$ -	\$ 375,000	
24-17	Renewal	Sewer Cleaning and Inspection	Core Area sewers should be cleaned and inspected on a 5-year cycle. This program will support that continued cycle.	\$ 750,000	S	Debt	\$ -	\$ 150,000	\$ 150,000	\$ 150,000	\$ -	\$ -	\$ 450,000	
21-11	Renewal	Manhole Repairs and Replacement	Based upon CCTV and staff inspections on manholes, there are a number of deteriorated MH's that require repair or replacement.	\$ 3,600,000	S	Debt	\$ 750,000	\$ 2,000,000	\$ 600,000	\$ 1,000,000	\$ -	\$ -	\$ 3,600,000	
23-01	Renewal	Cecelia Ravine Pipe Protection	Based on geotechnical review, a section of the exposed NWT in Cecelia Ravine should be covered & protected from falling rocks upslope from the pipe.	\$ 1,000,000	S	Debt	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ 1,500,000	
24-10	Renewal	East Coast Interceptor and Bowker Sewer Rehabilitation Ph2	Based on results of CCTV inspection about 2,000m of sewer needs to be relined along Beach Dr (from Bowker to Windsor) and along Doncaster Dr., Shelbourne St. and Kings Rd.	\$ 8,000,000	S	Debt	\$ 150,000	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000	
24-11	Renewal	Western Trunk Grit Chamber Repairs	The Western Trunk (Island Highway) Grit Chamber is badly corroded and requires repairs before extensive structural damage occurs.	\$ 2,500,000	S	Debt	\$ 250,000	\$ 1,250,000	\$ 1,250,000	\$ -	\$ -	\$ -	\$ 2,500,000	
26-01	Renewal	NWT Sewer Replacement at Alpha-Terrace	A 5m long section of old concrete pipe downstream of Boundary Transition Chamber is badly corroded and needs to be replaced with new PVC pipe.	\$ 1,000,000	S	Debt	\$ -	\$ -	\$ 100,000	\$ 900,000	\$ -	\$ -	\$ 1,000,000	
PRESSURE PIPES AND APPURTENANCES														
21-12	Renewal	Gorge Siphon Inlet Chamber Upgrade	The concrete chamber is badly corroded and the control gates are seized on this chamber and they need to be replaced so that the individual siphons can be isolated or activated.	\$ 3,500,000	S	Res	\$ 1,175,000	\$ 3,425,000	\$ -	\$ -	\$ -	\$ -	\$ 3,425,000	
21-13	New	Craigflower Forcemain Twinning	The hydraulic model and capacity assessment of the system by KWL in 2018-19, has identified that the Craigflower Forcemain must be twinned to prevent overflows into Portage Inlet during peak storm events.	\$ 13,655,000	S	Debt	\$ 553,000	\$ 450,000	\$ -	\$ 6,500,000	\$ 6,500,000	\$ -	\$ 13,450,000	
24-14	Renewal	Parsons Siphon/Bridge Connection Repairs	The siphon pipe support connections to the Parsons Bridge require repairs.	\$ 500,000	S	Res	\$ 50,000	\$ 50,000	\$ 450,000	\$ -	\$ -	\$ -	\$ 500,000	
25-03	Renewal	Harriet Siphon Inlet Chamber Upgrade	Assess concrete corrosion and replace seized control gates.	\$ 2,000,000	S	Debt	\$ -	\$ 1,000,000	\$ 1,000,000	\$ -	\$ -	\$ -	\$ 2,000,000	
27-01	Study	Forcemain and Siphon Pipe Assessment Study	There are several forcemain pipes downstream from each pump station that have never been assessed. A study is proposed to investigate various technologies to evaluate the condition of the pipes.	\$ 2,250,000	S	Debt	\$ -	\$ -	\$ -	\$ 250,000	\$ 1,000,000	\$ 1,000,000	\$ 2,250,000	
FLOW METERS														
21-16	New	Gorge & Chapman Meter	Based on KWL's 2018-19 Flow Meter Audit review, KWL recommended a new flow meter to measure the unmetered Gorge and Chapman catchments. Includes installation of new metering manhole.	\$ 400,000	S	Debt	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000	
GENERAL														
21-22	Study	Asset Management Plan Update	Previous condition assessment studies will be updated and incorporated into a long-term asset management plan to meet expected level-of-service requirements.	\$ 250,000	S	Debt	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ 250,000	

APPENDIX B

Service #: 3.798C
 Service Name: Debt - Core Area Wastewater Treatment Program

PROJECT DESCRIPTION				PROJECT BUDGET & SCHEDULE										
Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward from 2024	2025	2026	2027	2028	2029	5 - Year Total	
21-23	Study	DCC Program Development	With the completion of CAWTP and amendment of the Service Establishment Bylaw, it was noted that a DCC Program would be established to fund future wastewater projects related to growth. This project is to create the program, consult with stakeholders and prepare a new DCC bylaw.	\$ 400,000	S	Debt	\$ -	\$ 165,000	\$ -	\$ -	\$ -	\$ -	\$ 165,000	
21-24	Renewal	Record Drawing and Wastewater Agreement Updates	The old as-built drawings, connection points and wastewater agreements with the contributing municipalities has not been updated in many years. Updates are required to reflect changes in the system, identify clear demarcation points, and reflect updates in the LWMP.	\$ 1,100,000	S	Debt	\$ -	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ 500,000	
21-25	Renewal	SCADA and Radio Assessment	Majority of the radio and SCADA equipment are nearing end of life, technological advances do not allow for straight replacements, funding is required for assessments of existing equipment and site requirements.	\$ 3,900,000	S	Debt	\$ 2,000,000	\$ 750,000	\$ 2,000,000	\$ 750,000	\$ 400,000	\$ -	\$ 3,900,000	
22-03	Renewal	Acquisition of Outstanding Right-of-Ways	Some of the infrastructure is located on privately owned land that do not have rights-of-way. A plan is being developed to acquire SRW's for all infrastructure over time. Initial spending requires a study and plan prior to acquisition.	\$ 1,200,000	S	Debt	\$ -	\$ 500,000	\$ 500,000	\$ -	\$ -	\$ -	\$ 1,000,000	
21-27	New	New Infrastructure Optimization	Unforeseen and unplanned optimization at a number of new facilities to improve operation and health and safety requirements.	\$ 500,000	S	Debt	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000	
22-04	New	Microwave Radio Upgrades	To provide a high bandwidth communications backbone to the CAWWT system, a microwave communications system will be installed.	\$ 700,000	S	ERF	\$ 236,000	\$ 336,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ -	\$ 636,000	
23-07	New	Enterprise Data Historian Management System	A data historian is required to store large amounts of data that is required for compliance reporting to regulators, operational performance reports, cost allocation, and engineering analysis.	\$ 300,000	E	Debt	\$ -	\$ 50,000	\$ 250,000	\$ -	\$ -	\$ -	\$ 300,000	
28-01	Decommission	Marigold Surge Tank Deconstruction	The old Marigold Surge Tank has been abandoned for many years, is becoming a safety concern for youth, a needs to be removed.	\$ 1,800,000	S	Debt	\$ -	\$ -	\$ -	\$ -	\$ 300,000	\$ 1,500,000	\$ 1,800,000	
24-15	Replacement	IT Core Infrastructure Replacement	Replacement of Core IT infrastructure such as servers, network switches, UPS, etc for equipment end of life	\$ 455,000	S	ERF	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ 200,000	\$ -	\$ 400,000	
27-03	Study	Westshore Wastewater Treatment Plant Siting Assessment	Capacity needs, technology review, siting requirements, conceptual layout, Environmental Impact Assessment and other planning efforts.	\$ 600,000	S	Res	\$ -	\$ -	\$ -	\$ 300,000	\$ 300,000	\$ -	\$ 600,000	
ANNUAL PROVISIONAL														
21-26	Replacement	Annual Provisional Emergency Repairs	Unforeseen and unplanned emergency repairs can occur which require immediate attention.	\$ 7,500,000	S	Res	\$ -	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 7,500,000	
23-06	Replacement	Annual Provisional Equipment Replacement	Replacement of at end of service life, including valves, variable frequency drives, capacitors.	\$ 1,500,000	S	ERF	\$ -	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 1,500,000	
23-08	New	Process & Mechanical Upgrades	Upgrades to the Core Area Wastewater Treatment and Conveyance infrastructure in order to optimize operations.	\$ 4,250,000	S	Debt	\$ -	\$ 850,000	\$ 850,000	\$ 850,000	\$ 850,000	\$ 850,000	\$ 4,250,000	
23-09	New	Safety & Security Upgrades	Upgrades to the Core Area Wastewater Treatment and Conveyance infrastructure to improve worker health and safety.	\$ 2,400,000	S	Debt	\$ -	\$ 600,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 2,200,000	
OUTFALLS / OVERFLOWS														
24-08	Renewal	Clover Point Outfall Retrofit	The existing Clover outfall is no longer operated on a regular basis since wastewater is now conveyed to McLoughlin WWTP, but it must be ready for operation during peak storm events. As a result, the existing outfall will need to be assessed for best operational and maintenance practices based on limited use.	\$ 500,000	S	Debt	\$ -	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ 500,000	
25-02	Renewal	Macaulay Point Outfall Retrofit	A section of coating on the emergency short outfall has failed and the pipe is corroding, and the long outfall needs to be modified to suit reduced usage. This project is to repair the coating, provide shoreline protection, and prepare a plan to maintain the deep outfall based on limited use.	\$ 750,000	S	Debt	\$ -	\$ -	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	
27-02	Renewal	Broom Overflow Pipe Rehabilitation	Overflow pipe is cracked and severed in multiple locations and H ₂ S gases and odours are present.	\$ 575,000	S	Debt	\$ -	\$ -	\$ -	\$ 75,000	\$ 500,000	\$ -	\$ 575,000	
RESIDUAL SOLIDS														
24-16	New	Optimization of Residual Treatment Facility Operations	Installation of additional equipment to enhance beneficial use of biogas and support continued stable operations at the RTF	\$ 3,250,000	S	Debt	\$ -	\$ 3,250,000	\$ -	\$ -	\$ -	\$ -	\$ 3,250,000	
DCC PROJECTS														
GRAND TOTAL				\$ 127,335,000			\$ 10,399,000	\$ 30,561,000	\$ 11,600,000	\$ 14,175,000	\$ 15,700,000	\$ 6,250,000	\$ 78,286,000	

Service: 3.798C Debt - Core Area Wastewater Treatment Program

Project Number 25-01 **Capital Project Title** Secondary Odour Collection System Upgrade - pre-filter **Capital Project Description** Replacement of existing pre-filter to further optimize odour treatment and extend the life of carbon treatment.

Project Rationale This work will progress the intent to further optimize odour control for poitential benefits to public impacts and life cycle costs.

Project Number 21-01 **Capital Project Title** Lang Cove Electrical and Building Upgrades **Capital Project Description** Renewals based upon Delcan's condition assessment and EIC inspections. Work includes electrical (replace PLC, SCADA pack, communications), and building upgrades.

Project Rationale Renewals based upon Delcan's 2013 condition assessments and revised inspections. Work includes electrical (replace PLC, SCADA pack, communications), and building upgrades.

Project Number 21-02 **Capital Project Title** Marigold Electrical and Building Upgrades **Capital Project Description** Renewals are based upon Delcan's condition assessment and EIC inspections. Work includes electrical (replace MCC, PLC, VFD's, 480v to 600v upgrade, etc), and building upgrades.

Project Rationale Renewals are based upon Delcan's 2013 condition assessments and revised inspections. Work includes electrical (replace MCC, PLC, VFD's, 480v to 600v upgrade, etc), and building upgrades. Tendering was conducted in 2023, combined with Currie Major PS (21-03) works but the Marigold portion of the scope far exceeded available budget. Re-tendering will be conducted in 2024 with additional budget added.

Project Number 21-03 **Capital Project Title** Currie Major Electrical and Seismic Upgrades **Capital Project Description** Renewals based upon Delcan's condition assessment and EIC inspections. Work includes electrical (replace VFDs, PLC, SCADA pack, communications), seismic upgrades and driveway repairs.

Project Rationale Renewals based upon Delcan's 2013 condition assessments and revised inspections. Work includes electrical (replace VFDs, PLC, SCADA pack, communications), seismic upgrades and driveway repairs. A tender was conducted in 2023, combined with Marigold PS (21-02) works but the Marigold component came in well over budget. Re-tendering will be conducted in 2024 with additional budget added for Marigold.

Service: **3.798C** **Debt - Core Area Wastewater Treatment Program**

Project Number	21-05	Capital Project Title	Harling PS - Complete Replacement	Capital Project Description	Based on Delcan's condition assessment and the age of this facility, replacement of Harling Point PS is required.
Project Rationale	Replacement of Harling Point PS is based on Delcan's 2013 condition assessment. The preliminary design was completed in 2018. CRD has progressed a scope of work for a Consultant to provide detailed design and construction support services. Detailed design scope was awarded and initiated in 2024 with Construction expected to commence in 2025.				

Project Number	22-05	Capital Project Title	Lang Cove Discharge Isolation Valves	Capital Project Description	Replace seized, direct buried isolation valves on at the Lang Cove pump station with new valves in a manhole.
Project Rationale	An isolation valve on the discharge force main of the Lang Cove pump station has failed, with no way of isolating the pump station for maintenance or an emergency. Additionally, there currently is no way to bypass the force main. Funds are required to design a bypass outlet, plan valve replacement, bypass pump the failed valve and replace the valve.				

Project Number	25-04	Capital Project Title	Pump Station Mechanical and Electrical Renewal Program	Capital Project Description	Mechanical and electrical upgrades to multiple pump stations based on previous condition assessments and EIC inspections.
Project Rationale	Electrical, Mechanical and other ancillary upgrades are required at multiple facilities. Due to similarities in work, there is benefit in managing this work within a single program budget. Pump stations requiring this work include Trent, Hood, Currie Minor, Humber, Rutland and Penrhyn.				

Project Number	25-05	Capital Project Title	Bioxide dosing system upgrade	Capital Project Description	Replacement of bioxide skids at multiple locations, which are at the end of their useful life. Piloting is underway and if successful trials are completed, implementation to follow.
Project Rationale	Similar bioxide replacement work at multiple locations will benefit from being managed as a program. Some locations being prioritized include Marigold PS, Craigflower PS, Meaford Flow Meter, Highlands and Trent PS.				

Service: **3.798C** **Debt - Core Area Wastewater Treatment Program**

Project Number	21-06	Capital Project Title	Shoreline Trunk Sewer Upgrade	Capital Project Description	The hydraulic model and capacity assessment of the system by KWL in 2018-19, has identified that the Shoreline Trunk must be twinned to prevent overflows into Portage Inlet during peak storm events.
Project Rationale	The hydraulic model and capacity assessment of the system by KWL in 2018-19, has identified that the Shoreline Trunk must be twinned to prevent overflows into Portage Inlet.				

Project Number	21-07	Capital Project Title	Western Trunk Sewer Twinning	Capital Project Description	The hydraulic model and capacity assessment of the system by KWL in 2018-19, has identified that the Western Trunk Sewer must be twinned from Aldeane to Craigflower PS to prevent overflows upstream of Parson's siphon during peak storm events.
Project Rationale	The hydraulic model and capacity assessment of the system by KWL in 2018-19, has identified that the Western Trunk Sewer must be twinned from Aldeane to Craigflower PS to prevent overflows upstream of Parson's siphon. For 2025, approximately \$400k will be allocated to twin a section of this main at the new Galloping Goose pedestrian overpass in partnership with the City of Colwood.				

Project Number	21-09	Capital Project Title	Bowker Sewer Rehabilitation Ph1	Capital Project Description	Based on results of CCTV inspection about 2,000m of sewer along Shelbourne, Kings and from Trent PS to Newport needs to be relined.
Project Rationale	Lining work on phase 1 completed in 2023. Warranty inspections to push into late 2024 and possibly 2025.				

Project Number	24-17	Capital Project Title	Sewer Cleaning and Inspection	Capital Project Description	Core Area sewers should be cleaned and inspected on a 5-year cycle. This program will support that continued cycle.
Project Rationale	Core Area sewers should be cleaned and inspected on a 5-year cycle. This program will support that continued cycle.				

Service: **3.798C** **Debt - Core Area Wastewater Treatment Program**

Project Number	21-11	Capital Project Title	Manhole Repairs and Replacement	Capital Project Description	Based upon CCTV and staff inspections on manholes, there are a number of deteriorated MH's that require repair or replacement.
Project Rationale	Based upon CCTV and staff inspections on manholes, high priority repairs and replacement of deteriorated MH's.				

Project Number	23-01	Capital Project Title	Cecelia Ravine Pipe Protection	Capital Project Description	Based on geotechnical review, a section of the exposed NWT in Cecelia Ravine should be covered & protected from falling rocks upslope from the pipe.
Project Rationale	Based on geotechnical review, a section of the exposed NWT in Cecelia Ravine should be covered & protected from falling rocks upslope from the pipe. This project is currently being delayed for future coordination with works that CRD Parks is expected to be doing on the Galloping Goose Trail.				

Project Number	24-10	Capital Project Title	East Coast Interceptor and Bowker Sewer Rehabilitation Ph2	Capital Project Description	Based on results of CCTV inspection about 2,000m of sewer needs to be relined along Beach Dr (from Bowker to Windsor) and along Doncastor Dr., Shelbourne St. and Kings Rd.
Project Rationale	Based on results of CCTV inspection about 2,000m of sewer along Beach Dr (from Bowker to Broom) and along Doncastor and Transit Roads needs to be relined. Lining work anticipated to be completed prior to end of 2024 but some warranty inspection work will carry into 2025.				

Project Number	24-11	Capital Project Title	Western Trunk Grit Chamber Repairs	Capital Project Description	The Western Trunk (Island Highway) Grit Chamber is badly corroded and requires repairs before extensive structural damage occurs.
Project Rationale	Repairs to Western Trunk Grit Chamber at Island Highway. Chamber is badly corroded and requires repair.				

Service: **3.798C** **Debt - Core Area Wastewater Treatment Program**

Project Number 26-01 **Capital Project Title** NWT Sewer Replacement at Alpha-Terrace **Capital Project Description** A 5m long section of old concrete pipe downstream of Boundary Transition Chamber is badly corroded and needs to be replaced with new PVC pipe.

Project Rationale Pipe segment replacement required prior to failure.

Project Number 21-12 **Capital Project Title** Gorge Siphon Inlet Chamber Upgrade **Capital Project Description** The concrete chamber is badly corroded and the control gates are seized on this chamber and they need to be replaced so that the individual siphons can be isolated or activated.

Project Rationale The control gates are seized on this chamber and they need to be replaced so that the individual siphons can be isolated or activated.

Project Number 21-13 **Capital Project Title** Craigflower Forcemain Twinning **Capital Project Description** The hydraulic model and capacity assessment of the system by KWL in 2018-19, has identified that the Craigflower Forcemain must be twinned to prevent overflows into Portage Inlet during peak storm events.

Project Rationale The hydraulic model and capacity assessment of the system by KWL in 2018-19, has identified that the Craigflower Forcemain must be twinned to prevent overflows into Portage Inlet.

Project Number 24-14 **Capital Project Title** Parsons Siphon/Bridge Connection Repairs **Capital Project Description** The siphon pipe support connections to the Parsons Bridge require repairs.

Project Rationale The siphon pipe support connections to the Parsons Bridge require repairs.

Project Number 25-03 **Capital Project Title** Harriet Siphon Inlet Chamber Upgrade **Capital Project Description** Assess concrete corrosion and replace seized control gates.

Project Rationale The concrete chamber is badly corroded and the control gates are seized on this chamber and they need to be replaced so that the individual siphons can be isolated or activated.

Service: 3.798C Debt - Core Area Wastewater Treatment Program

Project Number 27-01 **Capital Project Title** Forcemain and Siphon Pipe Assessment Study **Capital Project Description** There are several forcemain pipes downstream from each pump station that have never been assessed. A study is proposed to investigate various technologies to evaluate the condition of the pipes.

Project Rationale Repairs to Western Trunk Grit Chamber at Island Highway. Chamber is badly corroded and requires repair.

Project Number 21-16 **Capital Project Title** Gorge & Chapman Meter **Capital Project Description** Based on KWL's 2018-19 Flow Meter Audit review, KWL recommended a new flodar meter to measure the unmetered Gorge and Chapman catchments. Includes installation of new metering manhole.

Project Rationale Based on KWL's 2018-19 Flow Meter Audit review, KWL recommended a new flodar meter to measure the unmetered Gorge and Chapman catchments. Includes installation of new metering manhole.

Project Number 21-22 **Capital Project Title** Asset Management Plan Update **Capital Project Description** Previous condition assessment studies will be updated and incorporated into a long-term asset management plan to meet expected level-of-service requirements.

Project Rationale Previous condition assessment studies will be updated and incorporated into a long-term asset management plan to meet expected level-of-service requirements.

Project Number 21-23 **Capital Project Title** DCC Program Development **Capital Project Description** With the completion of CAWTP and amendment of the Service Establishment Bylaw, it was noted that a DCC Program would be established to fund future wastewater projects related to growth. This project is to create the program, consult with stakeholders

Project Rationale With the completion of CAWTP and amendment of the Service Establishment Bylaw, it was noted that a DCC Program would be established to fund future wastewater projects related to growth. This project is to create the program, consult with stakeholders and prepare a new DCC bylaw.

Service: **3.798C** **Debt - Core Area Wastewater Treatment Program**

Project Number	21-24	Capital Project Title	Record Drawing and Wastewater Agreement Updates	Capital Project Description	The old as-built drawings, connection points and wastewater agreements with the contributing municipalities has not been updated in many years. Updates are required to reflect changes in the system, identify clear demarcation points, and reflect updates in the LWMP.
Project Rationale	The old as-built drawings, connection points and wastewater agreements with the contributing municipalities has not been updated in many years. Updates are required to reflect changes in the system, identify clear demarcation points, and reflect updates in the LWMP.				

Project Number	21-25	Capital Project Title	SCADA and Radio Assessment	Capital Project Description	Majority of the radio and SCADA equipment are nearing end of life, technological advances do not allow for straight replacements, funding is required for assessments of existing equipment and site requirements.
Project Rationale	Majority of the radio and SCADA equipment are nearing end of life, technological advances do not allow for straight replacements, funding is required for assessments of existing equipment and site requirements.				

Project Number	22-03	Capital Project Title	Acquisition of Outstanding Right-of-Ways	Capital Project Description	Some of the infrastructure is located on privately owned land that do not have rights-of-way. A plan is being developed to acquire SRW's for all infrastructure over time. Initial spending requires a study and plan prior to acquisition.
Project Rationale	Some of the infrastructure is located on privately owned land that do not have right-of-ways. A plan is being developed to acquire SRW's for all infrastructure over time. Initial spending requires a study and plan prior to acquisition.				

Project Number	21-27	Capital Project Title	New Infrastructure Optimization	Capital Project Description	Unforeseen and unplanned optimization at a number of new facilities to improve operation and health and safety requirements.
Project Rationale	Unforeseen and unplanned optimization at a number of new facilities to improve operation and health and safety requirements.				

Service: 3.798C Debt - Core Area Wastewater Treatment Program

Project Number 22-04 **Capital Project Title** Microwave Radio Upgrades **Capital Project Description** To provide a high bandwidth communications backbone to the CAWWT system, a microwave communications system will be installed.

Project Rationale Multiple facilities throughout the CRD RWS system require additional bandwidth to allow for proper monitoring and control. This project will enable the initial design and preliminary installation of a high bandwidth microwave backbone that will be able to be leveraged by multiple CRD operational groups. The installation of this backbone will be coordinated with the other IWS service areas.

Project Number 23-07 **Capital Project Title** Enterprise Data Historian Management System **Capital Project Description** A data historian is required to store large amounts of data that is required for compliance reporting to regulators, operational performance reports, cost allocation, and engineering analysis.

Project Rationale A data historian is required to store large amounts of data that is required for compliance reporting to regulators, operational performance reports, cost allocation, and engineering analysis.

Project Number 28-01 **Capital Project Title** Marigold Surge Tank Deconstruction **Capital Project Description** The old Mariogld Surge Tank has been abandond for many years, is becoming a safety concern for youth, a needs to be removed.

Project Rationale Future assessment and decommissioning.

Project Number 24-15 **Capital Project Title** IT Core Infrastructure Replacement **Capital Project Description** Replacement of Core IT infrastructure such as servers, network switches, UPS, etc for equipment end of life

Project Rationale CAWW portion of Core IT Infrastructure. Program to be managed by CRD IT.

Project Number 27-03 **Capital Project Title** Westshore Wastewater Treatment Plant Siting Assessment **Capital Project Description** Capacity needs, technology review, siting requirements, conceptual layout, Environmental Impact Assessment and other planning efforts.

Project Rationale Capacity needs, technology review, siting requirements, conceptual layout, Environmental Impact Assessment and other planning efforts.

Service: 3.798C Debt - Core Area Wastewater Treatment Program

Project Number 21-26 **Capital Project Title** Annual Provisional Emergency Repairs **Capital Project Description** Unforeseen and unplanned emergency repairs can occur which require immediate attention.

Project Rationale Funds are required for unforeseen and unplanned emergency repairs can occur which require immediate attention.

Project Number 23-06 **Capital Project Title** Annual Provisional Equipment Replacement **Capital Project Description** Replacement of at end of service life, including valves, variable frequency drives, capacitors.

Project Rationale Replacement of equipment at end of service life, including valves, variable frequency drives, capacitors.

Project Number 23-08 **Capital Project Title** Process & Mechanical Upgrades **Capital Project Description** Upgrades to the Core Area Wastewater Treatment and Conveyance infrastructure in order to optimize operations

Project Rationale Annual Provisional account for upgrades to the Core Area Wastewater Treatment and Conveyance infrastructure in order to optimize operations in order to improve compliance with regulatory requirements, improve equipment and process efficiency, and reduce risk of pre-mature equipment failure.

Project Number 23-09 **Capital Project Title** Safety & Security Upgrades **Capital Project Description** Upgrades to the Core Area Wastewater Treatment and Conveyance infrastructure to improve worker health and safety

Project Rationale Annual Provisional Account for upgrades to the Core Area Wastewater Treatment and Conveyance infrastructure to improve worker health and safety. This includes constructing safe access platforms to complete maintenance at equipment that present a fall from heights risk and other items that are flagged as health and safety concerns.

Project Number 24-08 **Capital Project Title** Clover Point Outfall Retrofit **Capital Project Description** The existing Clover outfall is no longer operated on a regular basis since wastewater is now conveyed to McLoughlin WWTP, but it must be ready for operation during peak storm events. As a result, the existing outfall will need to be assessed for best operational and maintenance practices based on limited use.

Project Rationale The existing outfall will see a significant reduction in usage once the Clover Point Pump Station is commissioned and wastewater flows up to 3 times ADWF are redirected to the McLoughlin WWTP. As a result, the existing outfall will need to be assessed for best operational and maintenance practices based on expected limited use instead of current continuous use.

Service: **3.798C** **Debt - Core Area Wastewater Treatment Program**

Project Number	25-02	Capital Project Title	Macaulay Point Outfall Retrofit	Capital Project Description	A section of coating on the emergency short outfall has failed and the pipe is corroding, and the long outfall needs to be modified to suit reduced usage. This project is to repair the coating, provide shoreline protection, and prepare a plan to maintain the deep outfall based on limited use.
Project Rationale	A section of coating the emergency short outfall has failed, the pipe is corroding, and the long outfall needs to be assessed/modified to suit reduced usage. This project is to repair the coating, provide shoreline protection, and modify the deep outfall.				

Project Number	27-02	Capital Project Title	Broom Overflow Pipe Rehabilitation	Capital Project Description	Overflow pipe is cracked and severed in multiple locations and H2S gases and odours are present.
Project Rationale	A section of coating the emergency short outfall has failed and the pipe is corroding, and the long outfall needs to be modified to suit reduced usage. This project is to repair the coating, provide shoreline protection, and modify the deep outfall.				

Project Number	24-16	Capital Project Title	Optimization of Residual Treatment Facility Operations	Capital Project Description	Installation of additional equipment to enhance beneficial use of biogas and support continued stable operations at the RTF
Project Rationale	Installation of additional equipment to enhance beneficial use of biogas and support continued stable operations at the RTF				

3.798C Debt - Core Area Wastewater Capital Asset and Reserve Summary

Summary Schedule

2025 - 2029 Financial Plan

Reserve Schedule Summary

Core Area Wastewater

The Wastewater Treatment Project (WTP) provides tertiary treatment for wastewater from the core area municipalities of Victoria, Esquimalt, Saanich, Oak Bay, View Royal, Langford and Colwood, and the Esquimalt and Songhees Nations. The WTP is built to meet the provincial and federal regulations for treatment at December 31, 2020. The Project consists of three main elements: McLoughlin Point Wastewater Treatment Plant, Residuals Treatment Facility, and the Conveyance System

Reserve/Fund Summary

	Estimate	Budget				
	2024	2025	2026	2027	2028	2029
Capital Reserve Fund	17,048,652	14,519,771	15,690,890	17,012,009	19,333,128	23,354,247
Capital Reserve Fund-Western Community	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Debt Reserve Fund	18,584,720	24,652,880	30,892,840	37,404,600	33,954,607	15,173
Total	37,633,372	41,172,651	48,583,730	56,416,609	55,287,735	25,369,420

See attached reserve schedules for projected annual cash flows.

Capital Reserve Fund Schedule Core Area Wastewater

Bylaw 4378 - The capital reserve fund was established to provide funding for capital expenditures in respect of capital projects including but not limited to, land, machinery or equipment necessary for the replacement, extension or renewal of existing capital works and related debt servicing payments

Capital Reserve Schedule

Capital Reserve Fund

Fund: 1092

Fund Centre: 102227

	Estimate	Budget				
	2024	2025	2026	2027	2028	2029
Beginning Balance	17,884,574	17,048,652	14,519,771	15,690,890	17,012,009	19,333,128
Planned Purchase (Based on Capital Plan)	(3,103,000)	(4,650,000)	(1,950,000)	(1,800,000)	(1,800,000)	(1,500,000)
Transfer IN (from Ops Budget)	1,617,078	2,121,119	3,121,119	3,121,119	4,121,119	5,521,119
Transfer IN (North East Trunk CRF)						
Surplus/Deficit						
Interest Income*	650,000					
Ending Balance \$	17,048,652	14,519,771	15,690,890	17,012,009	19,333,128	23,354,247

Assumptions/Background:

The funding strategy for the capital reserve fund is based upon the 25 year replacement plan as by Stantec during the construction of the Core Area Wastewater Treatment Project

* The planned purchase amount may differ from the five-year capital plan summary due to carryover from the previous year.

* Interest should be included in determining the estimated ending balance for the current year. Interest in planning years nets against inflation which is not included.

Bylaw 4378 - The capital reserve fund was established to serve both the Core Area and Western Communities. The reserve schedule below is committed to advancing studies for a wastewater treatment proposal in Colwood.

Colwood Treatment Project -Capital Reserve Schedule

Capital Reserve Fund

Fund: 1092

Fund Centre: 102277

	Estimate	Budget				
	2024	2025	2026	2027	2028	2029
Beginning Balance	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Interest Income*						
Ending Balance \$	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000

Assumptions/Background:

Based on the Colwood news release, on December 15, 2016, CAWTP project board approved the transfer of \$2 millions once the project is closed. The funds are to be set aside in a separate reserve fund center.

* Interest should be included in determining the estimated ending balance for the current year. Interest in planning years nets against inflation which is not included. which is not included.

Debt Reserve Fund Schedule Core Area Wastewater

Bylaw 4377 - The debt reserve fund was established for the specified purpose of funding future debt servicing payments or debt retirements. Monies in the debt repayment reserve will fund debt servicing and early repayment of debts issued to fund the Core Area Wastewater Treatment Project

Debt Reserve Schedule

Debt Reserve Fund
Fund: 1093
Fund Center: 102228

	Estimate	Budget				
	2024	2025	2026	2027	2028	2029
Beginning Balance	12,738,360	18,584,720	24,652,880	30,892,840	37,404,600	33,954,607
Debt Payment		-	-	-	(10,283,553)	(41,134,212)
Transfer from Ops Budget	5,346,360	5,418,160	5,489,960	5,561,760	5,633,560	5,994,778
Interest Income*	500,000	650,000	750,000	950,000	1,200,000	1,200,000
Ending Balance \$	18,584,720	24,652,880	30,892,840	37,404,600	33,954,607	15,173

Assumptions/Background:

The funding strategy for the debt reserve fund is based upon the project's financing plan as approved during the construction of the Core Area Wastewater Treatment Project. Repayment anticipated by 2031.

* Interest should be included in determining the estimated ending balance for the current year. Interest in planning years nets against inflation which is not included.