

**CAPITAL REGIONAL DISTRICT CAPITAL PLAN**

CAPITAL BUDGET FORM  
2021 & Forecast 2022 to 2025

Service #:

3.798C

Service Name:

Core Area Wastewater

**FIVE YEAR FINANCIAL PLAN**

Proj. No.	Capital Project Title	Capital Project Description	Funding Source	2021	2022	2023	2024	2025	5 - Year Total
<b>PROJECTS THAT ARE ALREADY INCLUDED IN THE CORE AREA LIQUID WASTE MANAGEMENT PLAN</b>									
21-03	Currie Major Electrical and Siesmic Upgrades	Renewals based upon Delcan's 2013 condition assessments and revised inspections. Work includes electrical (replace VFDs, PLC, SCADApack, communications), siesmic upgrades and driveway repairs. Assessment and VFD replacement in 2021 and other upgrades in 2022.	Debt	\$400,000	\$0	\$0	\$1,900,000	\$0	\$2,300,000
21-07	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 Aldeane to Craigflower PS to prevent overflows upstream of Parson's siphon. Complete an options study in 2021/22 and detailed design/construction between 2026-2030.	Debt	\$200,000	\$200,000	\$0	\$0	\$0	\$400,000
21-08	Boundary Odour Control Replacement	The Boundary UV odour control unit has failed. Based on the 2018 KWL Odour Control Assessment review, a new carbon scrubber located closer to Gorge Siphon inlet chamber maybe more effective.	Debt	\$400,000	\$0	\$0	\$0	\$0	\$400,000
21-09	Bowker Sewer Rehabilitation	Based on results of CCTV inspection about 1,685m of sewer from North Dairy to Richmond and 1,860m from Foul Bay to Currie PS needs to be relined.	Debt	\$4,300,000	\$4,300,000	\$0	\$0	\$0	\$8,600,000
21-10	Sewer Cleaning and Inspection	Regional sewers should be cleaned and inspected on a 5-year cycle. The trunk sewers from Prospect to Currie PS and from Bushby to Clover PS will be inspected in 2021. The 5-year cycle will recommence in 2024.	Debt	\$150,000	\$0	\$0	\$150,000	\$150,000	\$450,000
21-13	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.	Debt	\$300,000	\$300,000	\$4,500,000	\$4,500,000	\$0	\$9,600,000
21-20	Haultain, Hereward, Langford Replacement	Based on KWL's 2018-19 Flow Meter Audit review, ultrasonic meters are to be replaced with new LUT-440 models.	Debt	\$40,000	\$0	\$0	\$0	\$0	\$40,000
22-01	Odour Control HVAC Testing and Balancing	Based upon KWL's 2018 condition assessment review, upgrades are required to several odour control facilities (ie. carbon scrubbers, bioxide injection, etc). In addition, HVAC testing & balancing and process narratives are required.	Debt	\$0	\$200,000	\$0	\$200,000	\$200,000	\$600,000
23-01	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.	Debt	\$0	\$0	\$300,000	\$0	\$0	\$300,000
<b>SUBTOTAL OF EXISTING LWMP PROJECTS</b>									<b>\$22,690,000</b>
<b>PROJECTS THAT ARE NOT INCLUDED IN THE CORE AREA LIQUID WASTE MANAGEMENT PLAN</b>									
<b>PUMP STATIONS</b>									
21-01	Lang Cove Electrical and Building Upgrades	Renewals based upon Delcan's 2013 condition assessments and revised inspections. Work includes electrical (replace PLC, SCADApack, communications), and building upgrades.	Debt	\$100,000	\$250,000	\$0	\$0	\$0	\$350,000
21-02	Marigold Electrical and Building Upgrades	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.	Debt	\$400,000	\$1,850,000	\$0	\$0	\$0	\$2,250,000
21-04	Craigflower Odour Control Upgrade	Increasing flows and off-gassing from the cortex drop are generating higher odours than expected. Improvements are required to mitigate odours and address health and safety concerns.	Debt	\$400,000	\$0	\$0	\$0	\$0	\$400,000
21-05	Harling PS - Complete Replacement	Replacement of Harling Point PS is based on Delcan's 2013 condition assessment. The preliminary design was completed in 2018. Detailed Design will be completed in 2021 and construction in 2022.	Debt	\$200,000	\$1,700,000	\$0	\$0	\$0	\$1,900,000
24-01	Trent PLC Upgrade	The PLC needs to be upgraded to meet new software standards.	Debt	\$0	\$0	\$0	\$250,000	\$0	\$250,000
24-02	Hood Mechanical and Electrical Renewal	Upgrades are based upon Delcan's 2013 condition assessments and revised inspections. The work includes pump replacement, installation of a new valve chamber, RTU upgrade, and site improvements.	Debt	\$0	\$0	\$0	\$420,000	\$0	\$420,000
24-03	Currie Minor Mechanical and Electrical Renewal	Upgrades are based upon Delcan's 2013 condition assessments and revised inspections. The work includes pump and valve replacement.	Debt	\$0	\$0	\$0	\$230,000	\$0	\$230,000
24-04	Humber Electrical and Mechanical Renewal	Upgrades are based upon Delcan's 2013 condition assessments and revised inspections. The work includes pump and valve replacements, PLC/RTU upgrade and site improvements.	Debt	\$0	\$0	\$0	\$290,000	\$0	\$290,000
24-05	Rutland Electrical and Mechanical Renewal	Upgrades are based upon Delcan's 2013 condition assessments and revised inspections. The work includes pump and valve replacements, PLC/RTU upgrade and site improvements.	Debt	\$0	\$0	\$0	\$290,000	\$0	\$290,000
24-06	Penrhyn Electrical and Mechanical Renewal	Upgrades are based upon Delcan's 2013 condition assessments and revised inspections. The work includes electrical (replace PLC and MCC), mechanical (replace pumps and upgrade HVAC), and structural/building upgrades.	Debt	\$0	\$0	\$0	\$120,000	\$550,000	\$670,000
<b>GRAVITY SEWERS AND MANHOLES</b>									
21-06	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.	Debt	\$100,000	\$100,000	\$2,000,000	\$0	\$0	\$2,200,000
21-11	Manhole Repairs and Replacement	Based upon CCTV and staff inspections on manholes, high priority repairs and replacement of deteriorated MH's will start in 2021.	Debt	\$500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$1,500,000
<b>PRESSURE PIPES AND APPURTENANCES</b>									
21-12	Gorge Siphon Inlet Chamber Upgrade	The control gates are siezed on this chamber and they need to be replaced so that the individual siphons can be isolated or activated.	Debt	\$500,000	\$0	\$0	\$0	\$0	\$500,000
21-14	Marigold Siphon Assessment	The Marigold Siphon section is a pressurized (pre-stressed concrete pipe), nearing 50 years old, and has never been assessed. Assessment and eventual replacement of the pipe is required.	Debt	\$400,000	\$0	\$0	\$0	\$7,900,000	\$8,300,000
22-02	Gorge and Harriet Siphon Assessment	The Gorge and Harriet Siphons are ductile iron pipe, nearing 50 years old, and have never been flushed or assessed. Flushing and assessment of the pipe is required.	Debt	\$0	\$250,000	\$0	\$0	\$0	\$250,000
23-02	Penrhyn Siphon Assessment	The Penrhyn Siphon is PVC pipe, and has never been flushed or assessed. Flushing and assessment of the pipe is required.	Debt	\$0	\$0	\$400,000	\$0	\$0	\$400,000
24-07	Parsons Siphon Assessment	The Parsons Siphons are PVC and steel pipe, and have never been flushed or assessed. Flushing and assessment of the pipe is required.	Debt	\$0	\$0	\$0	\$400,000	\$0	\$400,000
25-01	Admirals Siphon Assessment	The Admirals Siphon is PVC pipe, and has never been flushed or assessed. Flushing and assessment of the pipe is required.	Debt	\$0	\$0	\$0	\$0	\$400,000	\$400,000
<b>FLOW METERS</b>									
21-15	Parsons Meter Replacement	Based on KWL's 2018-19 Flow Meter Audit review, Parsons meter is to be replaced with two doppler meters and one magmeter on Wilfert PS (includes install of meters, kiosk and conduit).	Debt	\$250,000	\$0	\$0	\$0	\$0	\$250,000
21-16	Gorge & Chapman Meter	Based on KWL's 2018-19 Flow Meter Audit review, KWL recommended a new flodar meter to measure the unmetred Gorge and Chapman catchments. Includes installation of new metering manhole.	Debt	\$130,000	\$0	\$0	\$0	\$0	\$130,000
21-17	Esquimalt Nation Meter	Based on KWL's 2018-19 Flow Meter Audit review, KWL recommended a new custom weir, kiosk and conduit to measure the unmetred Esquimalt Nation catchment.	Debt	\$200,000	\$0	\$0	\$0	\$0	\$200,000

FIVE YEAR FINANCIAL PLAN									
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21-18	Shoreline Trunk Meter	Based on KWL's 2018-19 Flow Meter Audit review, KWL recommended a new flodiar meter to measure the unmetred Shoreline catchment. Includes installation of FloDar meter, kiosk and conduit.	Debt	\$50,000	\$190,000	\$0	\$0	\$0	\$240,000
21-19	Selkirk Meter	Based on KWL's 2018-19 Flow Meter Audit review, KWL recommended a new flume meter to measure the unmetred Selkirk catchment (install weir, kiosk and conduit).	Debt	\$190,000	\$0	\$0	\$0	\$0	\$190,000
21-21	Penrhyn Meter	Based on KWL's 2018-19 Flow Meter Audit review, the ADFM insertion probe meter is damaged and needs to be replaced.	Debt	\$90,000	\$0	\$0	\$0	\$0	\$90,000
<b>GENERAL</b>									
21-22	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.	Debt	\$250,000	\$0	\$0	\$0	\$0	\$250,000
21-23	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.	Debt	\$300,000	\$100,000	\$0	\$0	\$0	\$400,000
21-24	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.	Debt	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000
21-25	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. Replacement will happen over many years commencing in 2022.	Debt	\$150,000	\$750,000	\$750,000	\$750,000	\$750,000	\$3,150,000
22-03	Acquisition of Outstanding Right-of-Ways	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.	Debt	\$0	\$200,000	\$0	\$0	\$1,000,000	\$1,200,000
21-26	Annual Provisional Emergency Repairs	Unforeseen and unplanned emergency repairs can occur which require immediate attention.	Debt	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$5,000,000
<b>OUTFALLS</b>									
24-08	Clover Point Outfall Retrofit	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 ADFW 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.	Debt	\$0	\$0	\$0	\$500,000	\$0	\$500,000
25-02	Macaulay Point Outfall Retrofit	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.	Debt	\$0	\$0	\$0	\$0	\$750,000	\$750,000
<b>RESIDUAL SOLIDS</b>									
21-27	Biosolids Beneficial Use Building	Modular storage facility for mixing biosolids for application at Hartland.	Debt	\$300,000	\$0	\$0	\$0	\$0	\$300,000
21-28	Lafarge Biosolids Receiving	Lafarge Biosolids Receiving Silo Interconnect or Purchase of two used Pneumatic Bulk Trailers	Debt	\$250,000	\$0	\$0	\$0	\$0	\$250,000
21-29	Quonset removal	Demo old storage facility	Debt	\$50,000	\$0	\$0	\$0	\$0	\$50,000
<b>SUBTOTAL OF PROJECTS NOT IN THE LWMP</b>									<b>\$34,450,000</b>
<b>GRAND TOTAL</b>				<b>\$5,910,000</b>	<b>\$6,740,000</b>	<b>\$4,500,000</b>	<b>\$4,600,000</b>	<b>\$12,700,000</b>	<b>\$57,140,000</b>