Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Core Area Liquid Waste Management Committee

Wednesday, October 7, 2020 | **11:30 AM** | **6th Floor Boardroom, 625 Fisgard Street, Victoria, BC V8W 1R7**

Special Meeting

B. Desjardins (Chair), L. Helps (Vice-Chair), D. Blackwell, S. Brice, F. Haynes, B. Isitt, J. Loveday, R. Martin, R. Mersereau, K. Murdoch, D. Screech, L. Seaton, N. Taylor, G. Young, C. Plant (Board Chair, ex-officio)

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We pledge to make our meetings a place where all feel welcome and respected.

1. Territorial Acknowledgement

2. Approval of Agenda

3. Chair's Remarks

4. Presentations/Delegations

5. Committee Business

5.1. 20-492 Wastewater Treatment Project Q2 2020 Quarterly Report

Recommendation: The Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board:
That this report be received for information.

Attachments: Staff Report: WTP Quarterly Report Q2 2020

5.2. 20-597 Wastewater Treatment Project July 2020 Monthly Report

Recommendation: The Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board:
That this report be received for information.

Attachments: Staff Report: WTP July 2020 Monthly Report

5.3. 20-598 Wastewater Treatment Project August 2020 Monthly Report

Recommendation: The Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board:
That this report be received for information.

Attachments: Staff Report: WTP August 2020 Monthly Report

5.4. 20-602 2019-2022 Wastewater Service Planning

Recommendation: That the Core Area Liquid Waste Management Committee recommends to the Capital Regional District:

That Appendix A Community Need Summary - Wastewater be approved as presented and advanced to the October 28, 2020 provisional budget review process.

Attachments:
- Staff Report: 2019-2022 Service Planning - Wastewater
- Appendix A: Community Need Summary - Wastewater
- Appendix B: Initiatives Progress Report - Wastewater

5.5. 20-603 Core Area Wastewater Service - 2021 Operating and Capital Budget

Recommendation: That the Core Area Liquid Waste Management Committee recommends that the Capital Regional District Board:

1. Review and approve the 2021 Core Area Liquid Waste Management Service operating and capital budgets as presented, at the October 28, 2020 provisional budget meeting; and

2. Direct staff to balance the 2020 actual revenue and expenses on the transfer to the debt retirement reserve fund at year end.

Attachments:
- Staff Report: Core Area Wastewater Service - 2021 Operating & Capital Budget
- Appendix A: Five Year Capital Plan
- Appendix B: Long-term Budget Overview
- Appendix C: Combined Core Area Wastewater Service Committee Summary

5.6. 20-577 Bylaw Nos. 4374 and 4375: Core Area Wastewater Loan Authorizations

Recommendation: The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:
1. That Bylaw No. 4374, "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 1, 2020" be introduced and read a first, second, and third time;
2. That Bylaw No. 4374 be referred to the Inspector of Municipalities for approval.
3. That Bylaw No. 4375, "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 2, 2020" be introduced and read a first, second, and third time;
4. That Bylaw No. 4375 be referred to the municipal councils of the participants for approval, and if two-thirds of approval is received, to the Inspector of Municipalities.

Attachments:
- Staff Report: Bylaw Nos. 4374 and 4375 Loan Authorizations
- Appendix A: Bylaw No. 4374 Loan Authorization Bylaw No. 1
- Appendix B: Bylaw No. 4375 Loan Authorization Bylaw No. 2

5.7. 20-576 Bylaw Nos. 4376, 4377, and 4378: Core Area Sewer Reserve Bylaws

Recommendation: The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:
1. That Bylaw No. 4376, "Capital Regional District Sewer and Water Services Operating Reserve Fund Bylaw No. 1, 2016, Amendment Bylaw No. 2, 2020" be introduced and read a first, second, and third time; and
2. That Bylaw No. 4376 be adopted.
3. That Bylaw No. 4377, "Liquid Waste Management Core Area and Western Communities Service Debt Repayment Reserve Establishment Bylaw No. 1, 2020", be introduced and read a first, second, and third time; and
4. That Bylaw No. 4377 be adopted.
5. That Bylaw No. 4378, "Liquid Waste Management Core Area and Western Communities Service Capital Reserve No. 1, 2020", be introduced and read a first, second, and third time; and
6. That Bylaw No. 4378 be adopted.

Attachments:
Staff Report: Bylaws 4376, 4377 and 4378 Reserve Establishment
Appendix A: Bylaw 4376 Sewer and Water Operating Reserve Funds
Appendix B: Bylaw 4377 Establish Debt Repayment Reserves
Appendix C: Bylaw 4378 Establish Sewer And Water Capital Reserves

6. Notice(s) of Motion

7. New Business

8. Adjournment

The next meeting is January 27, 2021.

To ensure quorum, please advise Sherri Closson (sclosson@crd.bc.ca) if you or your alternate cannot attend.

Item 7.1

Wastewater Treatment Project
Treated for a cleaner future

REPORT TO CORE AREA WASTEWATER TREATMENT PROJECT BOARD
MEETING OF THURSDAY, JULY 30, 2020

SUBJECT **Wastewater Treatment Project Q2 2020 Quarterly Report**

ISSUE

To provide the Core Area Wastewater Treatment Project Board with the Wastewater Treatment Project Q2 2020 Quarterly Report Report.

BACKGROUND

On May 25, 2016 the Regional Board of the CRD:

i) Adopted by resolution the Core Area Wastewater Treatment Project Board Terms of Reference (Project Board Terms of Reference) for the purposes of establishing principles governing the Core Area Wastewater Treatment Project (the Wastewater Treatment Project or the WTP);
ii) Established the Core Area Wastewater Treatment Project Board (Project Board) under Bylaw 4109 (the CRD Core Area Wastewater Treatment Board Bylaw No. 1, 2016) for the purposes of administering the Core Area Wastewater Treatment Project; and
iii) Delegated certain of its powers, duties and functions to the Project Board under Bylaw 4110 (the CRD Core Area Wastewater Treatment Project Board Delegation Bylaw No. 1, 2016).

On September 14, 2016 the Regional Board of the CRD:

i) Received the final report of the Project Board with respect to its recommendation for the CAWTP, dated September 7, 2016 (the Final Report); and
ii) Approved the business case attached as Appendix 1 (the Business Case) to the Final Report.

DISCUSSION

The Core Area Wastewater Treatment Project Board (the Project Board) Terms of Reference requires, amongst other things: that the Project Board provide the CRD Board with monthly progress reports and a comprehensive quarterly report on the Project.

The Quarterly report for the period of April-June 2020 is attached as Appendix A.

RECOMMENDATION

That the Core Area Wastewater Treatment Project Board approve the following resolution:

RESOLVED that:

The Staff Report, 'Wastewater Treatment Project Q2 2020 Quarterly Report', be received for information and forwarded to the Core Area Liquid Waste Management Committee and CRD Board for information.

Elizabeth Scott, Deputy Project Director
Wastewater Treatment Project

Dave Clancy, Project Director
Wastewater Treatment Project
Concurrence

Attachments: 1

Appendix A: Wastewater Treatment Project Q2 2020 Quarterly Report

ES:er

Wastewater Treatment Project
Treated for a cleaner future

CRD Wastewater Treatment Project

Q2 2020 Quarterly Report

Reporting Period: April-June 2020

TABLE OF CONTENTS

1 Executive Summary 4

1.1 Introduction 4

1.2 Dashboard 6

2 Wastewater Treatment Project Progress 9

2.1 Safety 9

2.2 Environment and Regulatory Management 15

2.2.1 Environment 15

2.2.2 Regulatory Management 16

2.3 First Nations 17

2.4 Stakeholder Engagement 18

2.5 Resolutions from Other Governments 21

2.6 Schedule 21

2.6.1 30 day look ahead 23

2.6.2 60 day look ahead 25

2.7 Cost Management and Forecast 27

2.7.1 Commitments 28

2.7.2 Expenses and Invoicing 28

2.7.3 Contingency and Program Reserves 28

2.7.4 Project Funding 29

2.8 Key Risks and issues 30

2.9 Status (Engineering, Procurement and Construction) 34

2.9.1 Wastewater Treatment Plant (McLoughlin Point WWTP) 34

2.9.2 Residuals Treatment Facility 39

2.9.3 Conveyance System 43

Appendix A– Overnight Work: Fairfield Watermain Shut-off (April 3, 2020) 58

Appendix B– Trent Forcemain: Bushby and Eberts Streets (April 14, 2020) 59

Appendix C– Clover Point Pump Station Overnight Work (April 15, 2020) 60

Appendix D– Temporary Overnight Work: Marigold Road (April 17, 2020) 61

Appendix E– Residual Solids Conveyance Line: Gorge Bridge Construction Update 62

Appendix F– Core Area Wastewater Discharge Notice (April 14, 2020) 63

Appendix G– Update: Core Area Wastewater Discharge Notice (April 17, 2020) 64

Appendix H– Beaches Reopen Following Core Area Wastewater Discharge (April 24, 2020) 65

Appendix I– Residual Solids Conveyance Line Map (April 24, 2020) 66

Appendix J– Trent Forcemain: Water Service Shutdown Notice Update (May 11, 2020) 67

Appendix K– Core Area Wastewater Discharge Notice (May 7, 2020) 68

Appendix L– Core Area Wastewater Discharge Notice (May 30, 2020) 69
Appendix M– Residual Solids Conveyance Line Map (May 8, 2020) 70
Appendix N– Trent Forcemain: Fairfield Road Closure (June 12, 2020) 71
Appendix O– Project Update #9 (June 2020) 72
Appendix P– Core Area Wastewater Discharge Notice at Macaulay Point (June 22, 2020) 73
Appendix Q– Residual Solids Conveyance Line Map (June 25, 2020) 74
Appendix R– Monthly Cost Report (June) 75
Appendix S– Quarterly Cost Report 76

1 Executive Summary

1.1 Introduction

This Quarterly Report covers the reporting period of April to June 2020 and outlines the progress made on the Wastewater Treatment Project over this time.

The Wastewater Treatment Project (the "Project") includes three main Project Components (the "Project Components"): the McLoughlin Point Wastewater Treatment Plant (the "McLoughlin Point WWTP"), the Residuals Treatment Facility (the "RTF") and the Conveyance System (which includes upgrades to the conveyance network including the construction of pump stations and pipes). The Project scope is being delivered through a number of contracts with a variety of contracting strategies.

Over the reporting period the COVID-19 public health emergency continued to have impacts on the Project. The Project Team and Project contractors are actively monitoring the status of the COVID-19 public health emergency and are taking additional precautions to protect our staff, contractors, and the public. Construction is ongoing at all of the Project's sites in accordance with guidelines established by the Provincial Health Officer.

While construction is ongoing, the public health emergency is impacting construction progress and may delay some interim project milestones, such as the transition to commissioning. However, based on current progress the Wastewater Treatment Project remains on schedule to meet the regulatory deadline for treatment by the end of 2020.

The McLoughlin Point WWTP Project Component is continuing with Harbour Resource Partners ("HRP" as the Design-Build contractor for the McLoughlin Point WWTP) progressing: Densadeg 1, 2 and 3 installation and hand over for commissioning; installation of the chemical distribution system; building envelopes in the Primary treatment area; moving bed bio reactor (MBBR) process equipment installation and covers; Biological Aerated Filter (BAF) equipment and tank covers in the Secondary treatment area; installation of disk filter walls; level 1 and 2 pumps, process piping and mechanical piping installation in the Tertiary treatment area; interior drywall, flooring and millwork, plumbing, glazing, and heating ventilation and air conditioning (HVAC) on level 1 and 2; and installation of the green roof in the Operations and Maintenance (O&M) building. In addition the blind was removed from the outfall and fiberglass reinforced plastic (FRP) baffles installed; and the main water service was installed and backfill progressed across the site.

The RTF Project Component is continuing with Hartland Resource Management Group ("HRMG" as the Design-Build-Finance-Operate-Maintain contractor for the RTF) progressing construction activities including: external pipe connections to Digester 1, and the Digested Solids Storage Tank (DSST); pneumatic testing of Digesters 2 and 3; electrical cable installation and terminations in the Other Municipal Solids Receiving Facility; electrical work, FRP grating and ducting installation and commencement of commissioning of systems in the Residuals Handling building; mechanical, electrical and insulation installations completed and commencement of commissioning of systems in the Residuals Drying Facility; hydro testing of water storage and effluent tanks; chemical piping installation; installation of FRP ducting in the Residuals Storage and Odour Control area; and fire alarm verification commenced in the Operations Building.

The Conveyance System is being delivered through seven construction contracts: two design-build contracts and five design-bid-build contracts.

The two design-build Conveyance System contracts progressed over the reporting period as follows:

- Clover Point Pump Station: Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressed construction activities over the reporting period including: installation of new sanitary screens in the existing inlet sanitary channel; demolition of existing pump room and HVAC and electrical equipment on existing mezzanine floor; new pump station in operation under interim operating phase; forcemain successfully testing and backfilled; works at the new public plaza and washroom; installed fuel storage tank and exhaust fan for diesel generator; grit separation equipment installation; installation of seismic upgrades, fuelling system and diesel generator; and installation of landscape retaining walls and concrete seating.

- Macaulay Point Pump Station: Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressed construction activities over the reporting period including: installation of wood siding panels, recycle water system and genset fuel tanks; installation of FRP platform, ducting and stairs; commencing commissioning of the programmable logic control and motor control centres; completed installation and pressure testing of the process piping in the pump room; completed commissioning of reclaimed water system, sewage pumps, odour control system and flow control valve; and completed HVAC functional test.

The design-bid-build Conveyance System contracts progressed over the reporting period, as follows:

- Clover Forcemain: Windley Contracting Ltd. ("Windley" as the Construction Contractor) continued construction activities including: cycle track and road restoration; commencing construction on the seawall balustrade replacement; poured new concrete wall; removal of existing wall; and commenced grading and cement pours for new sidewalk.

- Residual Solids Conveyance Line ("RSCL"): the RSCL is being delivered through two construction contracts, with work progressing as follows:

    - Residual Solids Pipes: Don Mann Excavating Ltd. ("Don Mann" as the Construction Contractor) continued construction activities over the reporting period, including: installation of valve chambers; completing pipe installation and pressure testing section from the north side of Tillicum Bridge to the south side of Admirals Bridge; completed air valve chamber on Grange Road; clean up and demobilization; and final surface restorations.

    - Residual Solids Pump Stations: Knappett Projects Inc. ("Knappett" as the Construction Contractor) continued construction activities including: pipe spools and electrical work at all three pump stations; installation of odour control units at all three pump stations; odour control unit underground vent and drain piping, commenced south pipe tie in and general backfill of the site at Pump Station 1; odour control slab was poured; installation of the surge tank and commencement

of commissioning activities at Pump Station 2; pressure testing and finishing items continued within the wet well and valve chamber; generator tested and commissioning activities carried out at Pump Station 3; and the Marigold crossing was completed with spool installation continuing and vent piping and trenching completed. Additionally, at Tillicum Bridge, the pipe spools were installed and the pipe was completed and pressure tested; and the pipe hangers and spools were installed at Admirals Bridge.

- Arbutus Attenuation Tank ("AAT"): NAC Constructors Ltd. (as the Construction Contractor) continued construction activities including: completed installation of secant piles, commenced formwork and rebar installation in preparation for concrete pours for sections of the ring beam; installed ducting from BC Hydro Pole to BC Hydro meter base; completed bulk excavation of the tank; and placed granular subbase spanning the full tank area.

- Trent Forcemain: Jacob Bros. Construction Inc. (as the Construction Contractor) progressed construction activities including: completion of storm sewer relocation on Bushby Street and Fairfield Road; completion of seawall investigation works; and completion of Fairfield Road watermain relocation; completed forcemain installation on Stannard Avenue; concrete flow through chamber stripped and backfilled; completed Eberts Street gravity main; and continued Fairfield Road forcemain installation.

1.2 Dashboard

Table 1 indicates the high level status of the Project and each Project Component with regards to the six Key Performance Indicators ("KPI") that were defined within the Project Charter.

There were no changes made to the KPIs over the reporting period.

The safety KPI for the Project and the conveyance system remains yellow. Over the quarterly reporting period six recordable safety incidents occurred and the total recordable incident frequency increased from 1.2 at the end of the first quarter of 2020 to 1.6. Over the reporting period the Project Team noted a trend in the number of safety incidents involving hand injuries. In April the Project Team sent a safety notice to all Contractors regarding hand injuries in the workplace, and in May sent a further e-mail noting the high incident of hand injuries, in order to draw contractors' attention to the trend, with the aim of increasing vigilance and correcting the trend. The Project Team continues to work with and ensure that all of the prime contractor partners maintain safety as their number one priority. The Project Team is also actively monitoring the status of the COVID-19 public health emergency and is taking additional precautions to protect our staff, contractors, and the public. The BC Government has designated construction as an essential service, and issued guidelines for construction sites to minimize the risks of COVID-19 transmission or illness. All Project contractors have implemented additional precautions to ensure the health and safety of their workers. These measures follow the direction set by the BC Government, including emphasizing the importance of maintaining social distance, increasing handwashing stations, reducing in-person meetings and increasing cleaning of common areas. The Project Team will continue to monitor contractors' compliance with the direction of the government as the situation evolves.

The schedule KPI for the Project overall and the Project components remains green. The COVID-19 public health emergency is impacting construction progress and may delay some interim project milestones, such as the transition to commissioning. However, construction is ongoing at all of the Project's sites, in accordance with provincial guidelines, and based on current progress the Wastewater Treatment Project remains on schedule to meet the regulatory deadline for treatment by the end of 2020.

The cost KPI for the Project overall and the conveyance system remained red over the reporting period, and are expected to remain red for the duration of the Project, primarily as a result of inflation in the Vancouver Island construction market. Other factors that have contributed to budget pressures include: design development to incorporate stakeholder input; geotechnical considerations including removal and disposal of contaminated material; and schedule constraints associated with the requirement to provide wastewater treatment by the regulatory deadline of December 31, 2020.

Based on the value of the contracts awarded to-date and the refreshed cost estimate for the scope remaining to be procured, the Project Team forecast the cost to complete the Project at $775M, or $10M over the Project's control budget. In May 2019 the CRD Board approved an increase in the Project's budget by $10M to $775M.

Subsequent to May 2019 the Project Team have continued to manage risks and there have been two main opposing budget drivers:

i) The Project's financing costs to-date have been lower than budgeted for two reasons: firstly as a result of low interest rates since the start of the Project, and secondly due to the receipt of funding from the provincial government earlier than forecast; and

ii) The Project's construction costs may be higher than budgeted as many contractors have advised that there are cost impacts from the COVID-19 public health emergency. Impacts include labour availability, work modifications to comply with provincial guidelines, and delays to the delivery of equipment and supplies.

It is too early to determine the cost impact to the Project, but if construction continues at the current pace the Project Team remain confident that the Project cost will be within the Project's $775M budget.

Table 1- Executive Summary Dashboard

Key Performance Indicators		Project Overall	WWTP	RTF	Conveyance System	Comments
Safety	Deliver the Project safely with zero fatalities and a total recordable incident frequency (TRIF) of no more than 1*.					Six recordable incidents occurred over the period. Site inspections are ongoing. The Project Team is actively monitoring the status of the COVID-19 public health emergency and is taking additional precautions to protect our staff, contractors, and the public. All Project contractors have implemented additional precautions to ensure the health and safety of their workers. The Project Team will continue to monitor and follow the direction of the government during this evolving situation.
Environment	Protect the environment by meeting all legislated environmental requirements and optimizing opportunities for resource recovery and greenhouse gas reduction.					Three minor environmental incidents occurred over the reporting period. Two were unplanned discharges from the Clover Point short outfall which triggered the CRD's Overflow Response Procedure. One was a small (<1 litre) release of gasoline that was cleaned up immediately.
Regulatory Requirements	Deliver the Project such that the Core Area complies with provincial and federal wastewater regulations.					No regulatory issues.
Stakeholders	Continue to build and maintain positive relationships with First Nations, local governments, communities, and other stakeholders.					Engagement activities were ongoing over the reporting period. Significant efforts were made to provide accurate and timely information to stakeholders.
Schedule	Deliver the Project by December 31, 2020.					The COVID-19 public health emergency is impacting construction progress and may delay some interim project milestones, such as the transition to commissioning. The Wastewater Treatment Project has made significant progress and currently remains on schedule to meet the regulatory deadline for treatment by the end of 2020.
Cost	Deliver the Project within the Control Budget ($765 million).					Based on the value of the contracts awarded to-date and a refreshed cost estimate for the scope remaining to be procured, the Project Team has forecast the cost to complete the Project at $775M, or $10M over the Project's Control Budget. This is primarily as a result of inflation in the Vancouver Island construction market. Other factors that have contributed to budget pressures include: design development to incorporate stakeholder input; geotechnical considerations including removal and disposal of contaminated material; and schedule constraints associated with the requirement to provide wastewater treatment by the regulatory deadline of December 31, 2020. The CRD Board have approved an increase in the Project's budget by $10M, to $775M. Many contractors have advised that there are cost impacts from the COVID-19 public health emergency. It is too early to determine the cost impact to the Project, but if construction continues at the current pace the Project Team remain confident that the Project cost will be within the Project's $775M budget, as a result of offsetting savings in financing costs.

* A TRIF of no more than 1 means that there is 1 or fewer recordable incidents (being a work-related injury or illness that requires medical treatment beyond first aid or causes death, days away from work, restricted work or transfer to another job, or loss of consciousness) for every 200,000 person-hours of work	
Status	Description
	KPI unlikely to be met
	KPI at risk unless correction action is taken
	KPI at risk but corrective action has been identified/is being implemented
	Good progress against KPI

2 Wastewater Treatment Project Progress

2.1 Safety

Safety information for the reporting period and cumulative for the Project from January 1, 2017 is summarized in Table 3.

The Project Team is actively monitoring the status of the COVID-19 public health emergency and is taking additional precautions to protect our staff, contractors, and the public. The BC Government has designated construction as an essential service, and issued guidelines for construction sites to minimize the risks of COVID-19 transmission or illness.

All Project contractors have implemented additional precautions to ensure the health and safety of their workers. These measures follow the direction set by the BC Government, including emphasizing the importance of maintaining social distance, increasing handwashing stations, reducing in-person meetings and increasing cleaning of common areas. The Project Team will continue to monitor contractors' compliance with the direction of the government during this evolving situation.

Site safety tours and weekly safety inspections were carried out by Project Management Office ("PMO") construction and safety personnel over the reporting period at all active worksites: McLoughlin Point WWTP, RTF, Macaulay Point Pump Station, Clover Point Pump Station, Clover Forcemain, Residual Solids Pipes, Residual Solids Pump Stations; Arbutus Attenuation Tank and Trent Forcemain.

Over the reporting period (April- June 2020) 42 safety incidents occurred, comprising: five medical aid recordable, one near-miss, twelve first-aid, one lost time recordable, and twenty-three report-only incidents, as summarized in Table 2.

Table 2: Safety Incidents over the Reporting Period

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
April 3, 2020	Residual Solids Pump Stations	First Aid	A worker stepped backwards and fell approximately 6 feet into an excavation. Worker stopped their fall causing them to injure their wrist.	Employee was assessed and treated on scene and put on Modified Duty. No further medical attention was required.	Tool-box talk reminding workers to be aware of their surroundings and their proximity to the work area was held.

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
April 6, 2020	McLoughlin Pt WWTP	First Aid	Worker was removing wire wheel from grinder when a wire poked through palm of their welding glove.	Worker notified Supervisor and reported to First Aid. No further medical treatment was required.	Tool-box talk held to remind workers to check their grinder for any possible hazards and that puncture resistant gloves must be worn when using a grinder.
April 7, 2020	Residual Solids Pump Stations	First Aid	A worker while chipping concrete had concrete dust enter their eye. Worker was wearing eye protection at the time.	Workers eye was flushed and they returned to work.	Toolbox talk reviewing the appropriate eye and face protection to be used for tasks that generate a significant amount of dust was held.
April 7, 2020	McLoughlin Pt WWTP	First Aid	Worker's wrench slipped pinching their hand between two surfaces.	Worker reported to First Aid to have the injury attended to. No further medical aid was needed.	Tool-box talk with workers was held to discuss the proper use of wrenches while loosening or tightening and keeping hands safe from being pinched in the event of slippage.
April 7, 2020	McLoughlin Pt WWTP	First Aid	Worker sustained a foot injury while stacking plywood. Worker was wearing appropriate footwear.	Worker was assessed by First Aid with no treatment provided and returned to work	Worker reminded to use proper lifting techniques and obtain assistance with awkward tasks.
April 11, 2020	Residual Solids Pipes	Report Only	Inspector observed an excavator operator hoisting a worker out of an excavation greater than 3 meters.	Meeting between Senior members of the Project Team and the contractor was held to review the incident and enforce that unsafe practices will not be tolerated.	Tool-box talk with the crew to reinforce safe work practices was held. Seriousness of the issue was clearly presented to the crew by the Contractors senior management.
April 13, 2020	Residual Solids Pump Stations	Report Only	The contractor discovered that some of their equipment at the Willis Point road lay down had been vandalized.	Incident reported to Police	Contractor reviewed their security at the laydown area and removed some of their equipment from the site.
April 15, 2020	McLoughlin Pt WWTP	Report Only	Workers while lifting felt some discomfort in their back. Worker continued to work but later reported it to their Supervisor	Worker was taken to First Aid and reported the incident and returned to work.	Tool-box talk on proper lifting techniques was held.
April 16, 2020	Clover Point Pump Station	Medical Aid Recordable	Worker was assisting with lowering a section of pipe and sustained a hand injury.	Worker was sent for a Medical Assessment. Worker fractured a knuckle and was put on modified duty.	Tool-Box talk on awareness of your surroundings and fully understanding the task at hand and properly assessing the risks prior to undertaking the task was held.
April 17, 2020	McLoughlin Pt WWTP	Medical Aid Recordable	Worker adjusting forks on the telehandler sustained a serious hand injury.	Worker was sent to Medical Aid and received 16 stitches and placed on Modified duty	Tool-Box talk on awareness of your surroundings and fully understanding the task at hand and properly assessing the risks prior to undertaking the task was held.

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
April 20, 2020	RTF	Report Only	A pressure test of digester 2 caused some of the bolts holding the roof sheets to pull through the panels.	Test was immediately stopped and tank depressurized. No workers were in the area during the pressure test.	Control zone was appropriate for the test. Issue with Digester 2 is under review.
April 22, 2020	McLoughlin Pt WWTP	Report Only	Worker's hand slipped while installing mechanical flange resulting in them over extending their elbow.	Worker reported incident to First Aid and returned to work.	Tool-box talk with crew on proper body positioning and securing the grip on a wrench to prevent slippage.
April 22, 2020	McLoughlin Pt WWTP	Report Only	Worker while lifting strained their back.	Worker reported incident to First Aid and returned to work.	Tool-box talk reviewing proper lifting methods and the use of mechanical lifting devices when moving heavy or awkward equipment was held.
April 23, 2020	Residual Solids Pump Stations	Report Only	An altercation between a TCP and a driver occurred at the intersection of Violet and Interurban.	Police were called to investigate the incident. No injuries were reported.	TCP asked to record license numbers of problematic drivers and to report them to their supervisor for follow up.
April 24, 2020	Residual Solids Pipes	Medical Aid Recordable	A worker sustained a hand injury from a hand grinder. The worker was wearing gloves at the time of the incident.	Worker was sent for a Medical Assessment and received 3 stitches	A tool-box talk reviewing the Safe Work Practice for the use of small hand tools was held. Also included in the talk was a review of the use of the correct gloves for the task.
April 28, 2020	Arbutus Attenuation Tank	Report Only	A worker while stepping down from a platform flexed their knee.	Worker reported to First Aid Attendant for assessment and returned to work.	Workers reminded in Tool-Box talk to be aware of their surroundings and to have platforms or other type of set-ups in place to aid in getting on and off platforms.
April 29, 2020	McLoughlin Pt WWTP	First Aid	Worker slipped engaging his safety harness causing them to strike their back on the edge of a plate settlers.	Worker reported to First Aid Attendant for assessment and returned to work.	Tool-box talk to ensure workers are aware of proper placement of their safety equipment and to always be aware of their surroundings.
April 30, 2020	McLoughlin Pt WWTP	First Aid	While guiding a pipe into position a worker overextended their wrist.	Workers wrist was assessed by First Aid and worker put on Modified Duties for the rest of the day	Tool-Box talk on proper assessments of work areas and proper lifting techniques was held.
May 1, 2020	Residual Solids Pump Stations	Lost Time Recordable	A worker sustained a hand injury when they lost their balance and crushed their finger between the handle of a cabinet and the steel cabinet.	Worker was sent to First Aid for assessment. An X-rays confirmed a fracture of the finger.	Tool-box talk held with crews to bring attention to the increase of hand injuries. They also reviewed the need for Hazard Assessments before starting work and in this case a working platform was recommended and installed.

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
May 5, 2020	Residual Solids Pump Stations	First Aid	Worker sustained a minor hand injury while trimming a piece of wood.	Worker reported to first aid where the laceration was cleaned and bandaged. No further follow up was required.	Tool-box talk to remind workers to wear the appropriate rated gloves for task was conducted.
May 6, 2020	McLoughlin Pt WWTP	First Aid	A Worker sustained a minor hand injury when they grabbed the end of a piece of pipe. Worker was wearing gloves at time of incident.	Worker reported to first aid where the laceration was cleaned and bandaged. No further follow up was required.	Tool-box talk to remind workers to wear the appropriate rated gloves for task was conducted.
May 11, 2020	Residual Solids Pipes	Medical Aid Recordable	A worker sustained a hand injury by striking their finger with a sledge hammer.	Worker reported to First Aid and was sent for x-rays. X-ray confirmed that the finger was fractured.	Tool-box talk with workers to remind them to focus on task and understand the hazards with the work being undertaken was conducted.
May 12, 2020	Residual Solids Pump Stations	Report Only	Worker was pulling a cable and experienced shoulder pain.	Worker reported to First Aid where they were evaluated with no follow up required.	Worker reminded to use good ergonomic practices and to perform stretching prior to any awkward task.
May 13, 2020	Residual Solids Pipes	Report Only	A worker over torqued a steel bolt on a pipe coupler causing it to break.	The pipe was under pressure and released water into the work area. No one was hurt in incident.	Tool-box talk reminding workers to be aware of the task at hand. Along with the proper use of small hand tools.
May 19, 2020	Clover Point Pump Station	Report Only	A member of the public disregarded notices indicating that Clover Point is a construction worksite and opened the construction gate.	A worker still on site inform the driver this was a construction site and they were trespassing. The driver accelerated around the worker and in doing so struck the workers hand with their mirror. The worker reported to First Aid and no further follow up was required.	The incident was reported to Police. A tool box talk reviewing the process of deescalating situations with members of the public was conducted.
May 20, 2020	Trent Forcemain	Report Only	A gas line was damaged by material sloughing into the excavation.	All equipment was immediately shut down and the area evacuated. Fortis was called and repaired the gas line.	A tool-box talk reviewing means and methods in securing the slope in an excavation was conducted.
May 21, 2020	Trent Forcemain	Report Only	While excavating a phone line was damaged interrupting the service to a nearby residence.	Locates were arranged prior to digging. Phone cable was not highlighted.	Phone Company attended site and repaired the service.
May 26, 2020	Residual Solids Pump Stations	Report Only	An inspector while descending using precast ladder rungs in a manhole fell approximately 1m.	One of the ladder rungs dislodged causing him to fall backwards striking his lower back against a pipe support. He reported to a medical facility to be evaluated with no treatment provided.	Safety Notice was issued to all Prime Contractors in regards to incident. All contractors were instructed to inspect ladder rungs in pre-cast manholes. No other issues were reported from any of the sites.
May 29, 2020	Arbutus Attenuation Tank	Report Only	A worker rolled their ankle on an uneven surface.	Worker reported incident to First Aid Attendant on site with no further treatment provided	Tool-box talk to discuss ensuring awareness of the work area and identification of hazards was conducted.

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
May 29, 2020	Residual Solids Pump Stations	Report Only	Worker was using a torque wrench on the bolts of a flange when the wrench slipped striking the worker in the face.	Worker received 2 chipped front teeth. Worker was assessed by First Aid Attendant and instructed to see a dentist to evaluate damaged teeth.	Tool-box talk to discuss proper body positioning when using handheld tools was conducted.
June 3, 2020	Trent Forcemain	Report Only	An excavator struck a gas utility.	Work was stopped, area evacuated and Fortis BC informed and came out to repair the line.	Tool-box talk to review the utilities checklist was held with the crew.
June 4, 2020	Residual Solids Pump Stations	First Aid	A worker while working on a panel had it topple onto them.	Worker reported to first aid. They sustained some minor scrapes but was not seriously injured. No follow up first aid was required.	Tool-box talk to remind workers to know the task at hand and get help when performing awkward tasks.
June 15, 2020	Residual Solids Pump Stations	Medical Aid Recordable	A worker lost a front tooth when struck in the face by a lifting hook that fell from a shelf.	Worker was treated at a dentist office and returned to full duties the following day.	Tool-box talk was held with workers to remind them that a hazard assessment must be performed prior to the work to identify all hazards.
June 15, 2020	McLoughlin Pt WWTP	First Aid	A worker while terminating wire felt material enter their eye. Glasses were being worn at the time.	Worker reported to first aid and had it flushed out. No further first aid treatment was required.	Workers reminded to ensure face shield and glasses are clean prior to tilting or removing.
June 16, 2020	McLoughlin Pt WWTP	First Aid	Worker put on safety glasses in the morning and felt something in their left eye.	Glasses were in workers vest pocket overnight and possibly had dust or debris on them.	Reminder in Daily News Letter for workers to clean their glasses before use.
June 18, 2020	McLoughlin Pt WWTP	Report Only	Office worker noticed a small fire coming from an ashtray in the designated smoking area.	Garbage had been put in the ashtray which caught on fire. Fire was extinguished immediately, no injuries sustained.	Reminder in company Daily News Letter to refrain from using the ashtrays for garbage.
June 18, 2020	McLoughlin Pt WWTP	Report Only	While grinding a worker felt material in their eye. Safety glasses and face shield was being used at the time.	Worker reported to first aid and had it flushed out. No further first aid treatment was required.	Workers reminded to ensure face shield and glasses are clean prior to tilting or removing.
June 18, 2020	McLoughlin Pt WWTP	Near Miss	A ladder used to access a scaffold shifted while a worker was descending.	No injuries were sustain by the worker.	Site inspection of all scaffolding was performed to ensure ladders were secured.
June 24, 2020	Residuals Treatment Facility	Report Only	Arial Work Platform struck and damaged exterior building panels.	No injuries sustained however minor property damage occurred.	Tool-box talk to discuss the use of spotters when backing or moving equipment in restricted areas.
June 24, 2020	Residuals Treatment Facility	Report Only	Telehandler Operator struck light standard with outrigger.	Outrigger had been left down while they were backing up to reposition the equipment.	Tool-box talk to discuss the use of spotters when backing or moving equipment in restricted areas was held.
June 26, 2020	Residual Solids Pump Stations	Report Only	An employee while reversing their truck struck a parked vehicle.	No injuries to any workers however damage to parked vehicle occurred.	Tool-box talk regarding use of a spotter when backing vehicles or equipment with limited visibility was held.
June 28, 2020	Residuals Treatment Facility	Report Only	Worker while lifting sustained a back injury.	Worker continued with their duties but pain worsened and reported to First Aid. Worker was put on Modified Duty.	Tool-box talk in regards to good ergonomic practices and proper lifting and bending techniques was held.

Key safety activities conducted during April included:

- bi-weekly project update meetings with prime contractors: Kenaidan, Windley, Don Mann, HRP, Knappett, Jacob Bros and NAC;
- weekly project update meetings with prime contractor: HRMG;
- monthly incident investigation reviews;
- hosted prime contractor safety coordination meeting with Project Contractors' safety representatives;
- reviewed site specific safety plans and high risk tasks;
- WTP Safety Manager and/or Construction Manager conducting regular site inspections at all active Project work sites with a focus on reviewing compliance with the BC Government's guidelines for construction sites to minimise the risks of COVID-19 transmission or illness;
- developed COVID-19 Project Sites Special Requirements Checklist for CRD staff, Compliance Inspectors and Guests;
- developed COVID 19 Prime Contractor Safety Challenge; and
- sent out safety notices: hand injuries in the workplace and wind warning.

Key safety activities conducted during May included:

- bi-weekly project update meetings with prime contractors: Kenaidan, Windley, Don Mann, HRP, Knappett, Jacob Bros and NAC;
- weekly project update meeting with prime contractor: HRMG;
- monthly Incident Investigation reviews;
- hosted Prime Contractor Safety Coordination Meeting with Project safety representatives;
- reviewed site specific safety plans and high risk tasks;
- WTP Safety Manager and/or Construction Manager conducting regular site inspections at all active Project work sites;
- compliance checks of COVID-19 Safe Work Plans of our Prime Contractors; and
- safety email sent out to inform Prime Contractors of high incidents "hand injuries" on the Project.

Key safety activities conducted during June included:

- bi-weekly project update meetings with prime contractors: Kenaidan, Windley, Don Mann, HRP, Knappett, Jacob Bros and NAC;
- weekly project update meetings with prime contractor: HRMG;
- monthly Incident Investigation reviews;
- reviewed site specific safety plans and high risk tasks;
- WTP Safety Manager and/or Construction Manager conducting regular site inspections at all active Project work sites; and
- prepare CAWTP office for Return to Work of employees working from home due to COVID-19.

Table 3: WTP Safety Information

	Reporting Period (Q2 2020)	Project Totals
Person Hours		
PMO	10,704	148,732
Project Contractor	299,843	1,972,599
Total Person Hours	310,547	2,121,331
PMO	30	
Project Contractors (& Project Consultants) working on Project Sites	580	
Total Number of Employees	610	
Near Miss Reports	1	46
High Potential Near Miss Reports	0	6
Report Only	23	165
First Aid	12	58
Medical Aid	5	10
Medical Aid (Modified Duty)	0	2
Lost Time	1	5
Total Recordable Incidents	6	17
		Project Frequency (from January 1, 2017)
First Aid Frequency		5.4
Medical Aid Frequency		1.1
Lost time Frequency		0.5
Total Recordable Incident Frequency		1.6

2.2 Environment and Regulatory Management

Environmental and regulatory activities continued over the reporting period relating to both the planning and permitting of upcoming work and the execution of current work.

2.2.1 Environment

Environmental work progressed as planned over the reporting period. The focus was on environmental monitoring of construction activities and planning for upcoming riparian work.

Key environmental management activities completed in April included:

- Kenaidan completed work at Clover Point Pump Station that required screened wastewater to be discharged out of the short outfall. As discharges from the short outfall may pose a health risk to people entering the waters along the affected shorelines (being those between Radcliffe Lane and Dock St including Gonzales Bay, Ross Bay, Clover Point, Holland Point and Ogden Point in Victoria and Harling Point, McNeill Bay and McMicking Point in Oak Bay), the CRD implemented its Overflow Response Procedure during the work. This involved posting public health advisory signs and closing nearby beaches to swimming and then completing water quality sampling prior to opening them up again. The work was completed

successfully and beaches were reopened following two rounds of sampling that showed water quality to be below the recreational limit.

Key environmental management activities completed in May included:

- The CRD, District of Saanich and Knappett met at the Colquitz River crossing site to discuss plans for riparian restoration and tree replacement; and
- The CRD, Parsons, Don Mann and their environmental consultant McElhanney met at the site of a culvert replacement on the Interurban Trail. The purpose of the visit was to discuss upcoming in-stream work to facilitate fish passage through the culvert.

Key environmental management activities completed in June included:

- Don Mann and their environmental consultant McElhanney completed in-stream work at the site of a culvert replacement on Interurban Trail. The in-stream work involved removing barriers to fish passage at the outlet of the culvert.

Over the reporting period, there were three minor environmental incidents:

- Overnight on May 6th, there was an unplanned discharge at Clover Point Pump Station when flows were diverted to the short outfall channel as a result of an electrical fault. The CRD's overflow response procedure was implemented: the CRD posted public health advisory signs and closed nearby beaches to swimming for approximately 36 hours.
- Overnight on May 29th, there was an unplanned discharge at Clover Point Pump Station when flows were diverted to the short outfall channel as a result of loss of power to the screens. The CRD's overflow response procedure was implemented: the CRD posted public health advisory signs and closed nearby beaches to swimming for approximately 5.5 days.
- On June 15th, Jacob Brothers experienced a minor spill of gasoline from a jerry can. The amount of the spill was less than one litre and was therefore not reportable. The spill was cleaned up with absorbent pads which were then disposed of at an appropriate facility. There was no environmental impact from the spill.

2.2.2 Regulatory Management

During the reporting period, the Project Team continued to monitor the advancement of the remaining construction-related regulatory approvals and supported or led the advancement of permit applications.

Key permitting activities for April included:

- On April 15th, the CRD placed an Environmental Protection Notice in two newspapers (the Times Colonist and Saanich News) providing a notice of intent regarding the issuance of an Operational Certificate for the Residuals Treatment Facility. In accordance with the Public Notification Regulation, the Environmental Protection Notice stated where on the CRD's website a copy of the draft Operational Certificate was posted, and how comments on the draft could be provided;
- The CRD and HRMG met with the BC Ministry of Environment and Climate Change Strategy (ENV) to review the draft Operational Certificate for the Residuals Treatment Facility;
- The CRD and HRP provided additional material to ENV in support of the MWR Registration;

- Kenaidan (as the Design-Build Contractor for the Macaulay Point Pump Station) applied to ENV for a Bypass Authorization to allow discharge from the short outfall at Macaulay Point Pump Station for a limited period during tie-in activities;
  HRP and their sub-consultants submitted an application for a Certificate of Compliance for the McLoughlin Point WWTP site. The Certificate of Compliance is a Provincial legal instrument that demonstrates that a contaminated site has been remediated to regulated standards; and
- Stantec (as the Trent Forcemain archaeological consultant) submitted an application to the Provincial Archaeology Branch to alter two recently discovered archaeological sites along Dallas Road and the adjacent seawall. The archaeological sites were discovered during pre-construction investigations.

Key permitting activities for May included:

- ENV issued an Operational Certificate to the CRD that authorizes air emissions from the Residuals Treatment Facility; and
- The CRD met with ENV to review and provide feedback on the draft MWR Registration letter.

Key permitting activities for June included:

- ENV issued the MWR Registration to the CRD, authorizing discharges from the McLoughlin Point WWTP outfall; and
- The CRD met with Environment and Climate Change Canada to discuss the federal process for registering the McLoughlin Point WWTP.

The status of key Project permits are summarized in Table 4. The table is not a list of all required Project permits, but rather a summary of the status of key Project permits. There were two changes made from the table presented in the Project's Q1 2020 Quarterly Report: receipt of the MWR Registration and Operational Certificate.

Table 4- Key Permits Status

Permit/Licence	*Anticipated Date*	*Status*	*Party Responsible for Obtaining Perming*
McLoughlin Point WWTP			
Municipal Wastewater Regulation ("MWR") Registration	Q2 2020	Received	CRD
McLoughlin Point Harbour Crossing			
Transport Canada Lease	Following completion of construction	On track	HRP
McLoughlin Point Outfall			
Transport Canada Lease	Following completion of construction	On track	HRP
Residuals Treatment Facility			
Operational Certificate	Prior to start of RTF operations	Received	HRMG

2.3 First Nations

First Nations communication and engagement was ongoing over the reporting period. Meetings with the Esquimalt and Songhees' liaisons continued, as did meetings with the W̱SÁNEĆ Leadership Council's (WLC) liaison. The meetings are a forum for covering both Project-related issues with the potential to impact First Nations, as well as an opportunity for broader discussion of CRD-related issues.

Key Activities in April included:

- the CRD shared information with the Songhees, Esquimalt and WLC liaisons about the Macaulay Point Pump Station Bypass Authorization and Trent Forcemain Site Alteration Permit applications (see Section 2.2) that will be referred by the Province to their respective Nations.

Key activities in May included:

- the CRD and the Esquimalt and Songhees liaisons continued to develop content for interpretive signs for installation at Clover Point, Macaulay Point and Mcloughlin Point.

Key activities in June included:

- the CRD and WLC liaison discussed the potential to organise an opportunity for archaeological artifacts recovered during construction to be reviewed with community members.

2.4 Stakeholder Engagement

The Project maintained its ongoing two-way Communications and Engagement Plan to provide Project information to stakeholders, communities and the public and to respond to public inquiries. The key focus of the communications and engagement activities over the period was to keep residents and stakeholders informed of Project plans, progress and construction information, and to receive and respond to questions and concerns raised by the community. A variety of communications tools and engagement activities were utilized to support the implementation of the plan, including stakeholder meetings, Project website updates and notifications of construction through notices and a public inquiry program, among other methods.

April Overview

Four construction notices were issued to stakeholders in the reporting period:

- Overnight Work: Fairfield Watermain Shut-off (April 3, 2020) (Appendix A);
- Trent Forcemain: Bushby and Eberts Streets (April 14, 2020) (Appendix B);
- Clover Point Pump Station Overnight Work (April 15, 2020) (Appendix C); and
- Temporary Overnight Work: Marigold Road (April 17, 2020) (Appendix D).

Construction notices were hand delivered in the community: the Overnight Work notice in Fairfield (distributed to 56 residences); Trent Forcemain notice (117 residences in the Fairfield area); Clover Point notice (57 residences near the Pump Station); and the Marigold Road construction notice (44 residences). In addition, as part of ongoing construction communications, residents affected by localized, temporary disruptions, such as driveway or water impacts, were notified by hand-delivery of notices. The Residual Solids Conveyance Line: Gorge Bridge construction notice (Appendix E) was reposted with updated construction dates.

Three public service announcements were distributed to local media and posted online as an alert.

- Core Area Wastewater Discharge Notice (April 14, 2020) (Appendix F);
- Update: Core Area Wastewater Discharge Notice (April 17, 2020) (Appendix G); and
- Beaches Reopen Following Core Area Wastewater Discharge (April 24, 2020) (Appendix H).

Over the month of April, the Project website, wastewaterproject.ca, was updated with information about the Project. Four construction notices were posted and the photo gallery section was updated with additional photos. A map showing the progress of construction along the Residual Solids Conveyance Line (Appendix I) was updated.

The CRD's Twitter account was used to provide Project information to the public, including notifications about the temporary pedestrian lane on the Gorge Bridge, closures on Interurban Road on the long weekend, and screened wastewater being discharged out of the short outfall at the Clover Point Pump Station.

Two alerts were added, and resolved once complete, to indicate the Interurban Road closure and the wastewater discharge at Clover Point.

Over the reporting period the Project Team held meetings with the following community groups and representatives, and municipality representatives:

- City of Victoria staff;
- City of Victoria Technical Working Group; and
- Township of Esquimalt Liaison Committee.

May Overview

One construction notice was issued to stakeholders in the reporting period:

- Trent Forcemain: Water Service Shutdown Notice Update (May 11, 2020) (Appendix J)

The Trent Forcemain notice was hand delivered to 190 residences in the Fairfield area. As well, as part of ongoing construction communications, residents affected by localized, temporary disruptions, such as driveway or water impacts, were notified by hand delivery of notices.
Two public service announcements were distributed to local media and posted online as an alert.

- Core Area Wastewater Discharge Notice (May 7, 2020) (Appendix K); and
- Core Area Wastewater Discharge Notice (May 30, 2020) (Appendix L).

Over the month of May, the Project website, wastewaterproject.ca, was updated with information about the Project. One construction notice and two public service announcements were posted. A map showing the progress of construction along the Residual Solids Conveyance Line (Appendix M) was updated.

The CRD's Twitter account was used to provide Project information to the public, including updates about wastewater discharge at the Clover Point Pump Station.

Two alerts were posted regarding the wastewater discharge at Clover Point following the CRD's response protocol.

Over the reporting period the Project Team held meetings with the following community groups and representatives, and municipality representatives:

- City of Victoria staff;
- City of Victoria Technical Working Group;
- District of Saanich Technical Working Group;
- PISCES (Portage Inlet Sanctuary Colquitz Estuary Society); and
- Township of Esquimalt Liaison Committee.

June Overview

One construction notice was issued to stakeholders in the reporting period:

- Trent Forcemain: Fairfield Road Closure (June 12, 2020) (Appendix N)

The notice was hand delivered to 75 residences along the closure and detour route.

Project Update #9 (Appendix O) was distributed in June. The update provided an overview of construction progress, work completed, activities underway, and what to expect for the rest of the year. This document was posted to the Project website, CRD Twitter and Facebook accounts, and distributed by email to more than 730 residents and stakeholders who have signed up to receive Project updates.

One public service announcement was distributed to local media and posted online as an alert:

- Core Area Wastewater Discharge Notice at Macaulay Point (June 22, 2020) (Appendix P)

Over the month of June, the Project website, wastewaterproject.ca, was updated with information about the Project. One construction notice and Project Update #9 were posted. A map showing the progress of construction along the Residual Solids Conveyance Line (Appendix Q) was updated.

The CRD's Twitter account was used to provide Project information to the public, including: updates about wastewater discharges at the Macaulay Point Pump Station; traffic advisories for the work on the Trent Forcemain; a notification that Project Update #9 was available; and to share a story that CHEK News aired about the Project. The CRD's Facebook account was also used to notify that Project Update #9 was available.

One alert was added and resolved for the wastewater discharge at Macaulay Point following the CRD's response protocol.

Over the reporting period, the Project Team held meetings with the following community groups and representatives, and municipality representatives:

- City of Victoria Technical Working Group;
- District of Saanich Technical Working Group;
- Greater Victoria Harbour Authority; and
- Township of Esquimalt Liaison Committee.

Public Inquiries

Public inquiry numbers from the Project email address and 24/7 information phone line (1 844 815-6132) are noted in Table 5.

Table 5 – Project Inquiries- Q2 2020

Inquiry Source	Contacts for Q2 2020
Information phone line inquiries	79
Email inquiries responded to	32

Key themes of the public inquiries were as follows:

- questions regarding overnight work for the Trent Forcemain;
- interest in finding out when the Project and restoration will be complete;
- questions regarding the wastewater discharge at the Clover Point Pump Station;
- interest in work on Grange Road;
- questions regarding water shut-off for the Trent Forcemain;
- questions regarding when specific construction pieces will take place; and
- interest in landscaping for various parts of the Project.

2.5 Resolutions from Other Governments

There were no resolutions related to the Project passed by other governments during the reporting period.

2.6 Schedule

Progress over the reporting period is summarized in Section 2.9.

Figure 1 shows the high-level Project schedule. This schedule has changed from that shown in the Q1 2020 Quarterly Report with updates made to reflect construction progress.

Over the reporting period the COVID-19 public health emergency continued to have impacts on the Project. Specifically, the COVID-19 public health emergency is impacting construction progress and may delay some interim project milestones, such as the transition to commissioning. However, construction is ongoing at all of the Project's sites, in accordance with provincial guidelines, and based on current progress the Wastewater Treatment Project remains on schedule to meet the provincial and federal regulations for treatment for the Core Area's wastewater by December 31, 2020.

Figure 1- High-Level Project Schedule

*Schedule subject to updates as Project planning progresses.

2.6.1 30 day look ahead

Key activities and milestones for the next 30 days (July) are outlined below by function.

Safety

- COVID-19 Safety Orientation for office employees returning to work;
- CRD corporate occupational health and safety coordination committee meeting;
- site safety tour with Corporate CRD OHS Manager;
- weekly and bi-weekly prime contractor progress meetings;
- host Prime Contractor Safety Coordination Meeting with Project safety representatives;
- review of any site specific safety plans or high risk tasks;
- send out any new Safety Notices or Incident Notifications to Prime Contractor;
- WTP Safety Manager and/or Construction Manager will conduct regular site inspections at all active Project work sites;
- incident reporting review with prime contractors at active work locations; and
- issue safety notices for trending observations or similar incidents occurring on project sites.

Environment and Regulatory Management

- CRD to register the McLoughlin Point WWTP under the federal Wastewater Systems Effluent Regulation;
- CRD Source Control department to issue a Waste Discharge Authorization to HRMG, allowing discharge of effluent to the return pipe; and
- CRD to submit application for Final Classification of the McLoughlin Point WWTP from the Environmental Operators Certification Program.

First Nations

- The CRD and First Nation liaisons to continue planning an opportunity for archaeological artifacts recovered during construction to be reviewed with the community members.

Stakeholder Engagement

- ongoing construction communications with stakeholders; and
- ongoing community liaison meetings.

Cost Management and Forecast

- prepare cost reports;
- monitor schedule;
- prepare CRD WTP annual budget; and
- submit funding claims to Infrastructure Canada (under the Building Canada Fund and Green Infrastructure Fund).

Construction

McLoughlin Point

- primary treatment and outfall ready for wastewater;
- complete backfill of tsunami and planter walls;
- construct road structure;
- commence landscaping;
- continue building envelope throughout;

- continue process mechanical and electrical throughout;
- install cabinetry and millwork in Operations &Maintenance (O&M) building;
- complete fire sprinkler system in O&M building;
- complete accessory installation in offices, control room and restrooms;
- complete system walk downs; and
- continue functional and wet testing.

Clover Point Pump Station

- complete construction of existing pumping station upgrades;
- continue landscaping;
- complete construction public washroom;
- install coating for floor, walls and ceilings in screen/degritter room, wet well access room and odour control screen room;
- complete electrical works;
- commence functional and operational testing of equipment; and
- install split stone to exterior retaining walls.

Macaulay Point Pump Station

- install slide gate;
- install fire stopping and smoke seals;
- install stainless steel door hardware;
- apply paint and sealants throughout;
- install washroom accessories and partitions; and
- install green roof system.

Residuals Treatment Facility

- continue functional start-up, wet testing and initial system verification;
- complete insulation at Digester #2;
- continue insulation at Digester #3;
- hydrotest Digested Solids Storage Tank;
- complete blower equipment installation at the Digester Building;
- installation of receiving bin at Other Municipal Solids Receiving Facility;
- continue testing and commissioning activities at the Residuals Handling Building;
- pour concrete deck at loadout assembly and commence testing and commissioning activities at the Dryer Building;
- complete Biogas Conditioning System;
- complete instrumentation work at Equalization Building;
- commence testing of fire pump at the Water Pump House;
- conduct testing of Odour Control System; and
- continue site grading and retention ponds.

Clover Forcemain

- form and pour new seawall;
- install new seawall railings;
- install new modified curbs;
- install new sidewalks;
- install new bollards; and
- complete Dallas Road surface works.

Residual Solids Pump Stations

- continue construction in pump stations, including completion of equipment installation, electrical and site works;
- conduct interim commissioning with water in pump stations;
- complete construction and start of commissioning in Marigold control valve chamber;
- complete Residual Solids Forcemain and Centrate Return Line tie-in, test and commissioning; and
- complete installation of Admiral Bridge pipe and pressure testing.

Arbutus Attenuation Tank (AAT)

- complete installation of rock anchors;
- form, rebar and install floor drains and piping in slab;
- commence installation of sumps and commence installation of fiberglass reinforced plastic (FRP) one sided walls;
- complete installation of temporary power for site in coordination with BC Hydro; and
- complete installation of water service for site in coordination with District of Saanich.

Trent Forcemain

- complete installation of forcemain in Fairfield Rd;
- install new forcemain in Memorial Crescent;
- install new sanitary sewer main in Bushby Street;
- install new forcemain in Brooke Street; and
- supply and install blowdown assembly with manhole frame & cover in Fairfield Road, Stannard Ave and Memorial Crescent.

2.6.2 60 day look ahead

Key activities and milestones for the next 60 days (August) are outlined below by function.

Safety

- CRD corporate occupational health and safety coordination committee meeting;
- host Prime Contractor Safety Coordination Meeting with Project safety representatives;
- weekly and bi-weekly prime contractor progress meetings;
- review of any site specific safety plans or high risk tasks;
- review prime contractor document submissions;
- issue safety notices for trending observations or similar incidents occurring on project sites;
- WTP Safety Manager and/or Construction Manager will conduct regular site inspections at all active Project work sites; and
- incident reporting review with prime contractors at active work locations.

First Nations

- CRD to continue meeting with First Nation liaisons.

Stakeholder Engagement

- ongoing construction communications with stakeholders; and
- ongoing community liaison meetings.

Cost Management and Forecast

- prepare cost reports;
- monitor schedule;
- finalize CRD WTP annual budget; and
- submit funding claims to Infrastructure Canada (under the Building Canada Fund and Green Infrastructure Fund).

Construction

McLoughlin Point

- construct site road structures;
- complete landscaping including green roof;
- install plumbing fixtures;
- install electrical finishes, fire sprinkler finishes and ceiling tiles O&M Level 1; and
- continue with functional, wet testing and commissioning.

Clover Point Pump Station

- form, pour and strip north retaining wall and buttresses;
- paint generator and fuel storage walls;
- install split stone to exterior retaining walls;
- form, pour and strip landscape retaining walls at public plaza lookout level;
- install doors and hardware to existing pump station; and
- touch-up and final painting.

Macaulay Point Pump Station

- install outdoor site furnishings;
- commence demolition of existing structure;
- install manhole and slide gate for 1350mm pipe replacement; and
- install green roof system.

Residuals Treatment Facility

- continue functional start-up, wet testing and initial system verification;
- commence process commissioning with residual solids;
- install membrane roof on Digested Solids Storage Tank;
- complete Digester Building construction;
- installation of weather cover at Other Municipal Solids Receiving Facility;
- continue testing and commissioning activities at the Residuals Handling Building;
- complete truck load-out assembly and continue testing and commissioning activities at the Dryer Building;
- complete Equalization Building construction;
- complete Water Pump House;
- complete testing of Odour Control System; and
- continue site grading, roads, and retention ponds.

Clover Forcemain

- complete road and cycle track from Lewis St to Dock St;
- complete installation of new railings along seawall; and
- commence paving of Dallas Road from Lewis St to Dock St.

Residual Solids Pipes

- Peers Creek Culvert and supporting utility replacement.

Residual Solids Pump Stations

- Pump Station 3, final grading; fence installation and landscaping; and
- Pump Station 2, final grading, fence installation and landscaping.

Arbutus Attenuation Tank (AAT)

- install valve chamber piping;
- install fibreglass reinforced plastic (FRP) slab and wall panels; and
- install floor drains and piping.

Trent Forcemain

- install sanitary sewer at Memorial Cres from Dallas Road to Thurlow Road; and
- restoration and paving at Memorial Cres.

2.7 Cost Management and Forecast

The monthly cost report for June and the quarterly cost report for the reporting period (April – June 2020) are shown in Appendices R and S. The cost report summarizes Project expenditures and commitments by Project Components and the major cost centres common to the Project Components.

The Project Team has been reporting budget pressures through its monthly reports to the Project Board (and CRD Board) since September 2017, primarily as a result of inflation in the Vancouver Island construction market. Other factors that have contributed to budget pressures include: design development to incorporate stakeholder input; geotechnical considerations including removal and disposal of contaminated material; and schedule constraints associated with the requirement to provide wastewater treatment by the regulatory deadline of December 31, 2020.

Based on the value of the contracts awarded to-date and the refreshed cost estimate for the scope remaining to be procured, the Project Team forecast the cost to complete the Project at $775M, or $10M (1.3%) over the Project's control budget. In May 2019 the CRD Board approved an increase in the Project's budget by $10M to $775M, and on August 14, 2019, the associated amendment to the 2019-2023 Financial Plan was approved.

Subsequent to May 2019 the Project Team have continued to manage risks and there have been two opposing budget drivers:

i) The Project's financing costs to-date have been lower than budgeted for two reasons: firstly as a result of low interest rates since the start of the Project, and secondly due to the receipt of funding from the provincial government earlier than forecast; and

ii) The Project's construction costs may be higher than budgeted as many contractors have advised that there are cost impacts from the COVID-19 public health emergency. Impacts include labour availability, work modifications to comply with provincial guidelines, and delays to the delivery of equipment and supplies.

It is too early to determine the cost impact to the Project, but if construction continues at the current pace the Project Team remain confident that the Project cost will be within the Project's $775M budget.

2.7.1 Commitments

Commitments were made over the reporting period in furtherance of delivering the Project. The net commitments made during the reporting period resulted in an increase in committed costs of $3.1 million. The significant commitments made in the reporting period comprised the approval of provisional items in construction contracts and contract change orders.

2.7.2 Expenses and Invoicing

The Project expenditures for the reporting period were as expected and were within the budget allocations for each of the budget areas. The main Project expenditures incurred over the reporting period were associated with construction activities and project management office-related costs.

2.7.3 Contingency and Program Reserves

Contingency draws totalling $1.2M were made over the reporting period, as summarised in Table 6. The draws to-date, remaining contingency and program reserve balances are summarized in Table 6.

Table 6- Contingency and Program Reserve Draw-Down Table

WTP Contingency and Program Reserve Draws and Reallocations	Draw Date		$ Amount
Contingency and Program Reserve (in Control Budget)		**$**	**69,318,051**
Net Contingency and Program Reserve draws to March 31, 2020		$	(53,307,121)
Contingency and Program Reserve balance as at March 31, 2020		**$**	**16,010,930**
Phone System for Mcloughlin Point WWTP	Apr-20	$	(92,000)
Radio Telemetry for Mcloughlin Point WWTP	Apr-20	$	(277,954)
Preparation of the application for a Certificate of Compliance for McLoughlin Point	May-20	$	(217,924)
Procurement and installation of equipment to allow for the continuous monitoring of odor control treatment System emissions via SCADA	May-20	$	(64,968)
WWTP Total Draw		$	(652,846)
RTF Total Draw		$	-
Saanich Infrastructure Improvement: Peers Creek Culvert Replacement	Jun-20	$	(520,000)
Conveyance Total Draw		$	(520,000)
PMO Total Draw		$	-
BC Hydro Total Draw		$	-
WTP Program Reserve Draw		$	-
Contingency and Program Reserve draws in the reporting period (April 1 - June 30, 2020)		$	(1,172,846)
Contingency and Program Reserve balance as at June 30, 2020		**$**	**14,838,084**

2.7.4 Project Funding

The federal and provincial governments are assisting the Capital Regional District in funding the Project.

The Government of British Columbia will provide $248 million towards the three components of the Project, while the Government of Canada is contributing:

- $120 million through the Building Canada Fund Major infrastructure Component towards the McLoughlin Point WWTP;
- $50 million through the Green Infrastructure Fund towards the conveyance system; and
- up to $41 million towards the RTF through the P3 Canada Fund.

The Project Team has applied to the Federation of Canadian Municipalities (FCM) for additional funding and has executed a grant agreement for the contribution of up to $346,900 towards the delineation of the contamination and remediation and risk assessment for the McLoughlin Point Wastewater Treatment Plant.

The status of funding claims is summarised in Table 7. Note that the timing for the provision of Government of British Columbia and Government of Canada's funding differs by funding source. The Project Team will submit claims to the funding partners in accordance with the relevant funding agreements. In accordance with the funding agreements, funding from the P3 Canada Fund and the remainder of the funding from the Government of British Columbia cannot be claimed until relevant Project components are substantially complete.

Table 7- Project Funding Status

Funding Source	Maximum Contribution	Funding Received in the Reporting Period	Funding Received to Date
Government of Canada (Building Canada Fund)	$120M	$2.5M	$103.3M
Government of Canada (Green Infrastructure Fund)	$50M	$3.6M	$44.3 M
Government of Canada (P3 Canada Fund)	$41M	-	-
Government of British Columbia	$248M	-	$186.0M
Federation of Canadian Municipalities	$0.3M	-	-
TOTAL	**$459.3M**	**$6.1M**	**$333.6M**

2.8 Key Risks and issues

The Project Team actively identified and managed Project risks over the reporting period. Table 8 summarizes the highest-level risks that were actively managed over the reporting period, as well as the mitigation steps identified and/or undertaken over the reporting period.

The following changes were made to the active risks summary over the reporting period:

- the risk of encountering unexpected contaminated soil conditions during excavation at the McLoughlin Point WWTP was closed because the excavation is complete and the application for a Certificate of Compliance has been submitted to the Province;
- The assessed risk level for a misalignment between First Nations' interests and the implementation of the Project was reduced (from medium to low) as a result of the regular, ongoing and productive liaison meetings;
- The assessed risk level for a misalignment between Project objectives/scope and stakeholder expectations was reduced (from medium to low) as a result of the Project's significant and ongoing communication and engagement activities;
- The risk that Municipal Wastewater Regulation (MWR) Registration was not achieved or was delayed was closed, as the MWR Registration was received over the reporting period;
- The assessed risk level for a change in law was increased (from medium to high) due to the potential for impacts from COVID-19;
- The assessed risk level for labour availability and/or cost escalation was reduced (from medium to low) as construction work has progressed to the point that the project is past the point of peak labour demand.

The COVID-19 public health emergency continued to have impacts on the Project over the reporting period. It is anticipated that these impacts may affect several of the Project's risks. The Project Team are currently evaluating the impact of the public health emergency on the Project's risks, and anticipates that changes may be made to several of the risks as the situation evolves. Those risks that the Project Team have identified as potentially impacted, and that are currently under review, are identified in Table 8.

Table 8- Project Active Risks Summary

Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	Trend in risk level from previous reporting period
Project				
Misalignment between First Nations' interests and the implementation of the Project.	The assessed risk level reflects the Project Team's priority of establishing strong and effective relationships with First Nations interfacing with, or interested in, the Project.	First Nations engagement activities remained ongoing over the reporting period (see section 2.3 for further details).	**L**	Reduced (from medium to low) as a result of the regular, ongoing and productive liaison meetings.
Divergent interests between multiple parties and governance bodies whose co-operation is required to successfully deliver the Project.	The assessed risk level reflects the Project Team's priority of establishing strong and effective relationships with municipal, provincial and federal government departments.	The Project Team continued engagement with municipal, provincial and federal government departments throughout the reporting period.	L	No change
Misalignment between Project objectives/scope and stakeholder expectations.	The assessed risk level reflects the Project Team's priority of establishing strong and effective community stakeholder engagement.	Community engagement activities were ongoing over the reporting period (see section 2.4 for further details).	L	Reduced (from medium to low) as a result of the Project's significant and ongoing communication and engagement activities.
Lack of integration between Project Components.	Planning challenges and system integration between the McLoughlin point WWTP, RTF and Conveyance System components of the Project results in schedule delays and/or additional Project costs.	Physical and schedule interfaces are clearly delineated in all construction contracts along with the requirement for commissioning and control plans. The Project Team has used a single Owner's engineer (Stantec) to develop the indicative design for all critical project components with significant interfaces. Commissioning and control plans are under development	L	No change
Senior government funds issue delayed.	The assessed risk level reflects the Project Team's priority of ensuring Project funding commitments are honoured.	Responsibility for meeting funding commitments has been assigned and is being monitored.	L	No change

Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	Trend in risk level from previous reporting period
Downstream works delays.	Delay to the commissioning of the conveyance projects delays commissioning of the WWTP and the RTF.	Schedule has sufficient time allowance to ensure conveyance elements complete prior to requirement. Contractor agreements will include terms that require the contractor to recover schedule delays and/or allow for CRD acceleration.	M	No change but this risk may be impacted by the COVID-19 public health emergency (assessment is currently underway)
Upstream works delays.	Delay to the commissioning of either the WWTP or the RTF impacts the commissioning of the other plant.	Contracts with HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) and HRMG (as the Design-Build-Finance-Operate Maintain contractor for the RTF) include terms that require the contractor to recover schedule delays and/or allow for CRD acceleration. Liquidated damages for late delivery are included in both HRP and HRMG contracts.	L	No change but this risk may be impacted by the COVID-19 public health emergency (assessment is currently underway)
Municipal Wastewater Regulation (MWR) Registration is not achieved or is delayed.	A delay to achieving MWR Registration of the wastewater treatment system would mean that the CRD could not discharge treated effluent, and therefore would not be able to commission the WWTP or RTF.	The Project Team (with HRP and Stantec representatives) have been meeting regularly with Ministry of Environment representatives since September 2017 to review the MWR Registration application requirements and the Project's schedule, in order to mitigate the risk of an incomplete application and/or schedule delays in the registration. The MWR Registration application was submitted to the Ministry of Environment in September 2019. The Project Team, MOE and relevant contractors have continued to meet regularly to track progress and discuss issues.	**C**	Risk closed as MWR Registration was received over the reporting period.
Public directly contacting contractors at sites.	Direct contact between the public and contractors could expose both parties to worksite hazards and potential injuries.	Communications and engagement plan and coverage of communications in contractor orientations.	M	No change

Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	Trend in risk level from previous reporting period
Change in law.	A change in law impacts the scope, cost or schedule of the Project.	Keep apprised of proposed modifications to relevant regulations so as to do the following as appropriate: submit comments on proposed modifications; and/or consider including anticipated modifications in contracts.	H	Increased (from medium to high) due to the potential for impacts from COVID-19
Labour - availability and/or cost escalation.	There is insufficient labour available to construct the Project, and/or there is significant labour cost.	The Project Team will, through the use of competitive selection processes for all construction contracts, ensure that all Project contractors have appropriate experience and therefore understand labour risk.	L	Reduced (from medium to low) as construction work has progressed to the point that the project is past the point of peak labour demand.
Disagreement on contractual obligations of the construction contractors.	There is a disagreement between the Project Team and a contractor regarding the performance of their contractual obligations.	The Project Team takes a proactive management approach to the resolution of any changes, claims and disputes that arise, working expeditiously to achieve resolution with the goal of minimizing any impacts to budget and schedule while ensuring adherence to the terms of the construction contracts.	M	No change but this risk may be impacted by the COVID-19 public health emergency (assessment is currently underway)
McLoughlin Point Wastewater Treatment Plant				
Unexpected contaminated soil conditions during excavation.	Site has more contaminated soils than initial assessment.	CRD and HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) are working collaboratively to minimize the costs associated with remediating the McLoughlin Point site while ensuring that contaminated materials are removed and disposed of in accordance with all applicable legislation.	C	This risk has been closed because the excavation is complete and an application for a Certificate of Compliance has been submitted to the Province.

Risk Level Key - Assessed risk level (based on likelihood and potential impact			
Low	**Medium**	**High**	**Closed**
L	**M**	**H**	**C**

2.9 Status (Engineering, Procurement and Construction)

2.9.1 Wastewater Treatment Plant (McLoughlin Point WWTP)

The McLoughlin Point WWTP Project Component continued with Harbour Resource Partners ("HRP" as the Design-Build contractor for the McLoughlin Point WWTP) progressing construction and commissioning activities.

Key activities in progress or completed by HRP in April were as follows:

- Primary treatment area:
  - progressed Densadeg 1, 2 and 3 installation;
  - continued installation of primary odour control fiberglass reinforced plastic (FRP) pipe and equipment;
  - installation of plate settler 1 tank covers complete, and continued plate settler 2 installation;
  - installed north pump room equipment with progression of electrical work;
  - completed fine screen building roofing, cladding and drywall, protecting panelling is ongoing;
  - completed fine screen building stairwell steel; and
  - secondary odour control FRP piping installation is progressing.

- Secondary treatment area:
  - Moving Bed Bio Reactor (MBBR) #2 and #1 process equipment re-installation complete;
  - Biological Aerated Filter (BAF) nozzles and laterals are installed in all cells except 12 & 9;
  - BAF gravel and biolite is installed in all cells except 12 & 9;
  - main exterior electrical gear installation complete;
  - glanding and terminations well underway in the main electrical room;
  - progressing electrical work in the blower building;
  - completed heat recovery room drywall;
  - penthouse building envelopes nearing completion;
  - installed translucent panels in 2 buildings; and
  - BAF cell 12 scouring air header installation is in progress.

- Tertiary treatment area:
  - continued upper disk filter walls, including outfall shaft roof slab;
  - lower level 1 pumps and mechanical piping install nearing completion; and
  - cinder block masonry nearing complete.

- O&M building:
  - completed lower level interior stud build-out and drywall;
  - level 1 heating ventilation and air conditioning (HVAC), plumbing and fire suppression trades are complete;
  - electrical trade is beginning to close out rooms to allow for drywall installation on level 1;
  - level 2 HVAC, plumbing and fire suppression are nearing completion;
  - steel stud install on level 2 nearing completion, drywall mudding & taping well underway;
  - level 1 and 2 roof complete with the exception of the North canopy;
  - continued construction of north end tsunami and planter wall;

- glazing installation complete on level 1 and level 2;
- steel stairwells installed; and
- elevator installed.

- Site Works:
  - Pig receiving station foundations constructed; and
  - Demobilized north tower crane.

Key activities in progress or completed by HRP in May were as follows:

- Primary treatment area:
  - Densadeg 1, 2 and 3 are going through final walk downs prior to hand over to commissioning;
  - primary odour control fiberglass reinforced plastic (FRP) pipe and equipment nearing completion;
  - plate settler 1 & 2 are progressing through final walk downs prior to hand over to commissioning;
  - chemical distribution systems installation ongoing, PVC piping is progressing; and
  - roofing and envelopes are nearing completion across the primary area.

- Secondary treatment area:
  - moving bed bio reactor (MBBR) 1 & 2 are mechanically complete, covers are complete;
  - Biological Aerated Filter (BAF) cell 12 is complete;
  - electrical teams have transitioned to field terminations by system from the work in the main electrical room;
  - all motor control centres are now powered;
  - communication network is ongoing;
  - electrical work in the blower building is nearing completion;
  - heat recovery room is progressing;
  - penthouse building envelopes are nearing completion; and
  - BAF tank covers are progressing.

- Tertiary treatment area:
  - continued upper disk filter walls, including outfall shaft roof slab, concrete is complete;
  - installation of secondary effluent FRP baffles ongoing;
  - lower level 1 pumps and mechanical piping installation is nearing completion;
  - level 2 process pipe continued with installation of UV system and pumps; and
  - cinder block masonry is ongoing.

- O&M building:
  - lower level interior flooring and millwork in progress;
  - lower level drywall is complete;
  - lower level painting and suspended ceiling is progressing;
  - door installation is in progress;
  - level 2 heating ventilation and air conditioning (HVAC) plumbing and fire suppression are all nearing completion;
  - steel stud installation on level 2 is nearing completion and drywall, paint, drop ceilings, flooring and millwork are underway;

- roofing is complete, cladding on all levels is nearing completion, green roof installation is in progress; and
- glazing installation complete on level 1 and nearing completion on level 2.

- Site Works:
  - removed outfall blind and installed FRP baffles;
  - pig receiving station piping complete;
  - installation of main plant water service is ongoing; and
  - storm line no.2 installed and backfill progressed across site.

Key activities in progress or completed by HRP in June were as follows:

- Primary treatment area:
  - Densadeg 1, 2 and 3 ready for commissioning;
  - primary odour control system in final walk down period;
  - plate settler 1 & 2 ready for commissioning;
  - chemical distribution systems preparing for walk down period; and
  - roofing and building envelopes are nearing completion across the primary area.

- Secondary treatment area:
  - MBBR installation entering walk down period;
  - BAF cell 9 close-out in progress;
  - tower crane has been dismantled;
  - blower system piping is nearing completion;
  - Suez is on site progressing through their pre-commissioning tasks;
  - heat recovery room is progressing;
  - penthouse building envelopes nearing completion; and
  - BAF tank covers installation is nearing completion.

- Tertiary treatment area:
  - concrete is complete;
  - completed installation of secondary effluent FRP baffles;
  - completed installation of lower level 1 pumps and mechanical piping, electrical nearing completion;
  - progressed level 2 process pipe; and
  - completed installation of disk filter system piping and masonry.

- O&M building:
  - lower level interior flooring and millwork continues;
  - lower level plumbing and HVAC in final finishing stages;
  - lower level painting and suspended ceiling is progressing;
  - door installation continues;
  - level 2 HVAC, plumbing and fire suppression are all nearing completion;
  - steel stud install on level 2 effectively complete, drywall, paint, drop ceilings, flooring and millwork continue;
  - roofing complete, cladding on all levels nearing completion, green roof install continues; and
  - glazing installation complete on level 1 and nearing completion on level 2.

Photographs of construction progress over the month of June at McLoughlin Point WWTP are shown in Figures 2-5.

Figure 2– McLoughlin Point Wastewater Treatment Plant – Operations and Maintenance building level 2, flooring installation and glazing installed

Figure 3– McLoughlin Point Wastewater Treatment Plant- Dirty Backwash Room, primary odour control carbon filter preparing to load media.

Figure 4– McLoughlin Point Wastewater Treatment Plant- Roof of north pump room, parapet flashing preparation.

Figure 5– McLoughlin Point Wastewater Treatment Plant- Operations & Maintenance building level 1, south entrance façade insulation.

2.9.2 Residuals Treatment Facility

The RTF Project Component continued with Hartland Resource Management Group ("HRMG" as the Design-Build-Finance-Operate-Maintain contractor for the RTF) progressing construction and commissioning activities.

Key activities in progress or completed by HRMG in April were as follows:

- Digester Area:
  - Digester 1 external pipe connections;
  - Investigation and rectification plan under development as a result of digester 1 and 2 not passing the pneumatic test;
  - Digester 3 Pipe install and concrete supports;
  - Digested Solids Storage Tank instrumentation install; and
  - Digester Building mechanical and electrical is in progress.

- Other Municipal Solids Receiving Facility:
  - electrical cable install and terminations is in progress.

- Residuals Handling Building:
  - electrical work continued in all areas;
  - fiberglass reinforced plastic (FRP) grating installation is in progress;
  - commenced installation of FRP ducting;
  - windows installed; and
  - louvres installed.

- Residuals Drying Facility:
  - mechanical installation is in progress;
  - electrical terminations continued;
  - insulation install is in progress; and
  - generator room louvres completed.

- Residuals Storage & Odour Control:
  - mechanical and electrical work is in progress;
  - hydro test completed in effluent tank; and
  - chemical piping install commenced.

- Operations Building:
  - drywall completed;
  - ceiling tile and flooring completed;
  - painting in progress;
  - millwork in progress;
  - windows completed; and
  - door installation in progress.

Key activities in progress or completed by HRMG in May were as follows:

- Digester Area:
  - Digester 1 external pipe connections;
  - Digester 2 Pneumatic test;
  - Digester 3 Close up and make ready for hydro test;

- Digested Solids Storage Tank external pipe connections; and
- Digester Building mechanical and electrical is in progress.

- Other Municipal Solids Receiving Facility:
  - Electrical cable terminations are in progress.

- Residuals Handling Building:
  - electrical work continued in all areas;
  - FRP grating install is in progress;
  - FRP ducting install ongoing; and
  - overhead crane commissioning completed.

- Residuals Drying Facility:
  - mechanical installation is in progress;
  - electrical terminations continued;
  - insulation install is in progress; and
  - generator run and load test completed.

- Residuals Storage & Odour Control:
  - mechanical and electrical work is in progress;
  - FRP duct install is progressing;
  - hydro test of water storage tank was completed; and
  - chemical piping install commenced.

- Operations Building:
  - completed all architectural finishes; and
  - electrical and mechanical deficiency's being closed out.

Key activities in progress or completed by HRMG in June were as follows:

- Digester Area
  - Digester 2 insulation install;
  - Digester 3 Pneumatic test completed;
  - DSST external pipe connections; and
  - Digester Building commissioning systems.

- Other Municipal Solids Receiving Facility
  - Heat tracing of piping.

- Residuals Handling Building
  - completed FRP grating installation;
  - completed FRP ducting; and
  - commissioning of various systems.

- Residuals Drying Facility
  - progressing installation of external stairs;
  - completed electrical terminations;
  - completed installation of insulation on ductwork;
  - completed commissioning generator transfer switch; and
  - commenced commissioning of various systems.

- Residuals Storage & Odour Control
  - completed mechanical and electrical work.
  - progressing installation of FRP duct;
  - commenced chemical piping installation; and
  - commenced commissioning of various systems.

- Operations Building
  - Fire alarm verification commenced.

Photographs of construction progress over the month of June at the Residuals Treatment Facility are shown in Figures 6-8.

Figure 6– Residuals Treatment Facility- Product silo load out hopper.

Figure 7– Residuals Treatment Facility- air ducting from Residuals Solids Tanks.

Figure 8− Residuals Treatment Facility – Fit-out of laboratory in Operations Building.

2.9.3 Conveyance System

2.9.3.1 Clover Point Pump Station

The Clover Point Pump Station continued with Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressing construction and commissioning activities over the reporting period.

Key activities in progress or completed by Kenaidan in April included:

- completed relocation of existing screens to new inlet storm channel;
- installation of new sanitary screens in the existing inlet sanitary channel;
- new exhaust plenum poured and stripped;
- completed existing pump room demolition;
- demolition of HVAC and electrical equipment on existing mezzanine floor ongoing;
- resumed work on gender neutral public washroom;
- 1500mm stub out completed;
- installed caisson for north retaining wall;
- completed commissioning of Storm Overflow components of the new facility;
- new pump station in operation under interim operating phase;
- forcemain successfully tested and backfilled; and
- moved bypass pumps back to complete diversion chamber tie in.

Key construction activities in progress or completed by Kenaidan in May included:

- progressed civil works (saw cut/demolition);
- completed pipe supports;
- progressed drag struts;
- completed bypass pumping for 1500mm tie-in at new inlet channel;
- installed fuel storage tank and exhaust fan for diesel generator;
- progressed work on fuelling system;
- progressed civil/concrete works at existing inlet sanitary channels;
- progressed de-gritter cone/head cell works;
- progressed demolition/concrete works at new inlet channel; and
- progressed works at the new public plaza and washroom.

Key construction activities in progress or completed by Kenaidan in June included:

- installation of seismic upgrades (cross braces, shotcrete, drag struts);
- installation of the fuelling system and diesel generator;
- progressed concrete and mechanical works in existing sanitary channel;
- continued grit separation equipment installation;
- continued works in the new wastewater channel;
- progressed electrical and mechanical works in the gender-neutral washroom at public plaza; and
- installation of landscape retaining walls and concrete seating.

Photographs of construction progress over the month of June at Clover Point are shown in Figures 9-11.

Figure 9−Clover Point Pump Station- New masonry walls in the generator room.

Figure 10−Clover Point Pump Station- Reclaim water system installed in the screening room.

Figure 11- Clover Point Pump Station – Public washroom roof formwork installation.

2.9.3.2 Macaulay Point Pump Station and Forcemain

The Macaulay Point Pump Station and Forcemain continued with Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressing construction and commissioning activities over the reporting period.

Key construction activities in progress or completed by Kenaidan in April were as follows:

- installed unit heaters;
- HVAC fans installation is nearing completion;
- completed wet well concrete pour;
- commenced wood siding panel installation;
- install recycle water system;
- genset fuel tanks have been installed;
- stainless steel pipe to the pigging chamber has been delivered; and
- cable pulling and termination for the pumps is complete.

Key construction activities in progress or completed by Kenaidan in May were as follows:

- completed fiberglass reinforced plastic (FRP) platform in the wet well;
- ongoing installation of FRP platform and stairs in the pump room;
- completed installation of FRP ducting in the wet well;
- completed installation of wood siding on North side of the building;
- ongoing process piping installation in the pump room is ongoing;
- inlet fire damper in the genset room is installed;
- installation of louver on the west side of the building;
- ongoing installation of penthouse louver;
- ongoing commissioning of programmable logic control and motor control centres;
- pigging chamber outfall pipe has been received and fused;
- exposed Pigging chamber wall and cut pipe penetration opening; and
- ongoing installation of Weholite pipe to the drop structure.

Key construction activities in progress or completed by Kenaidan in June were as follows:

- completed pigging chamber tie-in;
- commenced turning vanes installation in wet well;
- ongoing FRP platform and stair installation in the pump room;
- commenced wood siding installation on East side of building;
- completed process piping installation in the pump room;
- completed interior door installation;
- completed odour control system testing and commissioning;
- completed commissioning of flow control valve;
- completed process pipe pressure testing;
- commenced screen system commissioning;
- completed HVAC functional test;
- completed reclaimed water system commissioning;
- commenced grit removal system commissioning; and
- completed sewage pumps commissioning.

Photographs of construction progress over the month of June at Macaulay Point Pump Station are shown in Figures 12-13.

Figure 12−Macaulay Point Pump Station- Grading and prep for concrete curbs.

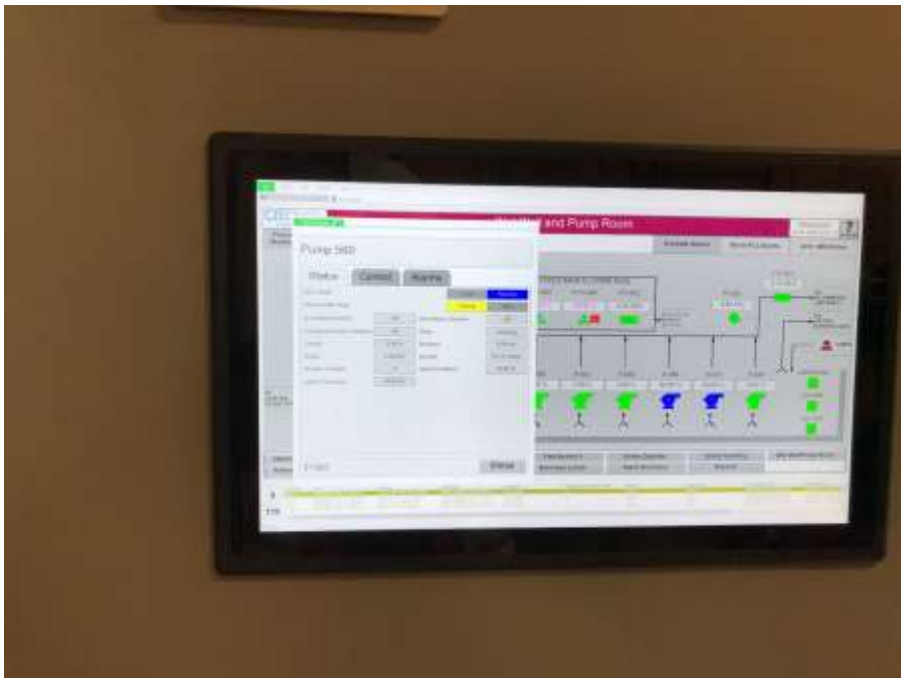


Figure 13−Macaulay Point Pump Station- Pump test runs.

2.9.3.3 Clover Forcemain (CFM)

Windley Contracting Ltd. ("Windley" as the Construction Contractor) continued construction activities over the reporting period.

Key construction activities in progress or completed by Windley in April included:

- commence seawall balustrade replacement construction;
- cycle track/road restoration between Government Street and Lewis Street;
- landscape restoration; and
- top lift paving Douglas Street to Lewis Street.

Key construction activities in progress or completed by Windley in May included:

- continued seawall balustrade replacement construction;
- commenced pouring new concrete wall; and
- commenced new sidewalk grading.

Key construction activities in progress or completed by Windley in June included:

- continued balustrade wall replacement construction;
- completed removal of existing wall;
- completed new concrete; and
- commenced new sidewalk pours.

Photographs of construction progress over the month of June on the Clover Forcemain are shown in Figures 14-15.

Figure 14−Clover Forcemain- New aluminium railing installed looking east from Oswego Street.

Figure 15−Clover Forcemain- New aluminium railing looking west from Oswego Street.

2.9.3.4 Residual Solids Conveyance Line

The RSCL is being delivered through two construction contracts:

- Residual Solids Pipes; and
- Residual Solids Pump Stations

Residual Solids Pipes: Don Mann Excavating Ltd. ("Don Mann" as the Construction Contractor for the Residual Solids Pipes) continued construction and commissioning activities over the reporting period.

Key construction activities in progress or completed by Don Mann in April were as follows:

- Segment #1
  - installation of the 250 mm main completed including valve Chamber installations;
  - final Paving in all areas of Segment 1;
  - line painting at various locations; and
  - successfully pressure tested pipe from south side of Tillicum bridge to Peters Street.

- Segment #2**:**
  - installation of the Air Valve chamber at Grange Road;
  - final asphalt reinstatement Grange Road at the Galloping Goose to Wilkinson Road and Interurban Road; and
  - commence Line Valve installation at the Galloping Goose Trail.

- Segment #3:
  - installation of the line valve and low point drain valve commenced at Interurban Rd north of Quayle Road;
  - curb/sidewalk replacement and final paving was completed at several locations, including boulevard restoration;
  - final surface restoration was completed on the remaining sections of the Interurban Trail within the Segment; and
  - final trail reinstatement.

- Segment #4
  - line painting was completed at the various road crossings within the segment;
  - extruded asphalt curbs were replaced within the Prospect Lake Rd/West Saanich Rd intersection;
  - final trail reinstatement was completed on the remaining section north of Pump Station 3; and
  - final Interurban Trail reinstatement from Goward Road north to Pump Station 3.

Key construction activities in progress or completed by Don Mann in May were as follows:

- Segment #1:
  - completed pipe installation and a pressure test was conducted from the north side of Tillicum Bridge to south side of Admirals Bridge (Pass).
- Segment #2**:**
  - completed air valve chamber on Grange Road; and
  - pipe leak was detected and repaired.

- Segment #3:
  - cleaned up and demobilized after base-paving around the low point drains at Interurban Road north of Quayle Road;
  - completed the installation of the relocated line valve on Interurban Road; and
  - final restoration (line painting, etc.) and deficiency repairs were completed along the Interurban Road and trail.

- Segment #4
  - final deficiencies were addressed, including sign and bollard reinstallation, soil and seed placement, etc.

Key construction activities in progress or completed by Don Mann in June were as follows:

- Segments #1 & 2: work is complete;
- Segment #3: final surface restoration was completed: paving deficiencies, line painting, stamped asphalt, etc.; and
- Segment #4: stamped asphalt restoration was completed at the Prospect Lake Rd intersection.

Photographs of construction progress over the month of June on the Residual Solids Pipes are shown in Figures 16-17.

Figure 16− Residual Solids Pipes- Grouting low point drain valve at Portage Road.

Figure 17−Residual Solids Pipes - Pre-paving meeting at Portage Road.

Residual Solids Pump Stations: Knappett Projects Inc. ("Knappett" as the Construction Contractor for the Residual Solids Pump Stations) continued construction activities including:

Key construction activities in progress or completed by Knappett in April included:

- Pump Station 1
  - pipe spools and electrical installations were both advanced;
  - genset was landed on the concrete pad and the lamp standard was installed; and
  - most of the chamber cores were grouted in.

- Pump Station 2
  - pigging chamber, flow meter and line valve were installed and backfilled;
  - pipe spool pieces were installed throughout all the chambers and are ongoing;
  - electrical work was advanced on the kiosk and the valve chamber; and
  - lamp standard was installed.

- Pump Station 3
  - Odour Control Unit underground piping was completed;
  - pipe spool piece installation was completed;
  - electrical works in the valve chamber was also completed; and
  - lamp standard was erected.

- Marigold Crossing:
  - Marigold Road crossing was completed and pipe was installed to the line valve on Violet Street.

- Tillicum Bridge:
  - pipe spool installation began after all the hangers were installed and epoxied in place with levelling shims.

Key construction activities in progress or completed by Knappett in May included:

- Pump Station 1
  - installed odour control unit underground vent and drain piping;
  - commenced the south pipe tie in;
  - electrical crews worked on the kiosk, installed conduit, and finished items in the wet well; and
  - general backfill took place across the site.

- Pump Station 2
  - BC Hydro line was installed;
  - pressure testing continued along with associated tie ins; and
  - The odour control slab was poured.

- Pump Station 3
  - surge tank line valve was installed and the line was trenched; and
  - pressure testing and finishing items continued within the wet well and valve chamber.

- Marigold Crossing:
  - Marigold crossing was completed, with asphalt paving left to complete.

- Tillicum Bridge:
  - Installation of pipe spools, associated deflection spools, and flexible couplings; and
  - Pipe completed and passed pressure testing.

- Admirals Bridge:
  - Commenced pipe hanger installation.

Key construction activities in progress or completed by Knappett in June included:

- Pump Station 1
  - commenced installation of odour control unit (OCU);
  - completed the connection to the silt trap lead;
  - BC Hydro duct bank crossing was completed and the pipe was installed.

- Pump Station 2
  - commenced installation of OCU;
  - completed installation of the surge tank on the concrete pedestals; and
  - commissioning activities were carried out.

- Pump Station 3
  - commenced installation of OCU equipment;
  - commissioning work was carried out; and
  - completed generator testing.

- Marigold Crossing
  - spool installation continued in the chamber; and
  - vent piping and trenching was completed from the manholes to the pump station.

- Admirals Bridge
  - Hangers and spools were installed.

- Return Chamber
  - 50mm threadolet was installed and the lid placed; and
  - RTF valve chamber lid was placed.

Photographs of construction progress over the month of June on the Residual Solids Pump Stations are shown in Figures 18-19.

Figure 18−Residual Solids Pump Stations– Admirals Bridge –Installing pipe under Admirals Bridge

Figure 19 −Residual Solids Pump Stations – Pump Station #1.

2.9.3.5 Arbutus Attenuation Tank

NAC Constructors Ltd. (as the Construction Contractor for the Arbutus Attenuation Tank) continued construction activities over the reporting period.

Key construction activities in progress or completed by NAC Constructors Ltd. in April include:

- completed installation of 232 secant piles;
- completed installation of diagonal and lateral struts atop the secant piles; and
- commenced formwork installation, rebar installation, and concrete pour for 3 of 4 sections for the ring beam.

Key construction activities in progress or completed by NAC Constructors Ltd. in May include:

- completed concrete pour #4 for the tie beam;
- installed ducting from BC Hydro pole to BC Hydro meter base;
- concrete equipment pad for BC Hydro meter base formed and poured; and
- commenced bulk excavation.

Key construction activities in progress or completed by NAC Constructors Ltd. in June include:

- completed bulk excavation of the tank;
- installed BC Hydro meter base wiring, and panel's set-up for hydro hook up;
- placed granular A subbase spanning the full tank area; and
- commenced the installation of rock anchors.

A photograph of construction progress during the month of June at the Arbutus Attenuation Tank is shown in Figure 20.

Figure 20−Arbutus Attenuation Tank- Inside the tank excavation looking north.

2.9.3.6 Trent Forcemain

Jacob Bros. Construction Inc. (as the Construction Contractor for the Trent Forcemain) progressed construction activities including:

Key construction activities in progress or completed by Jacob Bros. in April include:

- completed Fairfield Road Storm Main relocation work;
- completed Fairfield Road Sanitary Main relocation work;
- new line valve installed at Fairfield Road and Stannard Ave;
- completed seawall investigation works;
- completed Memorial Crescent watermain relocation works; and
- completed Fairfield Road watermain relocation works.

Key construction activities in progress or completed by Jacob Bros. in May include

- concrete flow through chamber stripped and backfilled;
- completed storm sewer relocation on Bushby Street;
- completed Memorial Cres and Fairfield Road watermain tie-in works; and
- commenced forcemain installation on Stannard Ave.

Key construction activities in progress or completed by Jacob Bros. in June include:

- completed Eberts Street gravity main;
- relocated conflicting Storm service on Eberts Street below proposed gravity main alignment;
- completed Stannard Avenue forcemain installation;
- installed bend and thrust block between Stannard Avenue and Fairfield Road during two-day road closure (June 15th – 17th);
- continued Fairfield Road forcemain installation; and
- installed blowdown assembly at Fairfield road.

A photograph of construction progress during the month of June at the Trent Forcemain is shown in Figure 21.

Figure 21- Trent Forcemain – Stannard Avenue – Realignment of sanitary service at Fairfield Road.

Appendix A− Overnight Work: Fairfield Watermain Shut-off (April 3, 2020)

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

April 3, 2020

Overnight Work: Fairfield Watermain Shut-off

On Monday, April 6, as part of construction for the Trent Forcemain there will be a temporary water service interruption on Fairfield Road between Memorial Crescent and Lillian Road. This includes water service disruption to your property.

The temporary water service interruption will be conducted at night to minimize the impact to residents. This work is necessary to facilitate construction of City of Victoria watermain and sanitary sewer on Memorial Crescent.

If you require the use of water during these hours, we ask that you prepare prior to the shut-off time of 9:00 p.m. on Monday, April 6. Service will be reinstated at 5:00 a.m. on Tuesday, April 7.

What to Expect

- Water supply will be shut-off from approximately 9:00 p.m. to 5:00 a.m.
- A trench will be excavated, a new pipe will be installed underneath the existing watermain, the trench will be backfilled, and the surface will be temporarily restored.
- Construction lights will be used to illuminate the work zone for safety and traffic control.
- Noise associated with this work includes excavation machinery and truck back-up beepers.
- Pipes and equipment will be temporarily stored in the area while this work is completed.

Traffic Impacts

- There will be single lane alternating traffic.
- Traffic control areas will be delineated by cones and signs and controlled by flaggers.

Thank you for your patience as this work is completed.

About the Wastewater Treatment Project
The Wastewater Treatment Project will provide 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 by the end of 2020.

Construction is ongoing at all of the Wastewater Treatment Project's sites in accordance with the guidelines established by the Provincial Health Officer.

Any questions about the work, please contact the Project Team.

24/7 Phone Line
1.844.815.6132

Email
wastewater@crd.bc.ca

Website
wastewaterproject.ca

Appendix B− Trent Forcemain: Bushby and Eberts Streets (April 14, 2020)

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

April 14, 2020

Trent Forcemain: Bushby and Eberts Streets

As part of the Wastewater Treatment Project, a concrete chamber will be constructed which requires a lane closure within the intersection of Bushby and Eberts Streets. This work is anticipated to begin by the end of this week and take approximately four weeks to complete.

What to Expect

- Barriers and fencing will be installed around the site.
- The area will be excavated, the concrete chamber installed, and the site restored.
- Rock encountered during excavation will be removed by blasting or mechanical means.
- Noise associated with this work includes excavation machinery and truck back-up beepers.
- Pipes and equipment will be temporarily stored in the area while this work is completed.
- Garbage and recycling services will be picked up as usual.

Traffic Impacts

- One lane within the intersection of Bushby and Eberts streets will be closed
- Traffic control areas will be delineated by cones and signs.
- Parking will be temporarily impacted around the intersection of Eberts and Bushby streets to facilitate traffic flow around the closure.
- BC Transit routes will be modified to accommodate the closure.

Access

- Local traffic access will be maintained on Eberts and Bushby streets.
- Vehicle access to residences will not be impacted.

Work Hours

- Monday to Friday from 7:00 a.m. to 7:00 p.m.
- Occasional Saturday work may be required from 10:00 a.m. to 7:00 p.m.

Thank you for your patience while this work is completed.

About the Wastewater Treatment Project
The Wastewater Treatment Project will provide 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 by the end of 2020.

Any questions about the work, please contact the Project Team.

24/7 Phone Line
1.844.815.6132

Email
wastewater@crd.bc.ca

Website
wastewaterproject.ca

Appendix C− Clover Point Pump Station Overnight Work (April 15, 2020)

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

April 15, 2020

Clover Point Pump Station: Overnight Work

Construction of the upgrades to the Clover Point Pump Station requires bypass pumping to the short outfall for approximately four days. This work will begin today and includes diesel-powered pumps running overnight. This work is required to allow the upgraded Clover Point Pump Station to pump wastewater to the new treatment plant at McLoughlin Point.

What to Expect

- The majority of work will take place inside the pump station.
- Noise and lights associated with construction equipment.
- Diesel-powered pumping units will be in operation and are equipped with acoustic enclosures to reduce noise.
- Wastewater will be screened and discharged out of the short outfall during this work and residents are advised to avoid entering the water along the shoreline on Dallas Road between St Charles Street and Dock Street, including at Ross Bay, Clover Point, Holland Point and Ogden Point.
- Public health advisory signs will be posted until sample results are below the health guidelines.

Work Hours

- The diesel-powered pumping units will be running continuously until this work is complete with crews onsite for the duration of this work.

Traffic Impacts

- There will be no traffic impacts.
- The Dallas Road Waterfront Trail between the Clover Point Pump Station and the crosswalk at Memorial Crescent remains closed.

Construction at Clover Point is anticipated to be complete by summer 2020.

Thank you for your patience as this work is completed.

About the Wastewater Treatment Project
The Wastewater Treatment Project will provide 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 by the end of 2020

Any questions about the work, please contact the Project Team.

24/7 Phone Line
1.844.815.6132

Email
wastewater@crd.bc.ca

Website
wastewaterproject.ca

Appendix D− Temporary Overnight Work: Marigold Road (April 17, 2020)

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

April 17, 2020

Temporary Overnight Work: Marigold Road

As part of the Wastewater Treatment Project, construction of the Residual Solids Conveyance Line will be crossing Marigold Road at Violet Avenue during the week of April 20th. Part of this work will require the closure of Marigold Road between Interurban Road and Daisy Avenue. This closure will be done at night from 7:00 p.m. to 7:00 a.m. to limit traffic impacts. The overnight work is expected to take place Wednesday night and be completed within one night, but it is weather dependent so the timing may change.

What to Expect

- A trench will be excavated, the new pipe will be installed, the trench will be backfilled, and the surface will be temporarily restored.
- Final restoration will take place after the section has been tested and completed.
- Noise associated with this work includes excavation machinery and truck back-up beepers.
- Pipes and equipment will be temporarily stored in the area while this work is completed.
- During night work, construction lights will be used to illuminate the work zone for safety and traffic control.

Traffic Impacts

- Marigold Road will be open to single lane alternating traffic from 7:00 a.m. to 7:00 p.m.
- Traffic control areas will be delineated by cones and signs and controlled by flaggers.
- Marigold Road will be closed from 7:00 p.m. Wednesday to 7:00 a.m. Thursday.

Work Hours

- Monday to Friday from 7:00 a.m. to 7:00 p.m.
- Overnight work on Wednesday from 7:00 p.m. to 7:00 a.m. Thursday

Thank you for your patience as this work is completed

About the Wastewater Treatment Project
The Wastewater Treatment Project will provide 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 by the end of 2020.

Any questions about the work, please contact the Project Team.

24/7 Phone Line
1.844.815.6132

Email
wastewater@crd.bc.ca

Website
wastewaterproject.ca

Appendix E− Residual Solids Conveyance Line: Gorge Bridge Construction Update

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

UPDATE

April 23, 2020

Residual Solids Conveyance Line: Gorge Bridge Construction

As part of the Wastewater Treatment Project, a pipe is being installed under the Gorge Bridge on Tillicum Road. This work is anticipated to be complete mid-May.

What to Expect

- Scaffolding has been erected on the side of the bridge and a pipe will be installed under the bridge.
- Noise associated with this work includes construction machinery and truck back-up beepers.

Traffic Impacts

- Southbound traffic has been reduced to one lane to provide a pedestrian walkway that supports social distancing.
- Northbound traffic will retain two lanes.
- Pedestrian access will be maintained on the east side of Gorge Bridge.

Work Hours

- Monday to Friday from 7:00 a.m. to 7:00 p.m.

About the Wastewater Treatment Project

The Wastewater Treatment Project will provide 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 by the end of 2020.

Any questions about the work, please contact the Project Team.

24/7 Phone Line
1.844.815.6132

Email
wastewater@crd.bc.ca

Website
wastewaterproject.ca

Appendix F− Core Area Wastewater Discharge Notice (April 14, 2020)

Making a difference...together

Public Service Announcement

For Immediate Release
April 14, 2020

Core Area Wastewater Discharge Notice

Victoria, BC- Construction for the Wastewater Treatment Project at the Clover Point Pump Station requires screened wastewater to be discharged out of the short outfall at Clover Point beginning the evening of April 14, 2020 for approximately four days. The shorelines that will be affected are:

- Dallas Road between St Charles St and Dock St including Ross Bay, Clover Point, Holland Point and Ogden Point in Victoria.

As a result of the discharge, residents are advised to avoid entering the waters along the affected shorelines, as the wastewater may pose a health risk to people entering the water.

As a precaution and in consultation with Island Health and the local municipalities, beaches within the affected areas will be posted with public health advisory signs until sample results indicate enterococci levels are below the 70CFU/100mL recreational limit.

For updates, please visit www.crd.bc.ca and follow us on Twitter @crd_bc

The CRD delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and all levels of government to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure while continuing to provide core services to residents throughout the region. Visit us online at www.crd.bc.ca.

-30-

For media inquiries, please contact:
Andy Orr, Senior Manager
CRD Corporate Communications
Tel: 250.360.3229
Cell: 250.216.5492

Appendix G− Update: Core Area Wastewater Discharge Notice (April 17, 2020)

Making a difference...together

Public Service Announcement

For Immediate Release
April 17, 2020

UPDATE: Core Area Wastewater Discharge Notice

Victoria, BC- Construction for the Wastewater Treatment Project at the Clover Point Pump Station requires screened wastewater to be discharged out of the short outfall at Clover Point. The shorelines affected are:

- Between Radcliffe Lane and Dock St including Gonzales Bay ***NEW***, Ross Bay, Clover Point, Holland Point and Ogden Point in Victoria
- Harling Point, McNeill Bay and McMicking Point in Oak Bay ***NEW***

As a result of the discharge, residents are advised to avoid entering the waters along the affected shorelines, as the wastewater may pose a health risk to people entering the water.

As a precaution and in consultation with Island Health and the local municipalities, beaches within the affected areas will be posted with public health advisory signs until sample results indicate enterococci levels are below the 70CFU/100mL recreational limit.

For updates, please visit www.crd.bc.ca and follow us on Twitter @crd_bc

For questions or more information on this advisory, please call 1.844.815.6132.

The CRD delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and all levels of government to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure while continuing to provide core services to residents throughout the region. Visit us online at www.crd.bc.ca.

-30-

For media inquiries, please contact:
Andy Orr, Senior Manager
CRD Corporate Communications
Tel: 250.360.3229
Cell: 250.216.5492

Appendix H− Beaches Reopen Following Core Area Wastewater Discharge (April 24, 2020)

Making a difference...together

Public Service Announcement

For Immediate Release
April 24, 2020

Beaches Reopen Following Core Area Wastewater Discharge

Victoria, BC- Following the successful completion of construction activities at Clover Point Pump Station that required screened wastewater to be discharged out of the short outfall, all of the affected beaches have been reopened. Testing of samples was completed this week and results indicate enterococci levels are below the 70CFU/100mL recreational level.

In consultation with Island Health, public health advisory signs have been removed from all of the affected shorelines:

- Between Radcliffe Lane and Dock St including Gonzales Bay, Ross Bay, Clover Point, Holland Point and Ogden Point in Victoria and Harling Point, McNeill Bay and McMicking Point in Oak Bay

Thank you for your patience while this work was completed.

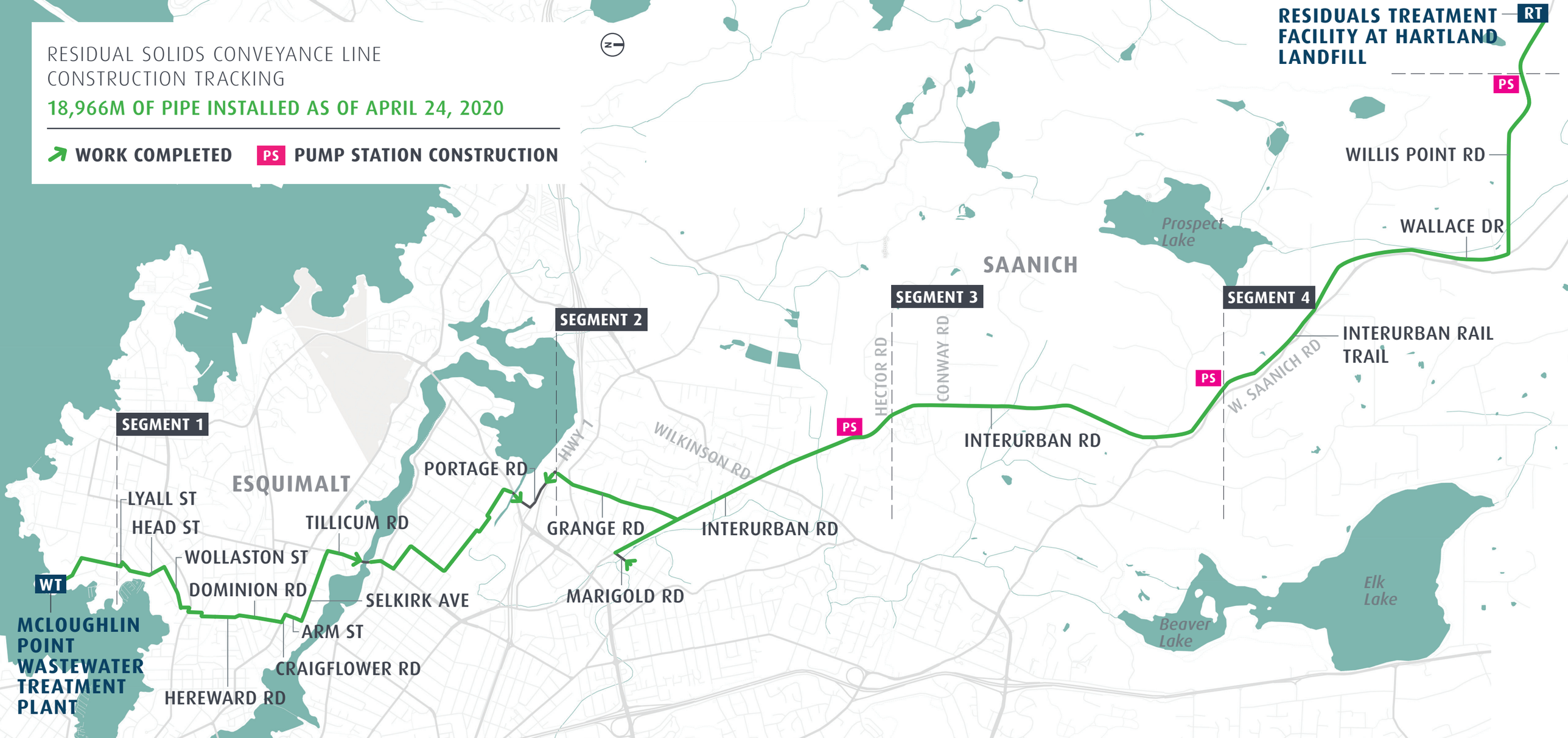
For updates, please visit www.crd.bc.ca and follow us on Twitter @crd_bc

The CRD delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and all levels of government to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure while continuing to provide core services to residents throughout the region. Visit us online at www.crd.bc.ca.

-30-

For media inquiries, please contact:
Andy Orr, Senior Manager
CRD Corporate Communications
Tel: 250.360.3229
Cell: 250.216.5492

Appendix I– Residual Solids Conveyance Line Map (April 24, 2020)


RESIDUAL SOLIDS CONVEYANCE LINE CONSTRUCTION TRACKING
18,966M OF PIPE INSTALLED AS OF APRIL 24, 2020
WORK COMPLETED
PS PUMP STATION CONSTRUCTION
RESIDUALS TREATMENT FACILITY AT HARTLAND LANDFILL
RT
PS
WILLIS POINT RD
WALLACE DR
Prospect Lake
SAANICH
SEGMENT 3
SEGMENT 4
SEGMENT 2
SEGMENT 1
INTERURBAN RAIL TRAIL
W. SAANICH RD
HECTOR RD
CONWAY RD
INTERURBAN RD
WILKINSON RD
HWY 1
PORTAGE RD
GRANGE RD
INTERURBAN RD
MARIGOLD RD
ESQUIMALT
LYALL ST
HEAD ST
TILLICUM RD
WOLLASTON ST
DOMINION RD
SELKIRK AVE
ARM ST
CRAIGFLOWER RD
HEREWARD RD
WT
MCLOUGHLIN POINT WASTEWATER TREATMENT PLANT
Beaver Lake
Elk Lake

Appendix J− Trent Forcemain: Water Service Shutdown Notice Update (May 11, 2020)

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

UPDATE

May 11, 2020

Trent Forcemain: Water Service Shutdown Notice

As part of construction for the Trent Forcemain, a water main is being relocated along Fairfield Road and Memorial Crescent. Connecting the new water main to the existing system requires a temporary interruption of water service between the hours of 10:00 a.m. and 2:00 p.m. on the following dates:

- Wednesday, May 13
- Thursday, May 14

If you require the use of water during these hours, we ask that you prepare prior to the shut-off time of 10:00 a.m. each day.

What to Expect

- Water service will be temporarily shut off each day from approximately 10:00 a.m. to 2:00 p.m.
- The actual duration of the shut-off will depend on the conditions encountered.
- The water may be discoloured after the water service is restored. While the water is safe for consumption, we encourage you to run the tap on cold in the tub or shower until the water runs clear.

Traffic Impacts

- Fairfield Road will have single lane alternating traffic on Wednesday, May 13.
- Memorial Crescent will have single lane alternating traffic on Thursday, May 14.
- Traffic control areas will be delineated by cones and signs and controlled by flaggers.

Work Hours

- Monday to Friday from 7:00 a.m. to 7:00 p.m.

If you have any further questions about the water disruption, please contact the Project Team at our 24/7 phone line 1-844-815-6132.

Thank you for your patience as this work is completed. We apologize for any inconvenience this may cause.

About the Wastewater Treatment Project
The Wastewater Treatment Project will provide 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 by the end of 2020.

Any questions about the work, please contact the Project Team.

24/7 Phone Line
1.844.815.6132

Email
wastewater@crd.bc.ca

Website
wastewaterproject.ca

Appendix K− Core Area Wastewater Discharge Notice (May 7, 2020)

Making a difference...together

Public Service Announcement

For Immediate Release
May 7 2020

Core Area Wastewater Discharge Notice

Victoria, BC- Construction at the Clover Point Pump Station resulted in an unplanned wastewater discharge out the short outfall the morning of May 7, 2020. The areas affected are in the vicinity of Clover Point Park, between Cook Street and Hollywood Place. This pump station is currently undergoing upgrades related to the Wastewater Treatment Project.

As a result of this discharge, residents are advised to avoid entering the waters along the affected shorelines, as the wastewater may pose a health risk.

As a precaution and in consultation with Island Health, beaches within the affected areas will be posted with public health advisory signs for one day. Due to the small amount of discharge, the advisory signs are anticipated to be removed tomorrow afternoon.

For updates, please visit www.crd.bc.ca and follow us on Twitter @crd_bc

The CRD delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and all levels of government to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure while continuing to provide core services to residents throughout the region. Visit us online at www.crd.bc.ca.

-30-

For media inquiries, please contact:
Andy Orr, Senior Manager
CRD Corporate Communications
Office 250.360.3229
Cell 250.216.5492

Appendix L− Core Area Wastewater Discharge Notice (May 30, 2020)

Making a difference...together

Public Service Announcement

For Immediate Release
May 30 2020

Core Area Wastewater Discharge Notice

Victoria, BC- Construction at the Clover Point Pump Station resulted in an unplanned wastewater discharge out the short outfall the night of May 29, 2020. The areas affected are in the vicinity of Clover Point Park, between Cook Street and Hollywood Place. This pump station is currently undergoing upgrades related to the Wastewater Treatment Project.

As a result of this discharge, residents are advised to avoid entering the waters along the affected shorelines, as the wastewater may pose a health risk.

As a precaution and in consultation with Island Health and the local municipalities, beaches within the affected areas will be posted with public health advisory signs until sample results indicate enterococci levels are below the 70CFU/100mL recreational limit.

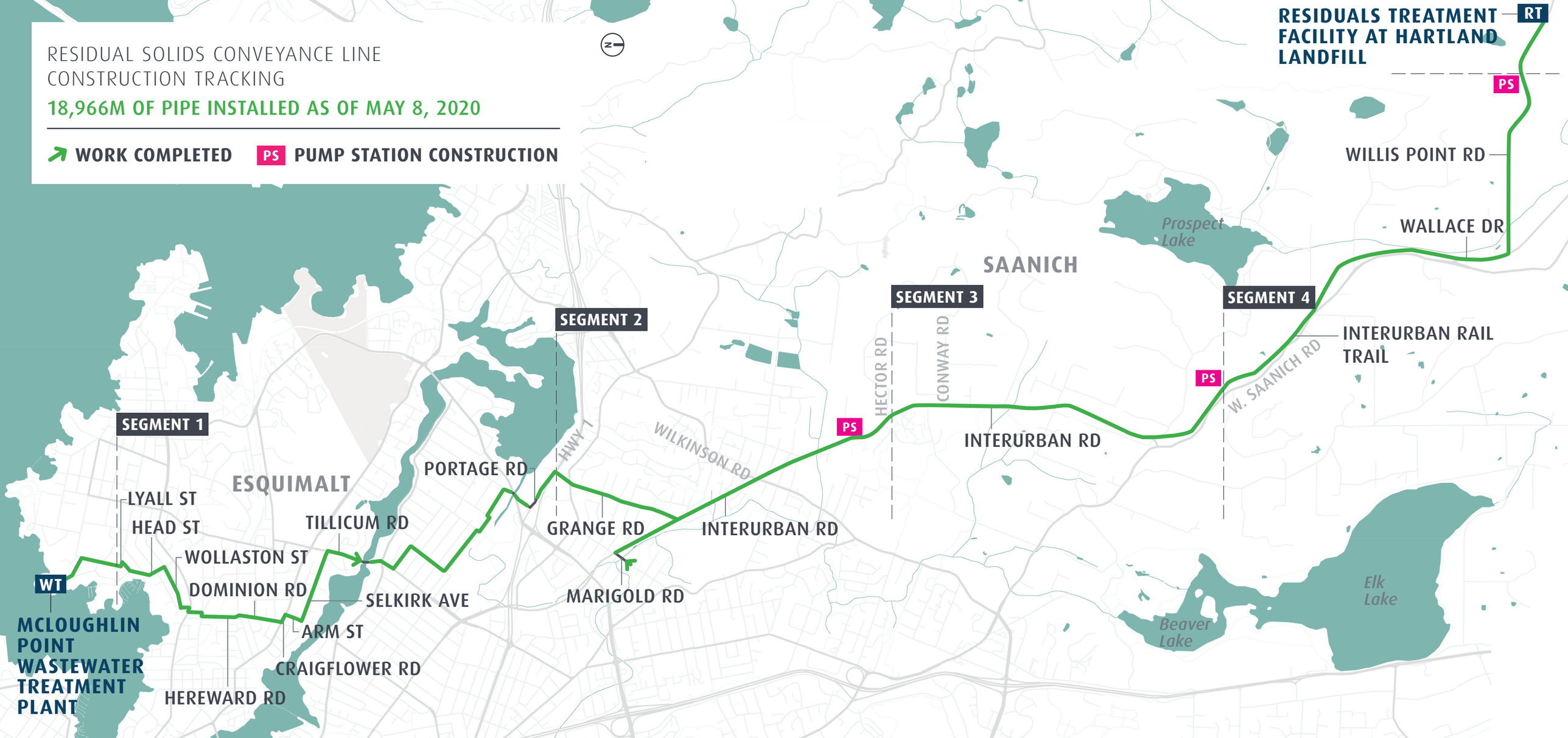
For updates, please visit www.crd.bc.ca and follow us on Twitter @crd_bc

The CRD delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and all levels of government to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure while continuing to provide core services to residents throughout the region. Visit us online at www.crd.bc.ca.

-30-

For media inquiries, please contact:
Andy Orr, CRD, Senior Manager, Corporate Communications
Office 250.360.3229 Cell 250.216.5492

Appendix M− Residual Solids Conveyance Line Map (May 8, 2020)


RESIDUAL SOLIDS CONVEYANCE LINE CONSTRUCTION TRACKING
18,966M OF PIPE INSTALLED AS OF MAY 8, 2020
WORK COMPLETED
PS PUMP STATION CONSTRUCTION
RESIDUALS TREATMENT FACILITY AT HARTLAND LANDFILL
RT
PS
WILLIS POINT RD
WALLACE DR
Prospect Lake
SAANICH
SEGMENT 4
SEGMENT 3
SEGMENT 2
SEGMENT 1
INTERURBAN RAIL TRAIL
W. SAANICH RD
HECTOR RD
CONWAY RD
INTERURBAN RD
WILKINSON RD
HWY 1
PORTAGE RD
GRANGE RD
INTERURBAN RD
MARIGOLD RD
ESQUIMALT
LYALL ST
HEAD ST
TILLICUM RD
WOLLASTON ST
DOMINION RD
SELKIRK AVE
ARM ST
CRAIGFLOWER RD
HEREWARD RD
WT
MCLOUGHLIN POINT WASTEWATER TREATMENT PLANT
Beaver Lake
Elk Lake

Appendix N− Trent Forcemain: Fairfield Road Closure (June 12, 2020)

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

June 12, 2020

Trent Forcemain: Fairfield Road Closure

As part of the Wastewater Treatment Project, construction of the Trent Forcemain will be crossing Fairfield Road at Stannard Avenue. This work will require the closure of Fairfield Road between the Fairfield Shopping Centre and Arnold Avenue. The closure is expected to take place during work hours starting on Monday, June 15 and be complete within approximately three days. A detour will be in place (see map on reverse).

What to Expect

- A trench will be excavated, the new pipe will be installed, the trench will be backfilled, and the surface will be temporarily restored.
- Final restoration will take place after the section has been tested and completed.
- Noise associated with this work includes excavation machinery and truck back-up beepers.
- Pipes and equipment will be temporarily stored in the area while this work is completed.

Traffic Impacts

- A signed detour will be in place during work hours.
- On-street parking along Memorial Crescent and St Charles Street will be removed to allow for detour traffic.
- Traffic control areas will be delineated by cones and signs and controlled by flaggers.

Access

- Vehicle access to residences will not be impacted.
- Emergency services will have access at all times.
- Garbage and recycling services will be picked up as usual.

Work Hours

- Monday to Friday from 7:00 a.m. to 7:00 p.m.
- Saturday from 10:00 a.m. to 7:00 p.m.

Thank you for your patience while this work is completed.

About the Wastewater Treatment Project
The Wastewater Treatment Project will provide 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 by the end of 2020.

Any questions about the work, please contact the Project Team.

24/7 Phone Line
1.844.815.6132

Email
wastewater@crd.bc.ca

Website
wastewaterproject.ca

Detour Route

Appendix O− Project Update #9 (June 2020)

Wastewater Treatment Project

The Wastewater Treatment Project is in its final year of construction and all the pieces are starting to come together. We are in the final push and the majority of the construction will conclude over the summer. The Project will then enter the next phase which is commissioning the new infrastructure. The Project still has many active construction sites throughout Victoria, Esquimalt and Saanich and we want to thank residents for their patience while we complete this work. The Project remains on schedule to meet the regulatory deadline of December 31, 2020. Construction progress is highlighted for each section of the Project with photos.

Construction Updates

MCLOUGHLIN POINT WASTEWATER TREATMENT PLANT

The view of McLoughlin Point changed this spring with the demobilization of both of the tower cranes on site. The majority of construction on site will be complete this summer. The exterior finishing of the building is nearing completion and the inside of the operations and maintenance building is being painted. The multi-level green roof is being installed and the areas around the plant are being backfilled. Wastewater will begin flowing through the plant later this summer as testing of the system commences.

Aerial view of McLoughlin Point Wastewater Treatment Plant.

RESIDUALS TREATMENT FACILITY

Construction on the Residuals Treatment Facility located at the Hartland Landfill has made excellent progress with all major equipment now installed. All the buildings have been built on site and the exterior work is complete. Work is focused on finishing the interior of the buildings.

Construction progress at the Residuals Treatment Facility.

CLOVER POINT PUMP STATION

In April, the Clover Point Pump Station achieved a significant milestone with relocating and installing new screens. This was an important step to begin modifying the existing pump station and to allow the upgraded pump station to pump wastewater to the new McLoughlin Point Wastewater Treatment Plant.

New pumps at the Clover Point Pump Station.

MACAULAY POINT PUMP STATION

At Macaulay Point, the building has been erected and siding is being installed. All major equipment has been installed and mechanical and electrical work continues on site. The tower crane has also been demobilized at Macaulay Point. The Macaulay Forcemain work is complete with all the pipe installed and tested and the roads surrounding the area have been paved and reopened.

Siding being installed on the new Macaulay Point Pump Station.

CLOVER FORCEMAIN

Construction on Dallas Road has been focusing on restoration work since the forcemain installation was finished last summer. All the restoration work has been completed on Dallas Road except for the final section between Dock Street and Lewis Street. A new balustrade along the seawall is being installed for the City of Victoria which is anticipated to be complete in the fall.

New crosswalk at Government Street on the newly paved Dallas Road.

ARBUTUS ATTENUATION TANK

In Saanich, the Arbutus Attenuation Tank is being built on CRD property in Haro Woods. All the secant piles have been installed around the perimeter of the tank footprint. These are reinforced concrete piles that are required to minimize the footprint of the excavation. Now that this stage is complete, excavation is taking place for the 5,000m^3 attenuation tank.

Excavation at the Arbutus Attenuation Tank.

RESIDUAL SOLIDS CONVEYANCE LINE

Over 99% of the Residual Solids Conveyance Line is installed. Work has been focusing on installing valves and chambers, completing tie-ins, and paving. Construction at the three small pump stations along the Residual Solids Conveyance Line is progressing well. Pipes have been installed on the Gorge Bridge and the last section of pipe is being installed on the Admirals Bridge.

Pipe installation on Portage Road in Saanich.

The pipe has been installed under the Gorge Bridge on Tillicum Road.

Wastewater Treatment Project
Treated for a cleaner future

Project Update #9
June 2020

TRENT FORCEMAIN

In January, Jacob Bros Construction started work on the Project's final construction contract, to build the Trent Forcemain, 1.9km of pipe being installed in the Fairfield neighbourhood of Victoria. Construction has started with relocating an existing water main and chamber. Forcemain installation started in May.

A section of pipe being installed for the Trent Forcemain.

COVID-19

Construction has been designated an essential service and the Project is continuing with all contractors implementing additional precautions to ensure the health and safety of their workers and the public. These measures include emphasizing the importance of maintaining social distance, increasing handwashing stations, reducing in-person meetings and increasing cleaning of common areas.

All contractors have implemented additional safety protocols on their sites.

CONSTRUCTION SUMMARY

14
active construction sites

600
construction workers

23,412m
pipes laid

For More Information

Website: wastewaterproject.ca
Email: wastewater@crd.bc.ca
24-7 Project Information Line: 1.844.815.6132

Appendix P− Core Area Wastewater Discharge Notice at Macaulay Point (June 22, 2020)

Making a difference...together

Public Service Announcement

For Immediate Release
June 22 2020

Core Area Wastewater Discharge Notice

Esquimalt, BC- Construction of the Macaulay Point Pump Station requires screened wastewater to be discharged out the short outfall overnight on June 22, 2020. The shorelines that will be affected are:

- Between Fraser Street and Victoria View Road including Saxe Point, Macaulay Point and McLoughlin Point in Esquimalt; and
- Along Dallas Road between Dock Street and Government Street in Victoria.

As a result of this discharge, residents are advised to avoid entering the waters along the affected shorelines, as the wastewater may pose a health risk.

As a precaution and in consultation with Island Health and the local municipalities, beaches within the affected areas will be posted with public health advisory signs until sample results indicate enterococci levels are below the 70CFU/100mL recreational limit.

A new Macaulay Point Pump Station is being built as part of the Wastewater Treatment Project and will pump wastewater from the western core area municipalities and the Esquimalt and Songhees Nations to the new McLoughlin Point Wastewater Treatment Plant for tertiary treatment.

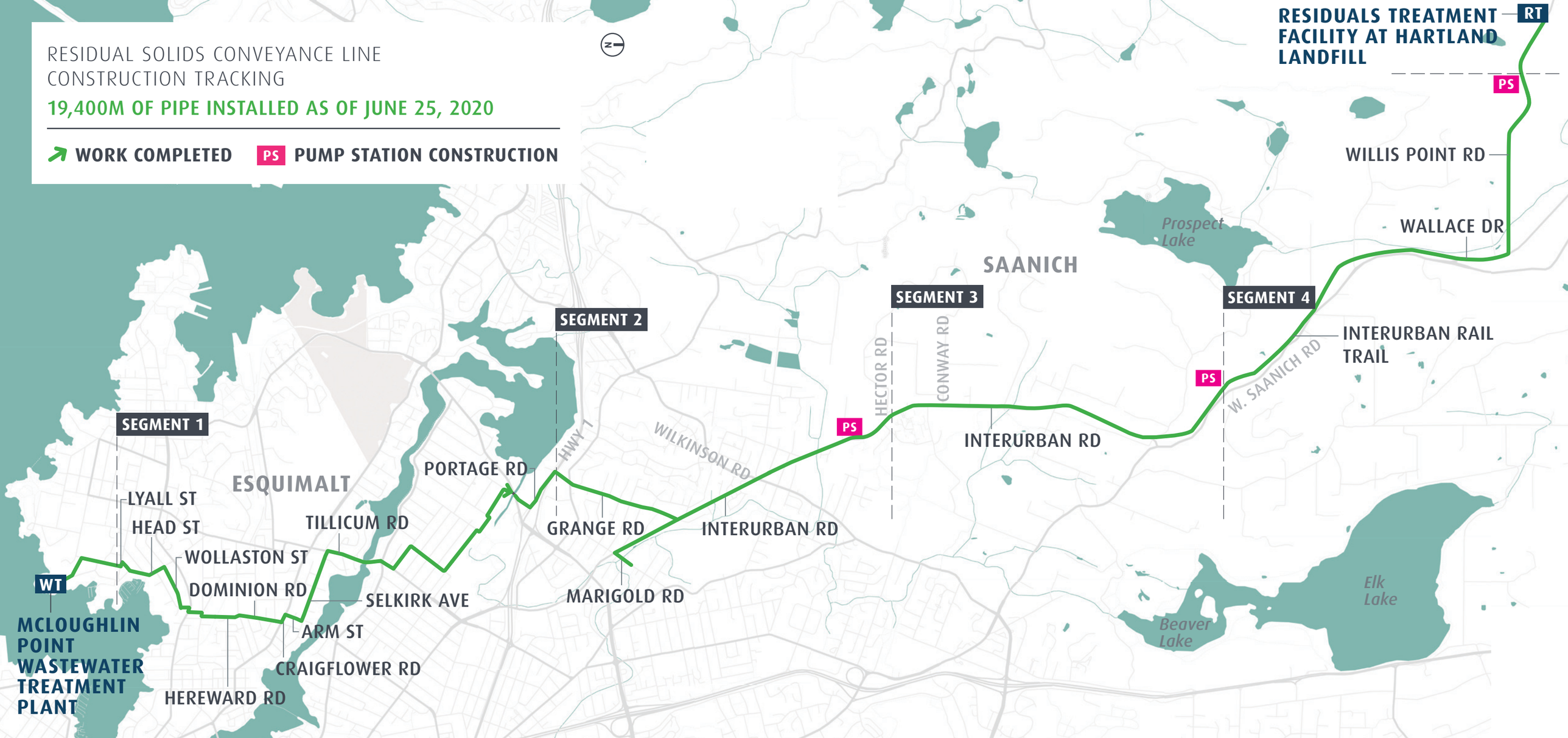
For updates, please visit www.crd.bc.ca and follow us on Twitter @crd_bc

The CRD delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and all levels of government to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure while continuing to provide core services to residents throughout the region. Visit us online at www.crd.bc.ca.

-30-

For media inquiries, please contact:
Andy Orr, Senior Manager
CRD Corporate Communications
Tel: 250.360.3229

Appendix Q− Residual Solids Conveyance Line Map (June 25, 2020)


RESIDUAL SOLIDS CONVEYANCE LINE CONSTRUCTION TRACKING
19,400M OF PIPE INSTALLED AS OF JUNE 25, 2020
WORK COMPLETED
PS PUMP STATION CONSTRUCTION
RESIDUALS TREATMENT FACILITY AT HARTLAND LANDFILL
RT
PS
WILLIS POINT RD
WALLACE DR
Prospect Lake
SAANICH
SEGMENT 3
SEGMENT 4
SEGMENT 2
SEGMENT 1
INTERURBAN RAIL TRAIL
W. SAANICH RD
HECTOR RD
CONWAY RD
INTERURBAN RD
WILKINSON RD
HWY 1
PORTAGE RD
ESQUIMALT
LYALL ST
HEAD ST
TILLICUM RD
GRANGE RD
INTERURBAN RD
WOLLASTON ST
DOMINION RD
SELKIRK AVE
MARIGOLD RD
WT
MCLOUGHLIN POINT WASTEWATER TREATMENT PLANT
ARM ST
CRAIGFLOWER RD
HEREWARD RD
Elk Lake
Beaver Lake

Appendix R− Monthly Cost Report (June)

MONTHLY COST REPORT
as at June 30, 2020

Description	BUDGET		COST EXPENDED					COMMITMENTS			FORECAST		VARIANCE	
	Control Budget	Allocated Budget	Expended to May 31, 2020	Expended over reporting period (June 2020)	Expended to June 30, 2020	Expended to June 30, 2020 as a % of Allocated Budget	Remaining (Unexpended) Allocated Budget at June 30, 2020	Total Committment at June 30, 2020	Unexpended Commitment at June 30, 2020	Uncommitted Allocated Budget at June 30, 2020	Forecast to Complete	Forecast at Completion	Variance at Completion $	Variance at Completion as a % of Allocated Budget
McLoughlin Point Wastewater Treatment Plant	**331.4**	**328.1**	**293.8**	**5.0**	**298.8**	**91%**	**29.3**	**321.2**	**22.4**	**6.9**	**29.3**	**328.1**	**-**	**0%**
Construction	306.7	321.0	293.3	5.0	298.2	93%	22.7	320.5	22.3	0.5	22.7	321.0	-	0%
Contingency	14.9	0.2	-	-	-	0%	0.2	-	-	0.2	0.2	0.2	-	0%
Financing	9.8	6.9	0.6	-	0.5	7%	6.4	0.7	0.1	6.2	6.4	6.9	-	0%
Residuals Treatment Facility	**159.4**	**140.0**	**10.9**	**0.4**	**11.3**	**8%**	**128.7**	**139.0**	**127.7**	**1.0**	**128.7**	**140.0**	**-**	**0%**
Construction	145.4	138.9	10.9	0.4	11.3	8%	127.7	138.9	127.7	0.0	127.7	138.9	-	0%
Contingency	12.3	0.2	-	-	-	0%	0.2	-	-	0.2	0.2	0.2	-	0%
Financing	1.7	0.8	0.0	-	0.0	2%	0.8	0.0	0.0	0.8	0.8	0.8	-	0%
Conveyance System	**158.0**	**215.7**	**160.9**	**5.4**	**166.3**	**77%**	**49.4**	**195.4**	**29.1**	**20.3**	**49.4**	**215.7**	**-**	**0%**
Macaulay Point Pump Station	25.4	30.8	26.9	0.8	27.7	90%	3.1	30.8	3.1	0.0	3.1	30.8	-	0%
Macaulay Forcemain	5.6	7.4	7.4	0.1	7.4	100%	-	7.4	-	-	-	7.4	-	0%
Craigflower Pump Station	12.5	12.4	12.4	-	12.4	100%	-	12.4	-	-	-	12.4	-	0%
Clover Point Pump Station	23.7	27.3	24.7	-	24.7	91%	2.6	27.2	2.5	0.1	2.6	27.3	-	0%
Currie Pump Station^	2.8	0.1	0.1	-	0.1	100%	-	0.1	-	-	-	0.1	-	0%
Arbutus Attenuation Tank	14.2	24.6	12.2	1.2	13.5	55%	11.1	23.1	9.7	1.4	11.1	24.6	-	0%
Clover Forcemain	14.6	32.5	29.2	0.8	30.0	92%	2.5	31.9	1.9	0.6	2.5	32.5	-	0%
Currie Forcemain^	3.3	0.2	0.2	-	0.2	100%	-	0.2	-	-	-	0.2	-	0%
Trent Forcemain	9.5	11.3	1.7	0.9	2.6	23%	8.7	8.1	5.5	3.2	8.7	11.3	-	0%
Residual Solids Conveyance Line	19.1	36.6	33.8	0.4	34.3	94%	2.3	36.5	2.2	0.1	2.3	36.6	-	0%
Residual Solids Pump Stations & Bridge Crossings	4.6	18.1	11.7	1.2	13.0	71%	5.2	16.9	4.0	1.2	5.2	18.1	-	0%
Residual Solids Conveyance Line – Highway Crossing	-	0.4	0.3	0.0	0.3	76%	0.1	0.4	0.0	0.1	0.1	0.4	-	0%
Contingency	16.8	9.9	-	-	-	0%	9.9	-	-	9.9	9.9	9.9	-	0%
Financing	5.8	4.1	0.2	-	0.2	5%	3.9	0.3	0.1	3.7	3.9	4.1	-	0%
Project Management Office ("PMO")	**75.8**	**77.9**	**55.8**	**1.0**	**56.8**	**73%**	**21.1**	**69.7**	**12.9**	**8.2**	**21.1**	**77.9**	**-**	**0%**
Project costs Aug 2016-Dec 2016	2.2	2.2	2.2	-	2.2	100%	-	2.2	-	-	-	2.2	-	0%
Owner's Engineering	17.2	17.5	14.1	0.4	14.5	83%	3.0	17.5	3.0	-	3.0	17.5	-	0%
Conveyance Design	5.0	9.5	7.6	0.1	7.6	80%	1.9	8.5	0.9	1.0	1.9	9.5	-	0%
Advisors & Professional Support	7.0	15.0	10.2	0.1	10.3	69%	4.7	11.5	1.2	3.5	4.7	15.0	-	0%
Project Board	2.0	1.3	0.9	0.0	0.9	73%	0.3	0.9	-	0.3	0.3	1.3	-	0%
Project Board Expenses	0.3	0.1	0.1	-	0.1	64%	0.0	0.1	-	0.0	0.0	0.1	-	0%
Project Team	29.1	23.1	15.9	0.3	16.3	70%	6.9	22.9	6.7	0.2	6.9	23.1	-	0%
Project Team Expenses	1.2	0.5	0.3	0.0	0.3	62%	0.2	0.3	-	0.2	0.2	0.5	-	0%
CRD Financial Services	1.5	1.4	0.9	0.0	0.9	66%	0.5	1.4	0.5	-	0.5	1.4	-	0%
CRD Human Resources	0.3	0.3	0.2	0.0	0.2	88%	0.0	0.3	0.0	-	0.0	0.3	-	0%
CRD Corporate Communications	0.2	0.2	0.2	-	0.2	86%	0.0	0.2	0.0	-	0.0	0.2	-	0%
CRD Real Estate	0.3	0.3	0.2	-	0.2	88%	0.0	0.3	0.0	-	0.0	0.3	-	0%
CRD Information Technology	0.4	0.4	0.3	0.0	0.3	68%	0.1	0.4	0.1	-	0.1	0.4	-	0%
CRD Insurance	0.1	0.0	0.0	-	0.0	100%	-	0.0	-	-	-	0.0	-	0%
CRD Operations	0.6	0.6	0.5	0.0	0.5	82%	0.1	0.6	0.1	-	0.1	0.6	-	0%
CRD Legislative Services	0.1	0.1	0.1	-	0.1	100%	-	0.1	-	-	-	0.1	-	0%
CRD Corporate Safety	0.2	0.2	0.2	-	0.2	100%	-	0.2	-	-	-	0.2	-	0%
CRD Executive Services	-	0.1	0.1	-	0.1	71%	0.0	0.1	0.0	-	0.0	0.1	-	0%
Office Lease	1.5	1.3	0.8	0.0	0.9	67%	0.4	1.2	0.4	0.1	0.4	1.3	-	0%
Office Supplies, Communications & Vehicles	1.2	0.7	0.5	0.0	0.5	79%	0.1	0.5	0.0	0.1	0.1	0.7	-	0%
Computer Hardware, Software & Training	1.0	1.1	0.6	-	0.6	60%	0.4	0.6	-	0.4	0.4	1.1	-	0%
Contingency	4.8	2.3	-	-	-	0%	2.3	-	-	2.3	2.3	2.3	-	0%
BC Hydro	**12.9**	**4.3**	**2.0**	**-**	**2.0**	**48%**	**2.3**	**2.1**	**0.0**	**2.2**	**2.3**	**4.3**	**-**	**0%**
Third Party Commitments	**8.1**	**8.1**	**3.9**	**0.1**	**4.0**	**49%**	**4.1**	**6.8**	**2.8**	**1.3**	**4.1**	**8.1**	**-**	**0%**
Program Reserves	**19.2**	**0.9**	**-**	**-**	**-**	**0%**	**0.9**	**-**	**-**	**0.9**	**0.9**	**0.9**	**-**	**0%**
Core Area Wastewater Treatment Project	**765.0**	**775.0**	**527.3**	**11.9**	**539.2**	**70%**	**235.7**	**734.1**	**194.9**	**40.8**	**235.7**	**775.0**	**-**	**0%**

* Values presented in $millions, results in minor rounding differences
** Cost report presents approved expenditures
^ Component no longer required, and would not provide any value therefore removed from Project Scope; Costs include Seaterra initiation, planning and design

Appendix S− Quarterly Cost Report

QUARTERLY COST REPORT
as at June 30, 2020

Description	BUDGET			COST EXPENDED					COMMITMENTS			FORECAST		VARIANCE	
	Control Budget	Allocated Budget		Expended to March 31, 2020	Expended over reporting period (Q2 2020 Apr-Jun)	Expended to June 30, 2020	Expended to June 30, 2020 as a % of Allocated Budget	Remaining (Unexpended) Allocated Budget at June 30, 2020	Total Committment at June 30, 2020	Unexpended Commitment at June 30, 2020	Uncommitted Allocated Budget at June 30, 2020	Forecast to Complete	Forecast at Completion	Variance at Completion $	Variance at Completion as a % of Allocated Budget
McLoughlin Point Wastewater Treatment Plant	**331.4**	**328.1**	-	**282.5**	**16.3**	**298.8**	**91%**	**29.3**	**321.2**	**22.4**	**6.9**	**29.3**	**328.1**	**-**	**0%**
Construction	306.7	321.0		281.8	16.4	298.2	93%	22.7	320.5	22.3	0.5	22.7	321.0	-	0%
Contingency	14.9	0.2		-	-	-	0%	0.2	-	-	0.2	0.2	0.2	-	0%
Financing	9.8	6.9		0.7	(0.1)	0.5	7%	6.4	0.7	0.1	6.2	6.4	6.9	-	0%
Residuals Treatment Facility	**159.4**	**140.0**		**10.6**	**0.7**	**11.3**	**8%**	**128.7**	**139.0**	**127.7**	**1.0**	**128.7**	**140.0**	**-**	**0%**
Construction	145.4	138.9		10.6	0.7	11.3	8%	127.7	138.9	127.7	0.0	127.7	138.9	-	0%
Contingency	12.3	0.2		-	-	-	0%	0.2	-	-	0.2	0.2	0.2	-	0%
Financing	1.7	0.8		0.0	-	0.0	2%	0.8	0.0	0.0	0.8	0.8	0.8	-	0%
Conveyance System	**158.1**	**215.7**		**152.3**	**14.0**	**166.3**	**77%**	**49.4**	**195.4**	**29.1**	**20.3**	**49.4**	**215.7**	**-**	**0%**
Macaulay Point Pump Station	25.4	30.8		25.3	2.3	27.7	90%	3.1	30.8	3.1	0.0	3.1	30.8	-	0%
Macaulay Forcemain	5.6	7.4		6.6	0.9	7.4	100%	-	7.4	-	-	-	7.4	-	0%
Craigflower Pump Station	12.5	12.4		12.4	-	12.4	100%	-	12.4	-	-	-	12.4	-	0%
Clover Point Pump Station	23.7	27.3		24.6	0.1	24.7	91%	2.6	27.2	2.5	0.1	2.6	27.3	-	0%
Currie Pump Station^	2.8	0.1		0.1	-	0.1	100%	-	0.1	-	-	-	0.1	-	0%
Arbutus Attenuation Tank	14.2	24.6		11.5	2.0	13.5	55%	11.1	23.1	9.7	1.4	11.1	24.6	-	0%
Clover Forcemain	14.6	32.5		28.0	1.9	30.0	92%	2.5	31.9	1.9	0.6	2.5	32.5	-	0%
Currie Forcemain^	3.3	0.2		0.2	-	0.2	100%	-	0.2	-	-	-	0.2	-	0%
Trent Forcemain	9.5	11.3		0.7	1.9	2.6	23%	8.7	8.1	5.5	3.2	8.7	11.3	-	0%
Residual Solids Conveyance Line	19.1	36.6		31.7	2.5	34.3	94%	2.3	36.5	2.2	0.1	2.3	36.6	-	0%
Residual Solids Pump Stations & Bridge Crossings	4.6	18.1		10.5	2.4	13.0	71%	5.2	16.9	4.0	1.2	5.2	18.1	-	0%
Residual Solids Conveyance Line – Highway Crossing	-	0.4		0.3	0.0	0.3	76%	0.1	0.4	0.0	0.1	0.1	0.4	-	0%
Contingency	16.8	9.9		-	-	-	0%	9.9	-	-	9.9	9.9	9.9	-	0%
Financing	5.8	4.1		0.3	(0.1)	0.2	5%	3.9	0.3	0.1	3.7	3.9	4.1	-	0%
Project Management Office ("PMO")	**75.8**	**77.9**		**53.8**	**3.0**	**56.8**	**73%**	**21.1**	**69.7**	**12.9**	**8.2**	**21.1**	**77.9**	**-**	**0%**
Project costs Aug 2016-Dec 2016	2.2	2.2		2.2	0.0	2.2	100%	-	2.2	-	-	-	2.2	-	0%
Owner's Engineering	17.2	17.5		13.4	1.1	14.5	83%	3.0	17.5	3.0	0.0	3.0	17.5	-	0%
Conveyance Design	5.0	9.5		7.4	0.2	7.6	80%	1.9	8.5	0.9	1.0	1.9	9.5	-	0%
Advisors & Professional Support	7.0	15.0		10.0	0.3	10.3	69%	4.7	11.5	1.2	3.5	4.7	15.0	-	0%
Project Board	2.0	1.3		1.0	(0.1)	0.9	73%	0.3	0.9	-	0.3	0.3	1.3	-	0%
Project Board Expenses	0.3	0.1		0.1	(0.0)	0.1	64%	0.0	0.1	-	0.0	0.0	0.1	-	0%
Project Team	29.1	23.1		15.3	0.9	16.3	70%	6.9	22.9	6.7	0.2	6.9	23.1	-	0%
Project Team Expenses	1.2	0.5		0.3	0.0	0.3	62%	0.2	0.3	-	0.2	0.2	0.5	-	0%
CRD Financial Services	1.5	1.4		0.8	0.1	0.9	66%	0.5	1.4	0.5	-	0.5	1.4	-	0%
CRD Human Resources	0.3	0.3		0.2	0.0	0.2	88%	0.0	0.3	0.0	-	0.0	0.3	-	0%
CRD Corporate Communications	0.2	0.2		0.2	(0.0)	0.2	86%	0.0	0.2	0.0	-	0.0	0.2	-	0%
CRD Real Estate	0.3	0.3		0.2	0.0	0.2	88%	0.0	0.3	0.0	-	0.0	0.3	-	0%
CRD Information Technology	0.4	0.4		0.2	0.1	0.3	68%	0.1	0.4	0.1	-	0.1	0.4	-	0%
CRD Insurance	0.1	0.0		-	0.0	0.0	100%	-	0.0	-	-	-	0.0	-	0%
CRD Operations	0.6	0.6		0.4	0.1	0.5	82%	0.1	0.6	0.1	-	0.1	0.6	-	0%
CRD Legislative Services	0.1	0.1		0.1	-	0.1	100%	-	0.1	-	-	-	0.1	-	0%
CRD Corporate Safety	0.2	0.2		0.1	0.1	0.2	100%	-	0.2	-	-	-	0.2	-	0%
CRD Executive Services	-	0.1		-	0.1	0.1	71%	0.0	0.1	0.0	-	0.0	0.1	-	0%
Office Lease	1.5	1.3		0.8	0.1	0.9	67%	0.4	1.2	0.4	0.1	0.4	1.3	-	0%
Office Supplies, Communications & Vehicles	1.2	0.7		0.5	0.0	0.5	79%	0.1	0.5	0.0	0.1	0.1	0.7	-	0%
Computer Hardware, Software & Training	1.0	1.1		0.6	0.0	0.6	60%	0.4	0.6	-	0.4	0.4	1.1	-	0%
Contingency	4.8	2.3		-	-	-	0%	2.3	-	-	2.3	2.3	2.3	-	0%
BC Hydro	**12.9**	**4.3**		**2.0**	**0.0**	**2.0**	**48%**	**2.3**	**2.1**	**0.0**	**2.2**	**2.3**	**4.3**	**-**	**0%**
Third Party Commitments	**8.1**	**8.1**		**3.7**	**0.3**	**4.0**	**49%**	**4.1**	**6.8**	**2.8**	**1.3**	**4.1**	**8.1**	**-**	**0%**
Program Reserves	**19.2**	**0.9**		**-**	**-**	**-**	**0%**	**0.9**	**-**	**-**	**0.9**	**0.9**	**0.9**	**-**	**0%**
Core Area Wastewater Treatment Project	**765.0**	**775.0**		**505.0**	**34.3**	**539.2**	**70%**	**235.7**	**734.1**	**194.9**	**40.8**	**235.7**	**775.0**	**-**	**0%**

* Values presented in $millions, results in minor rounding differences
** Cost report presents approved expenditures
^ Component no longer required, and would not provide any value therefore removed from Project Scope; Costs include Seaterra initiation, planning and design

Item 7.1

REPORT TO CORE AREA WASTEWATER TREATMENT PROJECT BOARD
MEETING OF THURSDAY, SEPTEMBER 24, 2020

SUBJECT **Wastewater Treatment Project July 2020 Monthly Report**

ISSUE

To provide the Core Area Wastewater Treatment Project Board with the Wastewater Treatment Project July 2020 Monthly Report.

BACKGROUND

On May 25, 2016 the Regional Board of the CRD:

i) Adopted by resolution the Core Area Wastewater Treatment Project Board Terms of Reference (Project Board Terms of Reference) for the purposes of establishing principles governing the Core Area Wastewater Treatment Project (the Wastewater Treatment Project or the WTP);
ii) Established the Core Area Wastewater Treatment Project Board (Project Board) under Bylaw 4109 (the CRD Core Area Wastewater Treatment Board Bylaw No. 1, 2016) for the purposes of administering the Core Area Wastewater Treatment Project; and
iii) Delegated certain of its powers, duties and functions to the Project Board under Bylaw 4110 (the CRD Core Area Wastewater Treatment Project Board Delegation Bylaw No. 1, 2016).

On September 14, 2016 the Regional Board of the CRD:

i) Received the final report of the Project Board with respect to its recommendation for the CAWTP, dated September 7, 2016 (the Final Report); and
ii) Approved the business case attached as Appendix 1 (the Business Case) to the Final Report.

DISCUSSION

The Core Area Wastewater Treatment Project Board (the Project Board) Terms of Reference requires, amongst other things: that the Project Board provide the CRD Board with monthly progress reports and a comprehensive quarterly report on the Project.

The Monthly report for the period of July 2020 is attached as Appendix A.

RECOMMENDATION

That the Core Area Wastewater Treatment Project Board approve the following resolution:

RESOLVED that:

The Staff Report, 'Wastewater Treatment Project July 2020 Monthly Report', be received for information and forwarded to the Core Area Liquid Waste Management Committee and CRD Board for information.

Elizabeth Scott, Deputy Project Director
Wastewater Treatment Project

Dave Clancy, Project Director
Wastewater Treatment Project
Concurrence

Attachments: 1

Appendix A: Wastewater Treatment Project July 2020 Monthly Report

ES:er

Wastewater Treatment Project
Treated for a cleaner future

CRD Wastewater Treatment Project

Monthly Report

Reporting Period: July 2020

TABLE OF CONTENTS

1 Executive Summary 3

1.1 Introduction 3

1.2 Dashboard 5

2 Wastewater Treatment Project Progress 8

2.1 Safety 8

2.2 Environment and Regulatory Management 11

2.2.1 Environment 11

2.2.2 Regulatory Management 12

2.3 First Nations 12

2.4 Stakeholder Engagement 13

2.5 Resolutions from Other Governments 14

2.6 Schedule 14

2.6.1 30 day look ahead 16

2.6.2 60 day look ahead 18

2.7 Cost Management and Forecast 20

2.7.1 Commitments 20

2.7.2 Expenses and Invoicing 21

2.7.3 Contingency and Program Reserves 21

2.7.4 Project Funding 21

2.8 Key Risks and issues 22

2.9 Status (Engineering, Procurement and Construction) 26

2.9.1 Wastewater Treatment Plant (McLoughlin Point WWTP) 26

2.9.2 Residuals Treatment Facility 29

2.9.3 Conveyance System 31

Appendix A– Trent Forcemain: Road Closure at Fairfield and Stannard (July 15, 2020) 43

Appendix B– Macaulay Point Pump Station: Transition to New Pump Station (July 13, 2020) 44

Appendix C– Core Area Wastewater Discharge Notice (July 24, 2020) 45

Appendix D– Residual Solids Conveyance Line Map (July 20, 2020) 46

Appendix E– Monthly Cost Report (July) 47

1 Executive Summary

1.1 Introduction

This Monthly Report covers the reporting period of July 2020 and outlines the progress made on the Wastewater Treatment Project over this time.

The Wastewater Treatment Project (the "Project") includes three main Project Components (the "Project Components"): the McLoughlin Point Wastewater Treatment Plant (the "McLoughlin Point WWTP"), the Residuals Treatment Facility (the "RTF") and the Conveyance System (which includes upgrades to the conveyance network including the construction of pump stations and pipes). The Project scope is being delivered through a number of contracts with a variety of contracting strategies.

Over the reporting period the COVID-19 public health emergency continued to have impacts on the Project. The Project Team and Project contractors are actively monitoring the status of the COVID-19 public health emergency and are taking additional precautions to protect our staff, contractors, and the public. Construction is ongoing at all of the Project's sites in accordance with guidelines established by the Provincial Health Officer.

While construction is ongoing, the public health emergency is impacting construction progress and may delay some interim project milestones, such as the transition to commissioning. However, based on current progress the Wastewater Treatment Project remains on schedule to meet the regulatory deadline for treatment by the end of 2020.

The McLoughlin Point WWTP Project Component is continuing with Harbour Resource Partners ("HRP" as the Design-Build contractor for the McLoughlin Point WWTP) progressing: wet commissioning at Densadegs 1, 2 and 3; primary odour control system, plate settler one and two, sludge tank, plant drain tank and valve vault; biological aerated filter (BAF) cell nine; wet commissioning on the blower; installation of disk filter system piping and equipment; lower level interior, second level interior and building envelope are all nearing completion in the Operations and Maintenance building; progressed final north planter and tsunami walls; and the Fortis gas tie-in and the BC Hydro inspection of the generator start-up were completed.

The RTF Project Component is continuing with Hartland Resource Management Group ("HRMG" as the Design-Build-Finance-Operate-Maintain contractor for the RTF) progressing construction activities including: erection of scaffolding for gas membrane installation in the Digester area; insulating piping and installation of receiving hopper in the Other Municipal Solids Receiving Facility; insulation of hot water piping and commissioning of various systems in the Residuals Handling Building; completed installation of external stairs in the Residuals Drying Facility; completion of fiberglass reinforced plastic (FRP) duct installation, and chemical piping installation; and commissioning of various system in the Residuals Storage and Odour Control area.

The Conveyance System is being delivered through seven construction contracts: two design-build contracts and five design-bid-build contracts.

The two design-build Conveyance System contracts progressed over the reporting period as follows:

- Clover Point Pump Station: Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressed construction activities over the reporting period including: electro-mechanical works in the public plaza washroom; completing seismic upgrades, installation of new diesel generator exhaust, fuelling system, diesel generator, and grit separation equipment; and functional and operational tests for upgrades at the existing pump station.

- Macaulay Point Pump Station: Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressed construction activities over the reporting period including: installation of flow splitters in the wet well; commenced grout around the slide gate; ongoing installation of FRP platform and stairs in the pump room and FRP installation in the Bin Room; and completion of the wood siding installation, installation of doors and grout for the flow splitter.

The design-bid-build Conveyance System contracts progressed over the reporting period, as follows:

- Clover Forcemain: Windley Contracting Ltd. ("Windley" as the Construction Contractor) continued construction activities including: cycle track and road restoration; seawall balustrade replacement construction; installing new aluminium fence and progressed installation of new bollards.

- Residual Solids Conveyance Line ("RSCL"): the RSCL is being delivered through two construction contracts, with work progressing as follows:

    - Residual Solids Pipes: Don Mann Excavating Ltd. ("Don Mann" as the Construction Contractor) continued construction activities over the reporting period, including: completing all pipe work, and commencing utility locates and survey layout along with equipment mobilization in preparation for undertaking Saanich infrastructure improvements at Peers Creek.

    - Residual Solids Pump Stations: Knappett Projects Inc. ("Knappett" as the Construction Contractor) continued construction activities including: installation of curbing at Pump Station 1, Hartland Reservoir underground pipe work; completed commissioning of pipes, and pump stations including pigging of the lines; and completed Admirals Bridge installation including pressure testing.

- Arbutus Attenuation Tank ("AAT"): NAC Constructors Ltd. (as the Construction Contractor) continued construction activities including: commencing drilling/grouting and installation of rock anchors; completed final excavation within the tank; and installation of the mud mat base at base of the tank.

- Trent Forcemain: Jacob Bros. Construction Inc. (as the Construction Contractor) progressed construction activities including: installation of 269 m of forcemain along

Fairfield Road and Memorial Crescent; and installation of air release valve chamber at Fairfield Road and Stannard Avenue.

1.2 Dashboard

Table 1 indicates the high level status of the Project and each Project Component with regards to the six Key Performance Indicators ("KPI") that were defined within the Project Charter.

There were no changes made to the KPIs over the reporting period.

The safety KPI for the Project and the conveyance system remains yellow. Over the reporting period no recordable safety incidents occurred and the total recordable incident frequency decreased from 1.6 (at the end of the June 2020) to 1.5.

The Project Team continues to work with and ensure that all of the prime contractor partners maintain safety as their number one priority. The Project Team is also actively monitoring the status of the COVID-19 public health emergency and is taking additional precautions to protect our staff, contractors, and the public. The BC Government has designated construction as an essential service, and issued guidelines for construction sites to minimize the risks of COVID-19 transmission or illness. All Project contractors have implemented additional precautions to ensure the health and safety of their workers. These measures follow the direction set by the BC Government, including emphasizing the importance of maintaining social distance, increasing handwashing stations, reducing in-person meetings and increasing cleaning of common areas. The Project Team will continue to monitor contractors' compliance with the direction of the government as the situation evolves.

The schedule KPI for the Project overall and the Project components remains green. The COVID-19 public health emergency is impacting construction progress and may delay some interim project milestones, such as the transition to commissioning. However, construction is ongoing at all of the Project's sites, in accordance with provincial guidelines, and based on current progress the Wastewater Treatment Project remains on schedule to meet the regulatory deadline for treatment by the end of 2020.

The cost KPI for the Project overall and the conveyance system remained red over the reporting period, and are expected to remain red for the duration of the Project, primarily as a result of inflation in the Vancouver Island construction market. Other factors that have contributed to budget pressures include: design development to incorporate stakeholder input; geotechnical considerations including removal and disposal of contaminated material; and schedule constraints associated with the requirement to provide wastewater treatment by the regulatory deadline of December 31, 2020.

Based on the value of the contracts awarded to-date and the refreshed cost estimate for the scope remaining to be procured, the Project Team forecast the cost to complete the Project at $775M, or $10M over the Project's control budget. In May 2019 the CRD Board approved an increase in the Project's budget by $10M to $775M.

Subsequent to May 2019 the Project Team have continued to manage risks and there have been two main opposing budget drivers:

i) The Project's financing costs to-date have been lower than budgeted for two reasons: firstly as a result of low interest rates since the start of the Project, and

secondly due to the receipt of funding from the provincial government earlier than forecast; and

ii) The Project's construction costs may be higher than budgeted as many contractors have advised that there are cost impacts from the COVID-19 public health emergency. Impacts include labour availability, work modifications to comply with provincial guidelines, and delays to the delivery of equipment and supplies.

It is too early to determine the cost impact to the Project, but given the ability to offset the unforeseen costs of COVID-19 through the finance cost savings, the Project Team remain confident that, if construction continues at the current pace, the Project cost will be within the Project's $775M budget.

Table 1- Executive Summary Dashboard

Key Performance Indicators		Project Overall	WWTP	RTF	Conveyance System	Comments
Safety	Deliver the Project safely with zero fatalities and a total recordable incident frequency (TRIF) of no more than 1*.					No recordable incidents occurred over the period. Site inspections are ongoing. The Project Team is actively monitoring the status of the COVID-19 public health emergency and is taking additional precautions to protect our staff, contractors, and the public. All Project contractors have implemented additional precautions to ensure the health and safety of their workers. The Project Team will continue to monitor and follow the direction of the government during this evolving situation.
Environment	Protect the environment by meeting all legislated environmental requirements and optimizing opportunities for resource recovery and greenhouse gas reduction.					Two minor environmental incident occurred over the reporting period: flows at the Clover Point Pump Station were temporarily diverted from the long outfall to the short outfall, and there was a small fuel leak from a compressor at the Arbutus Attenuation Tank site.
Regulatory Requirements	Deliver the Project such that the Core Area complies with provincial and federal wastewater regulations.					No regulatory issues.
Stakeholders	Continue to build and maintain positive relationships with First Nations, local governments, communities, and other stakeholders.					Engagement activities were ongoing over the reporting period. Significant efforts were made to provide accurate and timely information to stakeholders.
Schedule	Deliver the Project by December 31, 2020.					The COVID-19 public health emergency is impacting construction progress and may delay some interim project milestones, such as the transition to commissioning. The Wastewater Treatment Project has made significant progress and currently remains on schedule to meet the regulatory deadline for treatment by the end of 2020.
Cost	Deliver the Project within the Control Budget ($765 million).					Based on the value of the contracts awarded to-date and a refreshed cost estimate for the scope remaining to be procured, the Project Team has forecast the cost to complete the Project at $775M, or $10M over the Project's Control Budget. This is primarily as a result of inflation in the Vancouver Island construction market. Other factors that have contributed to budget pressures include: design development to incorporate stakeholder input; geotechnical considerations including removal and disposal of contaminated material; and schedule constraints associated with the requirement to provide wastewater treatment by the regulatory deadline of December 31, 2020. The CRD Board have approved an increase in the Project's budget by $10M, to $775M. Many contractors have advised that there are cost impacts from the COVID-19 public health emergency. It is too early to determine the cost impact to the Project, but given the ability to offset the unforeseen costs of COVID-19 through the finance cost savings, the Project Team remain confident that, if construction continues at the current pace, the Project cost will be within the Project's $775M budget.

* A TRIF of no more than 1 means that there is 1 or fewer recordable incidents (being a work-related injury or illness that requires medical treatment beyond first aid or causes death, days away from work, restricted work or transfer to another job, or loss of consciousness) for every 200,000 person-hours of work	
Status	Description
	KPI unlikely to be met
	KPI at risk unless correction action is taken
	KPI at risk but corrective action has been identified/is being implemented
	Good progress against KPI

2 Wastewater Treatment Project Progress

2.1 Safety

Safety information for the reporting period and cumulative for the Project from January 1, 2017 is summarized in Table 3.

The Project Team is actively monitoring the status of the COVID-19 public health emergency and is taking additional precautions to protect our staff, contractors, and the public. The BC Government has designated construction as an essential service, and issued guidelines for construction sites to minimize the risks of COVID-19 transmission or illness.

All Project contractors have implemented additional precautions to ensure the health and safety of their workers. These measures follow the direction set by the BC Government, including emphasizing the importance of maintaining social distance, increasing handwashing stations, reducing in-person meetings and increasing cleaning of common areas. The Project Team will continue to monitor contractors' compliance with the direction of the government during this evolving situation.

Site safety tours and weekly safety inspections were carried out by Project Management Office ("PMO") construction and safety personnel over the reporting period at all active worksites: McLoughlin Point WWTP, RTF, Macaulay Point Pump Station, Clover Point Pump Station, Clover Forcemain, Residual Solids Pump Stations; Arbutus Attenuation Tank and Trent Forcemain.

Over the reporting period (July 2020) 12 safety incidents occurred, comprising: seven first-aid, and five report-only incidents, as summarized in Table 2.

Table 2: Safety Incidents over the Reporting Period

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
July 3, 2020	RTF	Report Only	Minor damage caused by telehandler to parked vehicle.	Scratches to the paint on the driver's side rear quarter panel occurred. Contractor will cover cost of repairs. No one was injured or required first aid.	Tool-box talk with crews to remind them to use spotters when backing equipment or working in restricted areas.
July 7, 2020	Residual Solids Pump Stations	Report Only	Access by public to a construction site.	Members of the public on bikes entered a restricted construction site. When asked to leave a verbal confrontation ensued.	Signage to be placed in a more visible area so the public is aware of the site closure. Site security was enhanced to prevent unauthorized entry by the public.

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
July 8, 2020	McLoughlin Pt WWTP	Report Only	Lifting equipment shut-off while in use.	Unit was not loaded at the time. No injuries to any workers reported.	Tags placed on controls and a worker was placed in the area to prevent accidental shut-down of equipment.
July 10, 2020	McLoughlin Pt WWTP	First Aid	Worker lowering equipment into a tank.	Worker felt pain in lower back. Reported to first aid for evaluation. No follow up actions were required.	Tool-box talk to remind workers of the correct way to lift and lower materials and equipment.
July 10, 2020	McLoughlin Pt WWTP	First Aid	Worker was kneeling for a prolonged duration.	Worker felt pain in lower back. Reported to first aid for evaluation. No follow up actions were required.	Workers reminded of proper ergonomics and stretching prior to task in the event they may be in a fixed position for a period of time.
July 13, 2020	McLoughlin Pt WWTP	First Aid	Worker tripped on a fitting that was left under a pipe stand.	Worker sustained a minor injury to their foot. Reported to first aid for evaluation. No follow up actions were required.	Tool-box talk reviewing the importance of always being aware of your work space and ensuring housekeeping practices are followed.
July 13, 2020	Trent Forcemain	Report Only	Minor damage caused by excavator to parked vehicle.	An excavator reversed and contacted a City of Victoria garbage truck which was parked behind the equipment, causing minor damage to the truck.	Tool-box talk conducted to remind workers that spotters are required prior to backing up any equipment.
July 14, 2020	McLoughlin Pt WWTP	First Aid	Worker sustained a hand injury when pinched between scissor lift and steel trough.	Worker reported to first aid where a small cut to their hand was attended to. No follow up was required.	Tool-box talk to remind workers to be aware of their work area at all times.
July 15, 2020	McLoughlin Pt WWTP	Report Only	Worker bumped a ventilation duct while working overhead.	Falling object damaged equipment below.	Workers reminded to perform a risk assessment and identify any potential hazards that may be associated with task. Loose items to be secured with extra caution used when working around them if there is potential for them to fall if bumped.
July 17, 2020	McLoughlin Pt WWTP	First Aid	Worker sustained a hand injury while working in a panel.	Worker reported to first aid to have a small cut on their finger attended to. Worker was wearing gloves at time of incident which limited the injury. No further follow up was required.	Workers reminded to be more aware of hand positioning when opening and closing panel doors.
July 22, 2020	Arbutus Attenuation Tank	First Aid	Worker sustained an ankle injury while crossing site.	Worker stepped on a rock causing the foot to twist. Worker reported to first aid for evaluation. No follow up was required.	Workers reminded to be aware of their surroundings when walking on uneven ground and to ensure that traffic areas are kept free and clear of tripping hazards.

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
July 27, 2020	McLoughlin Pt WWTP	First Aid	Worker experienced a strain.	While attempting to adjust a louver installed in a wall the worker felt pain in forearm. They reported to first aid and no follow up was required.	Tool box talk conducted on the proper techniques for lifting and working overhead.

Key safety activities conducted during July included:

- bi-weekly project update meetings with prime contractors: HRMG, Kenaidan, Windley, Don Mann, HRP, Knappett, Jacob Bros and NAC;
- monthly Incident Investigation reviews;
- reviewed site specific safety plans and high risk tasks;
- WTP Safety Manager and/or Construction Manager conducting regular site inspections at all active Project work sites;
- office safety orientation for all WTP staff as they returned to working in the office, with a focus on COVID-19 protocols;
- host Prime Contractor Safety Coordination Meeting with Project safety representatives;
- heat stress safety notice issued to Prime Contractors;
- review of Prime Contractor Training Safe Work Practice protocols to be used on site; and
- site tour at Macaulay, McLoughlin and Clover Point for CRD Corporate Safety Manager and Emergency Response Coordinator.

Table 3: WTP Safety Information

	Reporting Period (July 2020)	Project Totals
Person Hours		
PMO	3,345	152,077
Project Contractor	89,362	2,061,961
Total Person Hours	92,707	2,214,038
PMO	29	
Project Contractors (& Project Consultants) working on Project Sites	478	
Total Number of Employees	507	
Near Miss Reports	0	46
High Potential Near Miss Reports	0	6
Report Only	5	170
First Aid	7	65
Medical Aid	0	10
Medical Aid (Modified Duty)	0	2
Lost Time	0	5
Total Recordable Incidents	0	17
		Project Frequency (from January 1, 2017)
First Aid Frequency		5.9
Medical Aid Frequency		1.1
Lost time Frequency		0.5
Total Recordable Incident Frequency		1.5

2.2 Environment and Regulatory Management

Environmental and regulatory activities continued over the reporting period relating to both the planning of upcoming work and the execution of current work.

2.2.1 Environment

Environmental work progressed as planned over the reporting period. The focus was on environmental monitoring of construction activities and planning for upcoming riparian work.

Key environmental management activities completed in July included:

- The CRD, Parsons (as Design Consultant), Don Mann (as Construction Contractor) and McElhanney (as the Construction Contractor's environmental consultant) met at the site of a culvert at Peers Creek on Interurban Road, that is being replaced as a Saanich infrastructure improvement. The purpose of the meeting was to discuss the environmental protection measures that would be implemented during the work.
- The CRD, District of Saanich and Don Mann (as Construction Contractor) visited the site adjacent to the Admirals Bridge to assess the restoration completed by Don Mann. The CRD and District of Saanich were satisfied with the restoration, with plans to revisit the site later in the fall, once the rains return and the seeding begins to germinate.

Over the reporting period, there were two minor environmental incidents:

- Overnight on July 23rd flows at Clover Point Pump Station where diverted from the long outfall to the short outfall as a result of loss of power to the screens. The CRD's overflow response procedure was implemented: the CRD posted public health advisory signs and closed nearby beaches to swimming for approximately 6 days.
- NAC Constructors Ltd. (NAC) experienced a minor fuel leak from a compressor at the Arbutus Attenuation Tank site. The amount was less than a litre, and was therefore not reportable. A spill kit was used to clean-up the spilled material and the used components of the spill kit were disposed of at an appropriate facility. The compressor was placed on a drip tray and crews were reminded of that requirement for all small equipment.

2.2.2 Regulatory Management

During the reporting period, the Project Team continued to monitor the advancement of the remaining construction-related regulatory approvals and supported or led the advancement of remaining permit applications.

Key permitting activities for July included:

- The CRD and Transport Canada met to discuss the Harbour Crossing Licence Agreement; and
- A similar meeting to discuss the Mcloughlin Point outfall will take place in September.

The status of key Project permits are summarized in Table 4. The table is not a list of all required Project permits, but rather a summary of the status of key Project permits.

Table 4- Key Permits Status

Permit/Licence	*Anticipated Date*	*Status*	*Party Responsible for Obtaining Perming*
McLoughlin Point Harbour Crossing			
Transport Canada Lease	Following completion of construction	On track	HRP
McLoughlin Point Outfall			
Transport Canada Lease	Following completion of construction	On track	HRP

2.3 First Nations

First Nations communication and engagement was ongoing over the reporting period. Meetings with the Esquimalt and Songhees' liaisons continued, as did meetings with the W̱SÁNEĆ Leadership Council's (WLC) liaison. The meetings are a forum for covering both Project-related issues with the potential to impact First Nations, as well as an opportunity for broader discussion of CRD-related issues.

Key activities in July included:

- The CRD, Knappett (as Construction Contractor), Millennia Research (CRD's archaeological consultant) and members of the WLC met to discuss the screening of archaeological material that was excavated from the site of one of the Residual Solids Pump Stations. The purpose of the meeting was discuss methods and schedule.

2.4 Stakeholder Engagement

The Project maintained its ongoing two-way Communications and Engagement Plan to provide Project information to stakeholders, communities and the public and to respond to public inquiries. The key focus of the communications and engagement activities over the period was to keep residents and stakeholders informed of Project plans, progress and construction information, and to receive and respond to questions and concerns raised by the community. A variety of communications tools and engagement activities were utilized to support the implementation of the plan, including stakeholder meetings, Project website updates and notifications of construction through notices and a public inquiry program, among other methods.

Construction Communications

Two construction notices were issued to stakeholders in the reporting period:

- Trent Forcemain: Road Closure at Fairfield and Stannard (July 15, 2020) (Appendix A); and
- Macaulay Point Pump Station: Transition to New Pump Station (July 13, 2020) (Appendix B)

The construction notices were hand delivered in the community. The Trent Forcemain notice was delivered to 75 residences along the closure and detour route and the Macaulay Point Pump Station notice was delivered to 46 residences near the pump station. In addition, as part of ongoing construction communications, residents affected by localized, temporary disruptions, such as driveway impacts, were notified by hand delivery of notices.

One public service announcement was distributed to local media and posted online as an alert:

- Core Area Wastewater Discharge Notice (July 24, 2020) (Appendix C)

Project Website

Over the reporting period the Project website, wastewaterproject.ca, was updated with information about the Project. Two construction notices were posted. A map showing the progress of construction along the Residual Solids Conveyance Line (Appendix D) was updated to show that pipe installation is complete. One alert was added and resolved for the wastewater discharge out of the short outfall at Clover Point, in accordance with the CRD's response protocol.

The CRD's Twitter and Facebook account were used to provide Project information to the public, including updates about the wastewater discharge at the Clover Point Pump Station and traffic advisories for the work on the Trent Forcemain.

Community Meetings

Over the reporting period, the Project Team held meetings with the following community groups and representatives, and municipality representatives:

- James Bay Neighbourhood Association;
- City of Victoria Technical Working Group;

- City of Victoria staff;
- District of Saanich Technical Working Group; and
- Township of Esquimalt Liaison Committee.

Public Inquiries

Public inquiry numbers from the Project email address and 24/7 information phone line (1 844 815-6132) are noted in Table 5.

Table 5 – Project Inquiries- July 2020

Inquiry Source	Contacts for July 2020
Information phone line inquiries	22
Email inquiries responded to	37

Key themes of the public inquiries were as follows:

- interest in restoration, landscaping and public amenities;
- questions regarding work hours and noise associated with construction; and
- interest in when specific construction areas will be finished.

2.5 Resolutions from Other Governments

There were no resolutions related to the Project passed by other governments during the reporting period.

2.6 Schedule

Progress over the reporting period is summarized in Section 2.9.

Figure 1 shows the high-level Project schedule. This schedule is unchanged from that shown in the Project's Q2 2020 Quarterly Report.

Over the reporting period the COVID-19 public health emergency continued to have impacts on the Project. Specifically, the COVID-19 public health emergency is impacting construction progress and may delay some interim project milestones, such as the transition to commissioning. However, construction is ongoing at all of the Project's sites, in accordance with provincial guidelines, and based on current progress the Wastewater Treatment Project remains on schedule to meet the provincial and federal regulations for treatment for the Core Area's wastewater by December 31, 2020.

Figure 1- High-Level Project Schedule

2.6.1 30 day look ahead

Key activities and milestones for the next 30 days (August) are outlined below by function.

Safety

- CRD corporate occupational health and safety coordination committee meeting;
- site safety tour with Corporate CRD OHS Manager;
- weekly and bi-weekly prime contractor progress meetings;
- host Prime Contractor Safety Coordination Meeting with Project safety representatives;
- review of any site specific safety plans or high risk tasks;
- send out any new Safety Notices or Incident Notifications to Prime Contractor
- review any new COVID-19 document submissions;
- WTP Safety Manager and/or Construction Manager will conduct regular site inspections at all active Project work sites;
- incident reporting review with prime contractors at active work locations; and
- issue Safety Notices for trending observations or any similar incidents occurring on project sites.

Environment and Regulatory Management

- McElhanney (Don Mann qualified environmental professional) to complete stream isolation work at Peers Creek and if fish are present, salvage and relocate them.

First Nations

- CRD to continue meeting with First Nation liaisons.

Stakeholder Engagement

- ongoing construction communications with stakeholders;
- ongoing community liaison meetings; and
- distribution of Dallas Road Update.

Cost Management and Forecast

- prepare cost reports;
- monitor schedule;
- finalize CRD WTP annual budget; and
- submit funding claims to Infrastructure Canada (under the Building Canada Fund and Green Infrastructure Fund).

Construction

McLoughlin Point

- construct site road structures;
- complete landscaping including green roof;
- install plumbing fixtures;
- install electrical finishes, fire sprinkler finishes and ceiling tiles O&M Level 1; and
- continue with functional testing, wet testing and commissioning.

Clover Point Pump Station

- form, pour and strip north retaining wall and buttresses;
- paint generator and fuel storage walls;
- install split stone to exterior retaining walls;
- form, pour and strip landscape retaining walls at public plaza lookout level;
- install doors and hardware to existing pump station; and
- touch-up and final painting.

Macaulay Point Pump Station

- install outdoor site furnishings;
- commence demolition of existing structure;
- install manhole and slide gate for 1350mm pipe replacement; and
- install green roof system.

Residuals Treatment Facility

- continue functional start-up, wet testing and initial system verification;
- tie-in to Residuals Solids Conveyance Line;
- prepare for installation of membrane roof on Digested Solids Storage Tank;
- complete Digester Building construction;
- installation of receiving hopper and weather cover at Other Municipal Solids Receiving Facility;
- continue testing and commissioning activities at the Residuals Handling Building;
- complete truck load-out assembly, complete final mechanical tie-ins, complete insulation; and continue testing and commissioning activities at the Dryer Building;
- complete biogas piping;
- complete Equalization Building construction;
- complete piping insulation at Water Pump House;
- complete testing of Odour Control System; and
- continue site grading, road paving, and retention ponds.

Clover Forcemain

- complete road and cycle track from Lewis Street to Dock Street;
- complete installation of new railings along seawall; and
- commence paving of Dallas Road from Lewis Street to Dock Street.

Residual Solids Pipes

- Peers Creek Culvert replacement.

Residual Solids Pump Stations

- Pump Station 3, final grading; fence installation and landscaping
- Pump Station 2, final grading; fence installation and landscaping; and
- Pump Station 1, final grading, fence installation and landscaping.

Arbutus Attenuation Tank (AAT)

- commence excavation for valve chamber;
- complete mud slab within attenuation tank excavation;
- complete rock anchor installation; and
- commence installation of reinforcing steel, formwork, and concrete pour (staged) for attenuation tank base slab.

Trent Forcemain

- install pipe at Memorial Crescent from Dallas Road to Thurlow Road; and
- restoration and paving at Memorial Crescent.

2.6.2 60 day look ahead

Key activities and milestones for the next 60 days (September) are outlined below by function.

Safety

- CRD corporate occupational health and safety coordination committee meeting;
- host Prime Contractor Safety Coordination Meeting with Project safety representatives;
- weekly and bi-weekly prime contractor progress meetings;
- review of any site specific safety plans or high risk tasks;
- review prime contractor document submissions;
- issue safety notices for trending observations or similar incidents occurring on project sites;
- WTP Safety Manager and/or Construction Manager will conduct regular site inspections at all active Project work sites; and
- incident reporting review with prime contractors at active work locations.

Environment and Regulatory Management

- finalizing the Licence Agreements for the Harbour Crossing and McLoughlin Point Outfall with Transport Canada.

First Nations

- continue meeting with First Nation liaisons.

Stakeholder Engagement

- ongoing construction communications with stakeholders; and
- ongoing community liaison meetings.

Cost Management and Forecast

- prepare cost reports;
- monitor schedule;
- prepare for Quarter 3 close; and
- submit funding claims to Infrastructure Canada (under the Building Canada Fund and Green Infrastructure Fund).

Construction

McLoughlin Point

- commission security systems, mechanical systems, fire systems, and plumbing systems;
- building systems integration; and
- biological growth and process optimization.

Clover Point Pump Station

- install split stone to exterior walls;
- install firestop and smoke seals;
- plant trees and shrubs;

- complete final painting and touch ups;
- spray foam insulation; and
- backfill north retaining wall.

Macaulay Point Pump Station

- install outdoor site furnishings;
- commence demolition of existing structure;
- remove and salvage existing equipment; and
- plant trees and shrubs, and install green roof system.

Residuals Treatment Facility

- continue functional start-up, wet testing and initial system verification;
- install membrane roof on Digested Solids Storage Tank;
- testing in Digester Building construction;
- complete installation of receiving hopper and weather cover at Other Municipal Solids Receiving Facility;
- continue testing and commissioning activities at the Residuals Handling Building;
- continue testing and commissioning activities at the Dryer Building;
- testing biogas piping;
- testing in Equalization Building;
- testing in Water Pump House;
- commission Odour Control System; and
- continue site grading, road paving, and retention ponds.

Clover Forcemain

- final paving of Dallas Rd from Lewis Street to Dock Street; and
- clean-up and demobilize.

Residual Solids Pipes

- complete Peers Creek culvert replacement.

Residual Solids Pump Stations

- final grading, trail restoration; and installation of fence and landscaping at Pump Station #2;
- final grading and install fence at Pump Station #3; and
- remove scaffolding from Admirals and Tillicum bridges.

Arbutus Attenuation Tank (AAT)

- install valve chamber piping;
- commence construction of concrete walls, columns, stairs within the attenuation tank; and
- install manhole and associated piping.

Trent Forcemain

- commence installation of pipe on Dallas Road;
- install pipe and valve chamber at Memorial Crescent from Dallas Road to Thurlow Road; and
- restoration and paving at Memorial Crescent.

2.7 Cost Management and Forecast

The monthly cost report for July is shown in Appendix E. The cost report summarizes Project expenditures and commitments by Project Components and the major cost centres common to the Project Components.

The Project Team has been reporting budget pressures through its monthly reports to the Project Board (and CRD Board) since September 2017, primarily as a result of inflation in the Vancouver Island construction market. Other factors that have contributed to budget pressures include: design development to incorporate stakeholder input; geotechnical considerations including removal and disposal of contaminated material; and schedule constraints associated with the requirement to provide wastewater treatment by the regulatory deadline of December 31, 2020.

Based on the value of the contracts awarded to-date and the refreshed cost estimate for the scope remaining to be procured, the Project Team forecast the cost to complete the Project at $775M, or $10M (1.3%) over the Project's control budget. In May 2019 the CRD Board approved an increase in the Project's budget by $10M to $775M, and on August 14, 2019, the associated amendment to the 2019-2023 Financial Plan was approved.

Subsequent to May 2019 the Project Team have continued to manage risks and there have been two opposing budget drivers:

i) The Project's financing costs to-date have been lower than budgeted for two reasons: firstly as a result of low interest rates since the start of the Project, and secondly due to the receipt of funding from the provincial government earlier than forecast; and

ii) The Project's construction costs may be higher than budgeted as many contractors have advised that there are cost impacts from the COVID-19 public health emergency. Impacts include labour availability, work modifications to comply with provincial guidelines, and delays to the delivery of equipment and supplies.

It is too early to determine the cost impact to the Project, but given the ability to offset the unforeseen costs of COVID-19 through the finance cost savings, the Project Team remain confident that, if construction continues at the current pace, the Project cost will be within the Project's $775M budget.

2.7.1 Commitments

Commitments were made over the reporting period in furtherance of delivering the Project. The net commitments made during the reporting period resulted in an increase in committed costs of $0.5 million. The significant commitments made in the reporting period comprised the approval of provisional items in construction contracts and contract change orders.

2.7.2 Expenses and Invoicing

The Project expenditures for the reporting period were as expected and were within the budget allocations for each of the budget areas. The main Project expenditures incurred over the reporting period were associated with construction activities and project management office-related costs.

2.7.3 Contingency and Program Reserves

Contingency credits totalling $0.2M were received over the reporting period, as summarised in Table 6. The draws to-date, remaining contingency and program reserve balances are summarized in Table 6.

Table 6- Contingency and Program Reserve Draw-Down Table

WTP Contingency and Program Reserve Draws and Reallocations	Draw Date	$ Amount
Contingency and Program Reserve (in Control Budget)		**$ 69,318,051**
Net Contingency and Program Reserve draws to June 30, 2020		$ (54,479,967)
Contingency and Program Reserve balance as at June 30, 2020		**$ 14,838,084**
Control and Instrumentation OSI Pi Initial Deployment Credit	Jul-20	$ 199,327
WWTP Total Draw		$ -
RTF Total Draw		$ -
Conveyance Total Increase		$ -
PMO Total Draw		$ -
BC Hydro Total Draw		$ -
WTP Program Reserve Draw		$ -
Contingency and Program Reserve credits in the reporting period		$ 199,327
Contingency and Program Reserve balance as at July 31, 2020		**$ 15,037,411**

2.7.4 Project Funding

The federal and provincial governments are assisting the Capital Regional District in funding the Project.

The Government of British Columbia will provide $248 million towards the three components of the Project, while the Government of Canada is contributing:

- $120 million through the Building Canada Fund Major infrastructure Component towards the McLoughlin Point WWTP;
- $50 million through the Green Infrastructure Fund towards the conveyance system; and
- up to $41 million towards the RTF through the P3 Canada Fund.

The Project Team has applied to the Federation of Canadian Municipalities (FCM) for additional funding and has executed a grant agreement for the contribution of up to $346,900 towards the delineation of the contamination and remediation and risk assessment for the McLoughlin Point Wastewater Treatment Plant.

The status of funding claims is summarised in Table 7. Note that the timing for the provision of Government of British Columbia and Government of Canada's funding differs by funding source. The Project Team will submit claims to the funding partners in accordance with the relevant funding agreements. In accordance with the funding agreements, funding from the P3 Canada Fund and the remainder of the funding from the Government of British Columbia cannot be claimed until relevant Project components are substantially complete.

Table 7- Project Funding Status

Funding Source	Maximum Contribution	Funding Received in the Reporting Period	Funding Received to Date
Government of Canada (Building Canada Fund)	$120M	$4.7M	$108M
Government of Canada (Green Infrastructure Fund)	$50M	$0.7M	$45M
Government of Canada (P3 Canada Fund)	$41M	-	-
Government of British Columbia	$248M	-	$186M
Federation of Canadian Municipalities	$0.3M	-	-
TOTAL	**$459.3M**	**$5.4M**	**$339M**

2.8 Key Risks and issues

The Project Team actively identified and managed Project risks over the reporting period. Table 8 summarizes the highest-level risks that were actively managed over the reporting period, as well as the mitigation steps identified and/or undertaken over the reporting period.

No changes were made to the active risks summary over the reporting period:

The COVID-19 public health emergency continued to have impacts on the Project over the reporting period. It is anticipated that these impacts may affect several of the Project's risks. The Project Team are currently evaluating the impact of the public health emergency on the Project's risks, and anticipates that changes may be made to several of the risks as the situation evolves. Those risks that the Project Team have identified as potentially impacted, and that are currently under review, are identified in Table 8.

Table 8- Project Active Risks Summary

Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	Trend in risk level from previous reporting period
Project				
Misalignment between First Nations' interests and the implementation of the Project.	The assessed risk level reflects the Project Team's priority of establishing strong and effective relationships with First Nations interfacing with, or interested in, the Project.	First Nations engagement activities remained ongoing over the reporting period (see section 2.3 for further details).	L	No change
Divergent interests between multiple parties and governance bodies whose co-operation is required to successfully deliver the Project.	The assessed risk level reflects the Project Team's priority of establishing strong and effective relationships with municipal, provincial and federal government departments.	The Project Team continued engagement with municipal, provincial and federal government departments throughout the reporting period.	L	No change
Misalignment between Project objectives/scope and stakeholder expectations.	The assessed risk level reflects the Project Team's priority of establishing strong and effective community stakeholder engagement.	Community engagement activities were ongoing over the reporting period (see section 2.4 for further details).	L	No change
Lack of integration between Project Components.	Planning challenges and system integration between the McLoughlin point WWTP, RTF and Conveyance System components of the Project results in schedule delays and/or additional Project costs.	Physical and schedule interfaces are clearly delineated in all construction contracts along with the requirement for commissioning and control plans. The Project Team has used a single Owner's engineer (Stantec) to develop the indicative design for all critical project components with significant interfaces. Commissioning and control plans are under development	L	No change
Senior government funds issue delayed.	The assessed risk level reflects the Project Team's priority of ensuring Project funding commitments are honoured.	Responsibility for meeting funding commitments has been assigned and is being monitored.	L	No change

Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	Trend in risk level from previous reporting period
Downstream works delays.	Delay to the commissioning of the conveyance projects delays commissioning of the WWTP and the RTF.	Schedule has sufficient time allowance to ensure conveyance elements complete prior to requirement. Contractor agreements will include terms that require the contractor to recover schedule delays and/or allow for CRD acceleration.	M	No change but this risk may be impacted by the COVID-19 public health emergency (assessment is currently underway)
Upstream works delays.	Delay to the commissioning of either the WWTP or the RTF impacts the commissioning of the other plant.	Contracts with HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) and HRMG (as the Design-Build-Finance-Operate Maintain contractor for the RTF) include terms that require the contractor to recover schedule delays and/or allow for CRD acceleration. Liquidated damages for late delivery are included in both HRP and HRMG contracts.	L	No change but this risk may be impacted by the COVID-19 public health emergency (assessment is currently underway)
Public directly contacting contractors at sites.	Direct contact between the public and contractors could expose both parties to worksite hazards and potential injuries.	Communications and engagement plan and coverage of communications in contractor orientations.	M	No change
Change in law.	A change in law impacts the scope, cost or schedule of the Project.	Keep apprised of proposed modifications to relevant regulations so as to do the following as appropriate: submit comments on proposed modifications; and/or consider including anticipated modifications in contracts.	H	No change
Labour - availability and/or cost escalation.	There is insufficient labour available to construct the Project, and/or there is significant labour cost.	The Project Team will, through the use of competitive selection processes for all construction contracts, ensure that all Project contractors have appropriate experience and therefore understand labour risk.	L	No change

Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	Trend in risk level from previous reporting period
Disagreement on contractual obligations of the construction contractors.	There is a disagreement between the Project Team and a contractor regarding the performance of their contractual obligations.	The Project Team takes a proactive management approach to the resolution of any changes, claims and disputes that arise, working expeditiously to achieve resolution with the goal of minimizing any impacts to budget and schedule while ensuring adherence to the terms of the construction contracts.	M	No change but this risk may be impacted by the COVID-19 public health emergency (assessment is currently underway)

Risk Level Key - Assessed risk level (based on likelihood and potential impact			
Low	Medium	High	Closed
L	M	H	C

2.9 Status (Engineering, Procurement and Construction)

2.9.1 Wastewater Treatment Plant (McLoughlin Point WWTP)

The McLoughlin Point WWTP Project Component continued with Harbour Resource Partners ("HRP" as the Design-Build contractor for the McLoughlin Point WWTP) progressing construction and commissioning activities.

Key activities in progress or completed by HRP in July were as follows:

- Primary treatment area:
  - dry commissioned, and commencing wet commissioning at Densadegs 1, 2, & 3;
  - primary odour control system ready for influent;
  - plate settler 1 & 2 ready for influent;
  - sludge tank, plant drain tank and valve vault ready for influent;
  - untreated wash down water system ready for influent;
  - fine screens ready for influent; and
  - treated wash down water system progressed.

- Secondary treatment area:
  - moving bed bio reactor ready for influent;
  - biological aerated filter cell 9 progressed;
  - blower dry commissioning complete, ready for wet commissioning; and
  - heat recovery room steady progression, nearing construction completion.

- Tertiary treatment area:
  - outfall and clean water tank ready for influent;
  - backwash and clean water pumping systems dry commissioned and ready for wet commissioning;
  - progressed installation of disk filter system piping and disk filter equipment;
  - untreated wash down water system ready for influent; and
  - progressed treated wash down water system.

- O&M building:
  - lower level interior south of the workshop approaching completion;
  - building envelope is nearing completion; and
  - green roofing continued.

- Site Works:
  - progressed final north planter and tsunami walls;
  - continued backfill on site;
  - completed Fortis gas tie-in; and
  - completed BC Hydro inspection of generator start-up.

Photographs of construction progress over the month of July at McLoughlin Point WWTP are shown in Figures 2-5.

Figure 2− McLoughlin Point Wastewater Treatment Plant – Installation of cabinets in the Laboratory.

Figure 3− McLoughlin Point Wastewater Treatment Plant- operations and maintenance building north façade cladding and observation deck green roof membrane inspection.

Figure 4– McLoughlin Point Wastewater Treatment Plant- Tertiary building stairway cladding installation.

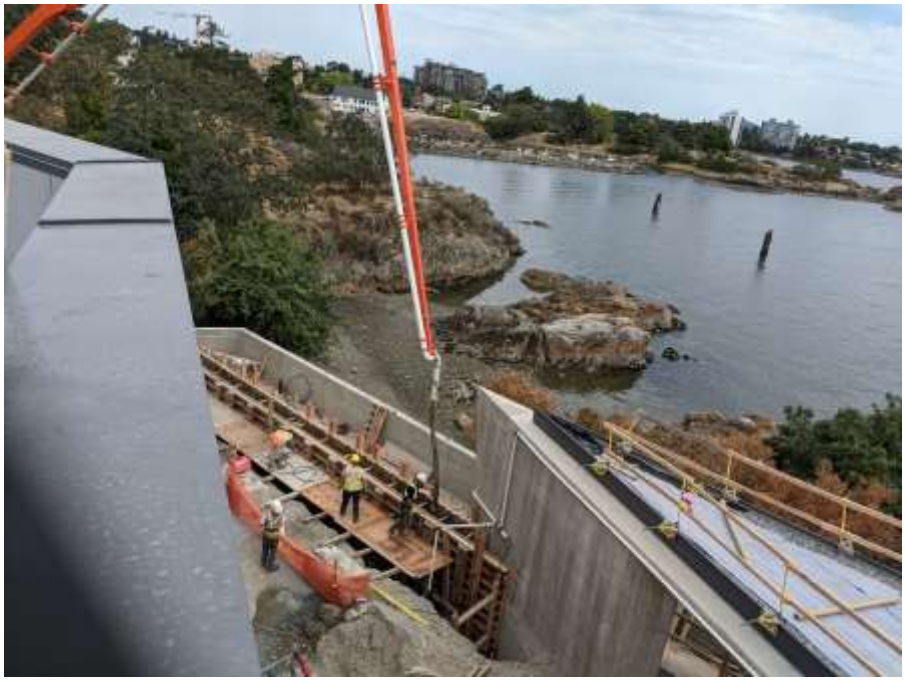


Figure 5– McLoughlin Point Wastewater Treatment Plant- North tsunami wall concrete pour.

2.9.2 Residuals Treatment Facility

The RTF Project Component continued with Hartland Resource Management Group ("HRMG" as the Design-Build-Finance-Operate-Maintain contractor for the RTF) progressing construction and commissioning activities.

Key activities in progress or completed by HRMG in July were as follows:

- Digester Area
  - erect scaffolding for gas membrane installation; and
  - commissioning systems and install of biogas piping on roof of Digester Building.

- Other Municipal Solids Receiving Facility
  - insulation of piping; and
  - installation of receiving hopper.

- Residuals Handling Building
  - commissioning of various systems; and
  - insulation of hot water piping.

- Residuals Drying Facility
  - completed installation of external stairs; and
  - commissioning of various systems in progress.

- Residuals Storage & Odour Control
  - completed installation of fiberglass reinforced plastic (FPR) duct installation; and
  - chemical piping installation complete.

- Operations Building
  - commenced fire alarm verification.

Photographs of construction progress over the month of July at the Residuals Treatment Facility are shown in Figures 6-8.

Figure 6− Residuals Treatment Facility- Ongoing placement and compaction of road base.

Figure 7− Residuals Treatment Facility- Filtrate self-priming pumps commissioning complete.

Figure 8− Residuals Treatment Facility – Wet testing and commissioning of Bio trickling Filter at Odour Control Facility.

2.9.3 Conveyance System

2.9.3.1 Clover Point Pump Station

The Clover Point Pump Station continued with Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressing construction and commissioning activities over the reporting period.

Key construction activities in progress or completed by Kenaidan in July included:

- completed seismic upgrades;
- completed installation of new diesel generator exhaust, fuelling system, and diesel generator;
- completed installation of grit separation equipment;
- completed works in the new wastewater channel;
- progressed electro-mechanical works in the public plaza washroom; and
- completed functional and operational test for upgrades at existing pump station.

Photographs of construction progress over the month of July at Clover Point are shown in Figures 9-10.

Figure 9−Clover Point Pump Station- Stone siding being installed on the public washroom.

Figure 10- Clover Point Pump Station – Curved landscape retaining wall formwork.

2.9.3.2 Macaulay Point Pump Station and Forcemain

The Macaulay Point Pump Station and Forcemain continued with Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressing construction and commissioning activities over the reporting period.

Key construction activities in progress or completed by Kenaidan in July were as follows:

- Diversion Chamber
  - completed concrete work around the slide gate;
  - commenced grout around the slide gate; and
  - installed slide gate.

- Pump Station
  - completed installation of turning vanes in wet well;
  - ongoing installation of fiberglass reinforced plastic (FRP) platform and stair in the pump room;
  - completed wood siding installation;
  - completed installation of all doors;
  - installed flow splitters in the wet well;
  - completed grout for the flow splitter; and
  - commenced FRP grating installation in the bin room.

Photographs of construction progress over the month of July at Macaulay Point Pump Station are shown in Figures 11-12.

Figure 11–Macaulay Point Pump Station- Final section of pipe being installed.

Figure 12−Macaulay Point Pump Station- Exterior finishes.

2.9.3.3 Clover Forcemain (CFM)

Windley Contracting Ltd. (“Windley” as the Construction Contractor) continued construction activities over the reporting period.

Key construction activities in progress or completed by Windley in July included:

- continued seawall balustrade replacement construction;
- removed old wall;
- completed new concrete wall;
- completed new sidewalk;
- installed new aluminium fence; and
- progressed bollard installation.

Photographs of construction progress over the month of July on the Clover Forcemain are shown in Figures 13-14.

Figure 13−Clover Forcemain- Installing parking bollards along Dallas Road

Figure 14−Clover Forcemain- New aluminium fence installed along Dallas Road.

2.9.3.4 Residual Solids Conveyance Line

The RSCL is being delivered through two construction contracts:

- Residual Solids Pipes; and
- Residual Solids Pump Stations

Residual Solids Pipes: Don Mann Excavating Ltd. (“Don Mann” as the Construction Contractor for the Residual Solids Pipes) continued construction and commissioning activities over the reporting period.

Key construction activities in progress or completed by Don Mann in July were as follows:

- All pipe work was completed.

- Peers Creek: utility locates and survey layout were conducted along with equipment mobilization in preparation for construction activity to replace a culvert as part of a Saanich infrastructure improvement.

Photographs of construction progress over the month of July on the Residual Solids Pipes are shown in Figures 15-16.

Figure 15− Residual Solids Pipes- Pressure washing manhole at Lyall Street and Peters Street.

Figure 16−Residual Solids Pipes - Building layers of geobag wall at Admirals Bridge.

Residual Solids Pump Stations: Knappett Projects Inc. ("Knappett" as the Construction Contractor for the Residual Solids Pump Stations) continued construction activities over the reporting period. Key construction activities in progress or completed by Knappett in July included:

- completed commissioning of the pipes and pump stations;
- completed pigging of the lines;
- at the pump stations, the odour control unit (OCU) installation was completed and stainless steel stacks were erected;
- OCU advanced start up began;
- completed and pressure tested pig receiver piping at Marigold Pump Station;
- completed Admirals Bridge installation;
- completed final paving and line painting on Willis Point Road;
- installed curbing at Pump Station1; and
- Hartland Reservoir underground pipe work.

Photographs of construction progress over the month of July on the Residual Solids Pump Stations are shown in Figures 17-18.

Figure 17−Residual Solids Pump Stations– Pump Station 1 –Installing bollard sleeves on the Odour Control pad.

Figure 18 −Residual Solids Pump Stations – Pump Station # 1: Excavating to install curbs.

2.9.3.5 Arbutus Attenuation Tank

NAC Constructors Ltd. (as the Construction Contractor for the Arbutus Attenuation Tank) continued construction activities over the reporting period. Key construction activities in progress or completed by NAC Constructors Ltd. in July included:

- completed final excavation within attenuation tank;
- commence drilling / grouting / installation of rock anchors; and
- complete installation of mud matt at base of attenuation tank.

Photographs of construction progress during the month of July at the Arbutus Attenuation Tank is shown in Figures 19 and 20.

Figure 19−Arbutus Attenuation Tank- Base Slab Steel Installation Progress.

Figure 20−Arbutus Attenuation Tank- Installed Rock Anchors and Granular Material Compaction.

2.9.3.6 Trent Forcemain

Jacob Bros. Construction Inc. (as the Construction Contractor for the Trent Forcemain) progressed construction activities over the reporting period. Key construction activities in progress or completed by Jacob Bros. in July included:

- installed 202m on Bushby Street including concrete cap running the entire length;
- installed 59m pipe at Fairfield Road, including the installation of three bends and corresponding thrust blocks;
- installed 210m of pipe along Memorial Crescent;
- installed air release valve chamber at the intersection of Fairfield Road and Stannard Avenue; and
- completed Fortis BC gas main relocation at Brooke Street.

A photograph of construction progress during the month of July at the Trent Forcemain is shown in Figure 21.

Figure 21−Trent Forcemain- Fairfield Road curb and sidewalk subgrade preparation.

Appendix A− Trent Forcemain: Road Closure at Fairfield and Stannard (July 15, 2020)

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

July 15, 2020

Trent Forcemain: Road Closure at Fairfield and Stannard

As part of the Wastewater Treatment Project, an air valve chamber is being constructed at Stannard Avenue and Fairfield Road. This work will require the closure of Fairfield Road between the Fairfield Shopping Centre and Arnold Avenue. The closure is expected to take place during work hours starting on Thursday, July 16 and be complete within approximately two days. A detour will be in place (see map on reverse).

What to Expect

- The area will be excavated, the chamber installed, and the site will be temporarily restored.
- Final restoration will take place after the section of forcemain along Fairfield Road has been tested and completed.
- Noise associated with this work includes excavation machinery and truck back-up beepers.
- Pipes and equipment will be temporarily stored in the area while this work is completed.

Traffic Impacts

- A signed detour will be in place during work hours.
- On-street parking along Memorial Crescent and St Charles Street will be removed to allow for detour traffic.
- Traffic control areas will be delineated by cones and signs and controlled by flaggers.

Access

- Vehicle access to residences will not be impacted.
- Emergency services will have access at all times.
- Garbage and recycling services will be picked up as usual.

Work Hours

- Monday to Friday from 7:00 a.m. to 7:00 p.m.
- Saturday from 10:00 a.m. to 7:00 p.m.

Thank you for your patience as this work is completed.

About the Wastewater Treatment Project
The Wastewater Treatment Project will provide 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 by the end of 2020.

Any questions about the work, please contact the Project Team.

24/7 Phone Line
1.844.815.6132

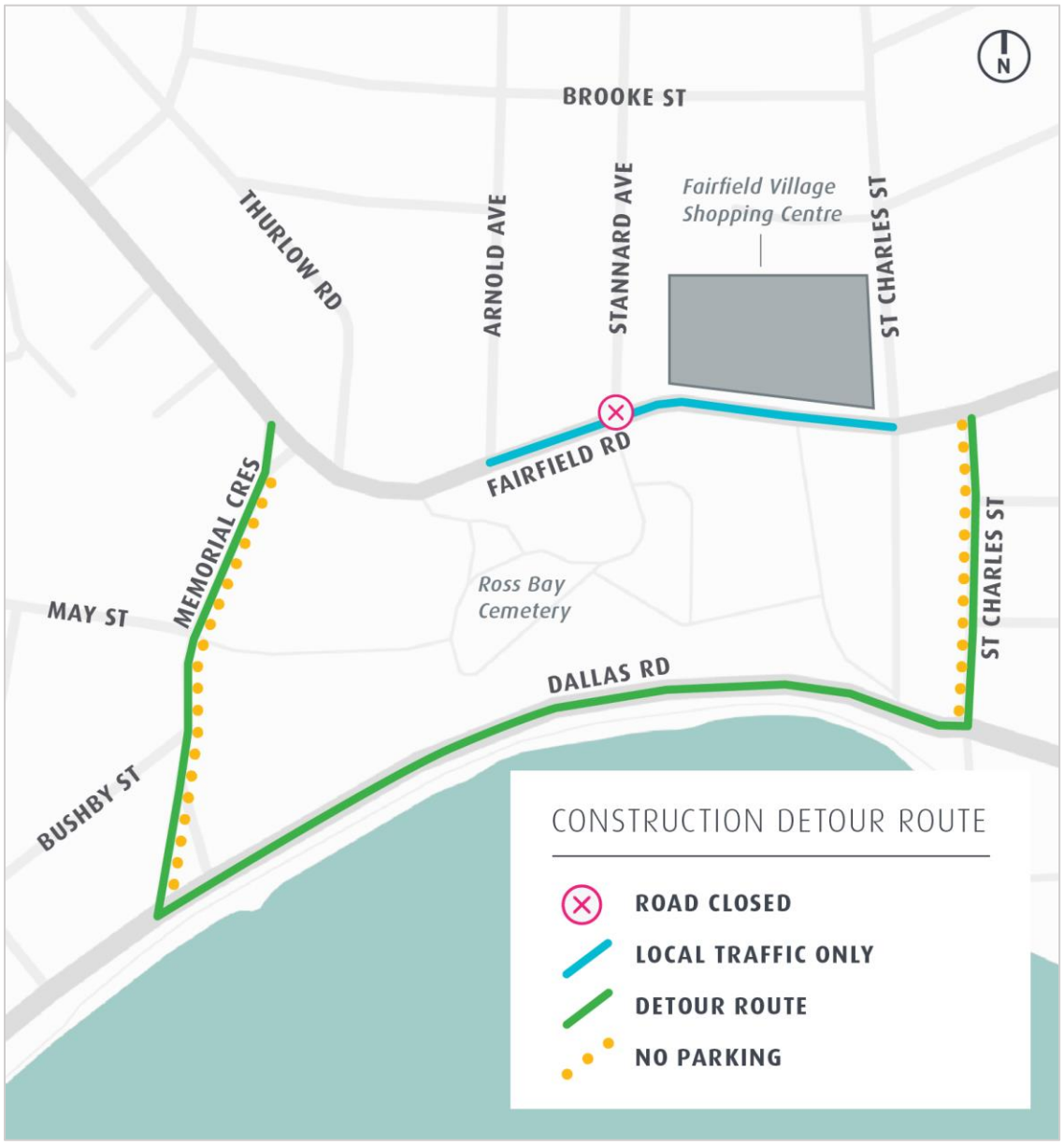
Email
wastewater@crd.bc.ca

Website
wastewaterproject.ca

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

Detour Route



Any questions about the work, please contact the Project Team.

24/7 Phone Line
1.844.815.6132

Email
wastewater@crd.bc.ca

Website
wastewaterproject.ca

Appendix B− Macaulay Point Pump Station: Transition to New Pump Station (July 13, 2020)

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

July 13, 2020

Macaulay Point Pump Station: Transition to New Pump Station

The Macaulay Point Pump Station is starting commissioning and wastewater will soon be diverted from the existing pump station to the new pump station. Diesel-powered pumps outside the pump station will be operating during the day beginning July 14 for one week, and will then operate continuously for an anticipated three weeks. Some overnight work, anticipated to begin the week of July 20, will also be required.

What to Expect

- Diesel-powered pumping units will operate outside the Macaulay Point Pump Station.
  - Beginning July 14, the pumps will operate during the day.
  - Beginning the week of July 20, the pumps will operate 24 hours a day until the work is complete (anticipated to be by the end of the first week of August)
- The pumps are equipped with acoustic enclosures to reduce noise.
- For overnight work, construction equipment will be in operation, including lights and truck back-up beepers.
- Increased short-term odour may occur intermittently during this work.

Work Hours

- Monday to Friday from 7:00 a.m. to 7:00 p.m.
- Saturday from 7:00 a.m. to 5:00 p.m.
- Some overnight work will be required for short periods the week of July 20.

Traffic Impacts

- No traffic impacts are expected.

About the Wastewater Treatment Project

The Wastewater Treatment Project will provide 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 by the end of 2020.

Any questions about the work, please contact the Project Team.

24/7 Phone Line
1.844.815.6132

Email
wastewater@crd.bc.ca

Website
wastewaterproject.ca

Appendix C− Core Area Wastewater Discharge Notice (July 24, 2020)

Making a difference...together

Public Service Announcement

For Immediate Release
July 24 2020

Core Area Wastewater Discharge Notice

Victoria, BC- Construction at the Clover Point Pump Station resulted in an unplanned wastewater discharge out the short outfall for intermittent periods overnight on July 23, 2020, and into the morning of July 24, 2020. The shorelines affected are along Dallas Road between Government Street and Crescent Road including Holland Point, Clover Point, Ross Bay and Gonzales Bay. This pump station is currently undergoing upgrades related to the Wastewater Treatment Project.

As a result of this discharge, residents are advised to avoid entering the waters along the affected shorelines, as the wastewater may pose a health risk.

As a precaution and in consultation with Island Health and the local municipalities, beaches within the affected areas will be posted with public health advisory signs until sample results indicate enterococci levels are below the 70CFU/100mL recreational limit.

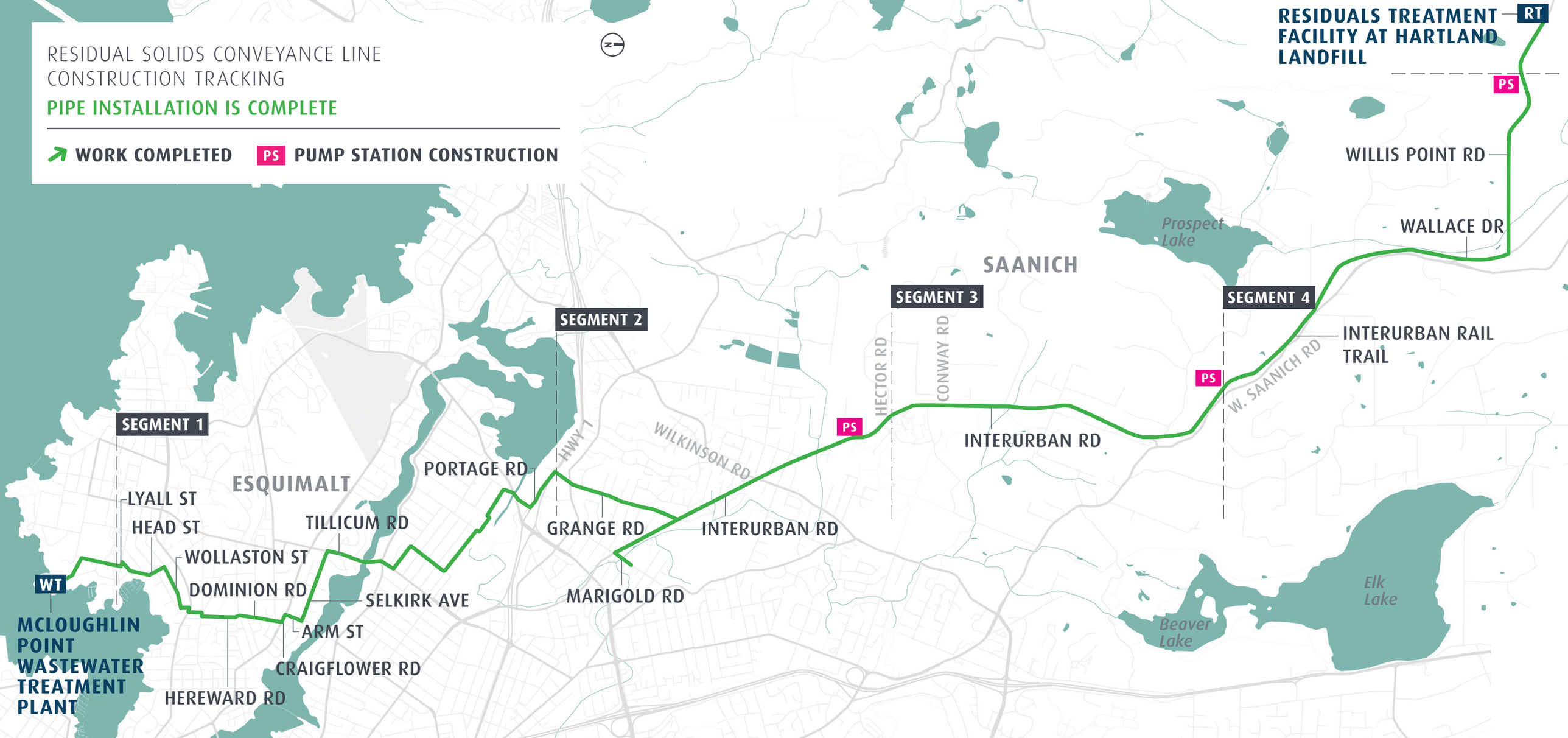
For updates, please visit www.crd.bc.ca and follow us on Twitter @crd_bc

The CRD delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and all levels of government to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure while continuing to provide core services to residents throughout the region. Visit us online at www.crd.bc.ca.

-30-

For media inquiries, please contact:
Andy Orr, Senior Manager
CRD Corporate Communications
Office 250.360.3229
Cell 250.216.5492

Appendix D− Residual Solids Conveyance Line Map (July 20, 2020)


RESIDUAL SOLIDS CONVEYANCE LINE
CONSTRUCTION TRACKING
PIPE INSTALLATION IS COMPLETE
WORK COMPLETED
PS PUMP STATION CONSTRUCTION
RESIDUALS TREATMENT FACILITY AT HARTLAND LANDFILL
RT
PS
WILLIS POINT RD
WALLACE DR
Prospect Lake
SAANICH
SEGMENT 4
SEGMENT 3
SEGMENT 2
SEGMENT 1
INTERURBAN RAIL TRAIL
W. SAANICH RD
HECTOR RD
CONWAY RD
INTERURBAN RD
WILKINSON RD
HWY 1
PORTAGE RD
GRANGE RD
INTERURBAN RD
MARIGOLD RD
ESQUIMALT
LYALL ST
HEAD ST
TILLICUM RD
WOLLASTON ST
DOMINION RD
SELKIRK AVE
ARM ST
CRAIGFLOWER RD
HEREWARD RD
WT
MCLOUGHLIN POINT WASTEWATER TREATMENT PLANT
Elk Lake
Beaver Lake

Appendix E− Monthly Cost Report (July)

MONTHLY COST REPORT
as at July 31, 2020

	BUDGET		COST EXPENDED					COMMITMENTS			FORECAST		VARIANCE	
Description	Control Budget	Allocated Budget	Expended to June 30, 2020	Expended over reporting period (July 2020)	Expended to July 31, 2020	Expended to July 31, 2020 as a % of Allocated Budget	Remaining (Unexpended) Allocated Budget at July 31, 2020	Total Committment at July 31, 2020	Unexpended Commitment at July 31, 2020	Uncommitted Allocated Budget at July 31, 2020	Forecast to Complete	Forecast at Completion	Variance at Completion $	Variance at Completion as a % of Allocated Budget
McLoughlin Point Wastewater Treatment Plant	**331.4**	**328.1**	**298.8**	**4.3**	**303.0**	**92%**	**25.1**	**321.0**	**17.9**	**7.1**	**25.1**	**328.1**	**-**	**0%**
Construction	306.7	320.8	298.2	4.3	302.6	94%	18.2	320.3	17.7	0.5	18.2	320.8	-	0%
Contingency	14.9	0.4	-	-	-	0%	0.4	-	-	0.4	0.4	0.4	-	0%
Financing	9.8	6.9	0.5	-	0.5	7%	6.4	0.7	0.2	6.2	6.4	6.9	-	0%
Residuals Treatment Facility	**159.4**	**140.0**	**11.3**	**0.1**	**11.4**	**8%**	**128.6**	**139.0**	**127.6**	**1.0**	**128.6**	**140.0**	**-**	**0%**
Construction	145.4	139.0	11.3	0.1	11.4	8%	127.6	139.0	127.6	0.0	127.6	139.0	-	0%
Contingency	12.3	0.2	-	-	-	0%	0.2	-	-	0.2	0.2	0.2	-	0%
Financing	1.7	0.8	0.0	-	0.0	2%	0.8	0.0	0.0	0.8	0.8	0.8	-	0%
Conveyance System	**158.0**	**215.7**	**166.3**	**4.2**	**170.4**	**79%**	**45.3**	**195.7**	**25.3**	**19.9**	**45.3**	**215.7**	**-**	**0%**
Macaulay Point Pump Station	25.4	30.9	27.7	0.0	27.7	90%	3.2	30.9	3.2	0.0	3.2	30.9	-	0%
Macaulay Forcemain	5.6	7.4	7.4	-	7.4	100%	-	7.4	-	-	-	7.4	-	0%
Craigflower Pump Station	12.5	12.4	12.4	-	12.4	100%	-	12.4	-	-	-	12.4	-	0%
Clover Point Pump Station	23.7	27.3	24.7	-	24.7	91%	2.5	27.3	2.5	0.0	2.5	27.3	-	0%
Currie Pump Station^	2.8	0.1	0.1	-	0.1	100%	-	0.1	-	-	-	0.1	-	0%
Arbutus Attenuation Tank	14.2	24.6	13.5	1.2	14.7	60%	9.9	23.3	8.6	1.3	9.9	24.6	-	0%
Clover Forcemain	14.6	32.5	30.0	0.3	30.3	93%	2.2	31.9	1.6	0.6	2.2	32.5	-	0%
Currie Forcemain^	3.3	0.2	0.2	-	0.2	100%	-	0.2	-	-	-	0.2	-	0%
Trent Forcemain	9.5	11.3	2.6	1.3	3.9	34%	7.4	8.1	4.2	3.2	7.4	11.3	-	0%
Residual Solids Conveyance Line	19.1	36.6	34.3	0.1	34.4	94%	2.2	36.5	2.1	0.1	2.2	36.6	-	0%
Residual Solids Pump Stations & Bridge Crossings	4.6	18.1	13.0	1.2	14.1	78%	4.0	17.0	2.8	1.1	4.0	18.1	-	0%
Residual Solids Conveyance Line – Highway Crossing	-	0.4	0.3	-	0.3	76%	0.1	0.4	0.0	0.1	0.1	0.4	-	0%
Contingency	16.8	9.9	-	-	-	0%	9.9	-	-	9.9	9.9	9.9	-	0%
Financing	5.8	4.1	0.2	-	0.2	4%	3.9	0.3	0.2	3.7	3.9	4.1	-	0%
Project Management Office ("PMO")	**75.8**	**77.9**	**56.8**	**0.6**	**57.4**	**74%**	**20.4**	**70.0**	**12.6**	**7.8**	**20.4**	**77.9**	**-**	**0%**
Project costs Aug 2016-Dec 2016	2.2	2.2	2.2	-	2.2	100%	-	2.2	-	-	-	2.2	-	0%
Owner's Engineering	17.2	17.5	14.5	-	14.5	83%	3.0	17.5	3.0	-	3.0	17.5	-	0%
Conveyance Design	5.0	9.5	7.6	0.2	7.8	82%	1.7	8.8	1.0	0.7	1.7	9.5	-	0%
Advisors & Professional Support	7.0	15.0	10.3	0.0	10.3	69%	4.7	11.5	1.1	3.5	4.7	15.0	-	0%
Project Board	2.0	1.3	0.9	0.0	0.9	74%	0.3	0.9	-	0.3	0.3	1.3	-	0%
Project Board Expenses	0.3	0.1	0.1	-	0.1	64%	0.0	0.1	-	0.0	0.0	0.1	-	0%
Project Team	29.1	23.1	16.3	0.3	16.5	71%	6.6	22.9	6.4	0.2	6.6	23.1	-	0%
Project Leadership Team Expenses	0.7	0.4	0.2	-	0.2	59%	0.2	0.2	-	0.2	0.2	0.4	-	0%
Project Support Team Expenses	0.5	0.2	0.1	-	0.1	67%	0.1	0.1	-	0.0	0.1	0.2	-	0%
CRD Financial Services	1.5	1.4	0.9	0.0	0.9	67%	0.5	1.4	0.5	-	0.5	1.4	-	0%
CRD Human Resources	0.3	0.3	0.2	0.0	0.2	88%	0.0	0.3	0.0	-	0.0	0.3	-	0%
CRD Corporate Communications	0.2	0.2	0.2	-	0.2	86%	0.0	0.2	0.0	-	0.0	0.2	-	0%
CRD Real Estate	0.3	0.3	0.2	-	0.2	92%	0.0	0.3	0.0	-	0.0	0.3	-	0%
CRD Information Technology	0.4	0.4	0.3	0.0	0.3	71%	0.1	0.4	0.1	-	0.1	0.4	-	0%
CRD Insurance	0.1	0.0	0.0	-	0.0	100%	-	0.0	-	-	-	0.0	-	0%
CRD Operations	0.6	0.6	0.5	0.0	0.5	86%	0.1	0.6	0.1	-	0.1	0.6	-	0%
CRD Legislative Services	0.1	0.1	0.1	-	0.1	100%	-	0.1	-	-	-	0.1	-	0%
CRD Corporate Safety	0.2	0.2	0.2	-	0.2	100%	-	0.2	-	-	-	0.2	-	0%
CRD Executive Services	-	0.1	0.1	-	0.1	86%	0.0	0.1	0.0	-	0.0	0.1	-	0%
Office Lease	1.9	1.3	0.9	0.0	0.9	69%	0.4	1.2	0.3	0.1	0.4	1.3	-	0%
Office Supplies	0.1	0.2	0.2	-	0.2	88%	0.0	0.2	-	0.0	0.0	0.2	-	0%
Vehicles	0.2	0.2	0.2	-	0.2	89%	0.0	0.2	0.0	-	0.0	0.2	-	0%
Connections Call Center	-	0.0	0.0	-	0.0	100%	-	0.0	-	-	-	0.0	-	0%
Communication support materials	0.5	0.2	0.1	-	0.1	61%	0.1	0.1	-	0.1	0.1	0.2	-	0%
Computer Hardware, Software & Training	1.0	1.1	0.6	-	0.7	61%	0.4	0.7	-	0.4	0.4	1.1	-	0%
Contingency	4.8	2.3	-	-	-	0%	2.3	-	-	2.3	2.3	2.3	-	0%
BC Hydro	**12.9**	**4.3**	**2.0**	**-**	**2.0**	**48%**	**2.3**	**2.1**	**0.0**	**2.2**	**2.3**	**4.3**	**-**	**0%**
Third Party Commitments	**8.1**	**8.1**	**4.0**	**0.1**	**4.1**	**50%**	**4.1**	**6.8**	**2.8**	**1.3**	**4.1**	**8.1**	**-**	**0%**
Program Reserves	**19.2**	**0.9**	**-**	**-**	**-**	**0%**	**0.9**	**-**	**-**	**0.9**	**0.9**	**0.9**	**-**	**0%**
Core Area Wastewater Treatment Project	**765.0**	**775.0**	**539.2**	**9.2**	**548.4**	**71%**	**226.5**	**734.6**	**186.2**	**40.3**	**226.5**	**775.0**	**-**	**0%**

* Values presented in $millions, results in minor rounding differences
** Cost report presents approved expenditures
^ Component no longer required, and would not provide any value therefore removed from Project Scope; Costs include Seaterra initiation, planning and design

REPORT TO CORE AREA WASTEWATER TREATMENT PROJECT BOARD
MEETING OF THURSDAY, SEPTEMBER 24, 2020

SUBJECT **Wastewater Treatment Project August 2020 Monthly Report**

ISSUE

To provide the Core Area Wastewater Treatment Project Board with the Wastewater Treatment Project August 2020 Monthly Report.

BACKGROUND

On May 25, 2016 the Regional Board of the CRD:

i) Adopted by resolution the Core Area Wastewater Treatment Project Board Terms of Reference (Project Board Terms of Reference) for the purposes of establishing principles governing the Core Area Wastewater Treatment Project (the Wastewater Treatment Project or the WTP);
ii) Established the Core Area Wastewater Treatment Project Board (Project Board) under Bylaw 4109 (the CRD Core Area Wastewater Treatment Board Bylaw No. 1, 2016) for the purposes of administering the Core Area Wastewater Treatment Project; and
iii) Delegated certain of its powers, duties and functions to the Project Board under Bylaw 4110 (the CRD Core Area Wastewater Treatment Project Board Delegation Bylaw No. 1, 2016).

On September 14, 2016 the Regional Board of the CRD:

i) Received the final report of the Project Board with respect to its recommendation for the CAWTP, dated September 7, 2016 (the Final Report); and
ii) Approved the business case attached as Appendix 1 (the Business Case) to the Final Report.

DISCUSSION

The Core Area Wastewater Treatment Project Board (the Project Board) Terms of Reference requires, amongst other things: that the Project Board provide the CRD Board with monthly progress reports and a comprehensive quarterly report on the Project.

The Monthly report for the period of August 2020 is attached as Appendix A.

RECOMMENDATION

That the Core Area Wastewater Treatment Project Board approve the following resolution:

RESOLVED that:

The Staff Report, 'Wastewater Treatment Project August 2020 Monthly Report', be received for information and forwarded to the Core Area Liquid Waste Management Committee and CRD Board for information.

Elizabeth Scott, Deputy Project Director
Wastewater Treatment Project

Dave Clancy, Project Director
Wastewater Treatment Project
Concurrence

Attachments: 1

Appendix A: Wastewater Treatment Project August 2020 Monthly Report

ES:er

Wastewater Treatment Project
Treated for a cleaner future

CRD Wastewater Treatment Project

Monthly Report

Reporting Period: August 2020

TABLE OF CONTENTS

1 Executive Summary 3

1.1 Introduction 3

1.2 Dashboard 5

2 Wastewater Treatment Project Progress 8

2.1 Safety 8

2.2 Environment and Regulatory Management 10

2.2.1 Environment 10

2.2.2 Regulatory Management 11

2.3 First Nations 11

2.4 Stakeholder Engagement 11

2.5 Resolutions from Other Governments 13

2.6 Schedule 13

2.6.1 30 day look ahead 15

2.6.2 60 day look ahead 17

2.7 Cost Management and Forecast 19

2.7.1 Commitments 19

2.7.2 Expenses and Invoicing 20

2.7.3 Contingency and Program Reserves 20

2.7.4 Project Funding 20

2.8 Key Risks and issues 21

2.9 Status (Engineering, Procurement and Construction) 25

2.9.1 Wastewater Treatment Plant (McLoughlin Point WWTP) 25

2.9.2 Residuals Treatment Facility 28

2.9.3 Conveyance System 30

Appendix A– Trent Forcemain: Updated Work Hours (August 6, 2020) 42

Appendix B– Dallas Road Update (August 6, 2020) 43

Appendix C– Trent Forcemain: Dallas Road Seawall (August 17, 2020) 44

Appendix D– Monthly Cost Report (August) 45

1 Executive Summary

1.1 Introduction

This Monthly Report covers the reporting period of August 2020 and outlines the progress made on the Wastewater Treatment Project over this time.

The Wastewater Treatment Project (the "Project") includes three main Project Components (the "Project Components"): the McLoughlin Point Wastewater Treatment Plant (the "McLoughlin Point WWTP"), the Residuals Treatment Facility (the "RTF") and the Conveyance System (which includes upgrades to the conveyance network including the construction of pump stations and pipes). The Project scope is being delivered through a number of contracts with a variety of contracting strategies.

Over the reporting period the COVID-19 public health emergency continued to have impacts on the Project. The Project Team and Project contractors are actively monitoring the status of the COVID-19 public health emergency and are taking additional precautions to protect our staff, contractors, and the public. Construction is ongoing at all of the Project's sites in accordance with guidelines established by the Provincial Health Officer.

While construction is ongoing, the public health emergency is impacting construction progress and may delay some interim project milestones, such as the transition to commissioning. However, based on current progress the Wastewater Treatment Project remains on schedule to meet the regulatory deadline for treatment by the end of 2020, and over the reporting period an important step was taken towards meeting the deadline: wastewater was pumped from Clover Point Pump Station and Macaulay Point Pump Station to McLoughlin Point WWTP for the first time, allowing commissioning of the treatment system to commence.

The McLoughlin Point WWTP Project Component is continuing with Harbour Resource Partners ("HRP" as the Design-Build contractor for the McLoughlin Point WWTP) commencing commissioning with wastewater and progressing: commissioning of the sludge tank, plant drain tank, plate settler 1 and 2 and fine screen processes in the primary treatment area; commissioning of moving bed bio reactor (MBBR) and biological aerated filter (BAF) processes in the secondary treatment area; commissioning of the outfall and clean water, backwash and clean water pumping system processes in the tertiary treatment area; and completion of the green roof system in the Operations and Maintenance Building.

The RTF Project Component is continuing with Hartland Resource Management Group ("HRMG" as the Design-Build-Finance-Operate-Maintain contractor for the RTF) progressing construction activities including: installation of insulation for Digesters 2 and 3, installation of biogas piping on the roof of the Digester building to tie into the Digester tanks in the Digester area; installation of hopper in the Other Municipal Solids Receiving Facility; commissioning of various system including boilers and completed insulation of hot water piping in the Residuals Handling Building; continued commissioning of various systems in the Residuals Drying Facility; and commenced the insulation of the fiberglass reinforced plastic (FRP) ductwork in the Residuals Storage and Odour Control Area.

The Conveyance System is being delivered through seven construction contracts: two design-build contracts and five design-bid-build contracts.

The two design-build Conveyance System contracts progressed over the reporting period as follows:

- Clover Point Pump Station: Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressed construction and commissioning activities over the reporting period including: commencing pumping of wastewater to the McLoughlin Point WWTP; forming, pouring and stripping of concrete benches and upper plaza retaining walls; installation of stone exterior of the pump station; installed crane stops for electrical room monorail; installed public washroom accessories and finishes; and completed installation of pigging chamber.

- Macaulay Point Pump Station: Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressed construction and commissioning activities over the reporting period including: commencing pumping of wastewater to the McLoughlin Point WWTP; installation of vent pipes and ongoing backfill around the existing structure at the Diversion Chamber; installation of FRP platform and stairs in the pump room; installation of acoustic insulation panels in the genset and pump rooms; and ongoing installation of electrical sleeves to the low level chamber.

The design-bid-build Conveyance System contracts progressed over the reporting period, as follows:

- Clover Forcemain: Windley Contracting Ltd. ("Windley" as the Construction Contractor) continued construction and commissioning activities including: supporting the commencement of pumping of wastewater from the Clover Point Pump Station, through the Clover Forcemain to the McLoughlin Point WWTP; ongoing construction of the seawall balustrade replacement and enhanced sidewalk.

- Residual Solids Conveyance Line ("RSCL"): the RSCL is being delivered through two construction contracts, with work progressing as follows:

    - Residual Solids Pipes: Don Mann Excavating Ltd. ("Don Mann" as the Construction Contractor) continued construction activities over the reporting period for the Saanich infrastructure improvement being undertaken at Peers Creek, including: realignment of a section of existing watermain; replacing existing sewer pipe with ductile iron pipe within a casing; removal of existing storm drain manhole and culvert pipes; and installation of new culverts and storm drain manhole.

    - Residual Solids Pump Stations: Knappett Projects Inc. ("Knappett" as the Construction Contractor) continued construction activities including: forming and pouring new pump bases and continued installation of mechanical equipment and piping for the Hartland water system improvements; replaced threaded hangar rods on Admirals and Tillicum Bridges; and installed odour control vent piping at all pump stations.

- Arbutus Attenuation Tank ("AAT"): NAC Constructors Ltd. (as the Construction Contractor) continued construction activities including: sections of mud mat poured

and completed; completed valve chamber excavation and subbase placement; backfill of culvert extension; and completed base slab pours for the valve chamber, lower sump and trough areas of the main tank.

- Trent Forcemain: Jacob Bros. Construction Inc. (as the Construction Contractor) progressed construction activities including: installation of Memorial Crescent air valve chamber; installation of forcemain on Stannard Avenue; reinstated three external drop structure manholes on Brooke Street; and installed 187m of forcemain on Brooke Street.

1.2 Dashboard

Table 1 indicates the high level status of the Project and each Project Component with regards to the six Key Performance Indicators ("KPI") that were defined within the Project Charter.

There were no changes made to the KPIs over the reporting period.

The safety KPI for the Project and the conveyance system remains yellow. Over the reporting period no recordable safety incidents occurred and the total recordable incident frequency decreased from 1.5 at the end of the July 2020 to 1.49.

The Project Team continues to work with and ensure that all of the prime contractor partners maintain safety as their number one priority. The Project Team is also actively monitoring the status of the COVID-19 public health emergency and is taking additional precautions to protect our staff, contractors, and the public. The BC Government has designated construction as an essential service, and issued guidelines for construction sites to minimize the risks of COVID-19 transmission or illness. All Project contractors have implemented additional precautions to ensure the health and safety of their workers. These measures follow the direction set by the BC Government, including emphasizing the importance of maintaining social distance, increasing handwashing stations, reducing in-person meetings and increasing cleaning of common areas. The Project Team will continue to monitor contractors' compliance with the direction of the government as the situation evolves.

The schedule KPI for the Project overall and the Project components remains green. The COVID-19 public health emergency is impacting construction progress and may delay some interim project milestones, such as the transition to commissioning. However, construction is ongoing at all of the Project's sites, in accordance with provincial guidelines, and based on current progress the Wastewater Treatment Project remains on schedule to meet the regulatory deadline for treatment by the end of 2020.

The cost KPI for the Project overall and the conveyance system remained red over the reporting period, and are expected to remain red for the duration of the Project, primarily as a result of inflation in the Vancouver Island construction market. Other factors that have contributed to budget pressures include: design development to incorporate stakeholder input; geotechnical considerations including removal and disposal of contaminated material; and schedule constraints associated with the requirement to provide wastewater treatment by the regulatory deadline of December 31, 2020.

Based on the value of the contracts awarded to-date and the refreshed cost estimate for the scope remaining to be procured, the Project Team forecast the cost to complete the Project at

$775M, or $10M over the Project's control budget. In May 2019 the CRD Board approved an increase in the Project's budget by $10M to $775M.

Subsequent to May 2019 the Project Team have continued to manage risks and there have been two main opposing budget drivers:

i) The Project's financing costs to-date have been lower than budgeted for two reasons: firstly as a result of low interest rates since the start of the Project, and secondly due to the receipt of funding from the provincial government earlier than forecast; and

ii) The Project's construction costs may be higher than budgeted as many contractors have advised that there are cost impacts from the COVID-19 public health emergency. Impacts include labour availability, work modifications to comply with provincial guidelines, and delays to the delivery of equipment and supplies.

It is too early to determine the cost impact to the Project, but given the ability to offset the unforeseen costs of COVID-19 through the finance cost savings, the Project Team remain confident that, if construction continues at the current pace, the Project cost will be within the Project's $775M budget.

Table 1- Executive Summary Dashboard

Key Performance Indicators		Project Overall	WWTP	RTF	Conveyance System	Comments
Safety	Deliver the Project safely with zero fatalities and a total recordable incident frequency (TRIF) of no more than 1*.					No recordable incidents occurred over the period. Site inspections are ongoing. The Project Team is actively monitoring the status of the COVID-19 public health emergency and is taking additional precautions to protect our staff, contractors, and the public. All Project contractors have implemented additional precautions to ensure the health and safety of their workers. The Project Team will continue to monitor and follow the direction of the government during this evolving situation.
Environment	Protect the environment by meeting all legislated environmental requirements and optimizing opportunities for resource recovery and greenhouse gas reduction.					There were no environmental incidents over the reporting period:
Regulatory Requirements	Deliver the Project such that the Core Area complies with provincial and federal wastewater regulations.					No regulatory issues.
Stakeholders	Continue to build and maintain positive relationships with First Nations, local governments, communities, and other stakeholders.					Engagement activities were ongoing over the reporting period. Significant efforts were made to provide accurate and timely information to stakeholders.
Schedule	Deliver the Project by December 31, 2020.					The COVID-19 public health emergency is impacting construction progress and may delay some interim project milestones, such as the transition to commissioning. The Wastewater Treatment Project has made significant progress and currently remains on schedule to meet the regulatory deadline for treatment by the end of 2020.
Cost	Deliver the Project within the Control Budget ($765 million).					Based on the value of the contracts awarded to-date and a refreshed cost estimate for the scope remaining to be procured, the Project Team has forecast the cost to complete the Project at $775M, or $10M over the Project's Control Budget. This is primarily as a result of inflation in the Vancouver Island construction market. Other factors that have contributed to budget pressures include: design development to incorporate stakeholder input; geotechnical considerations including removal and disposal of contaminated material; and schedule constraints associated with the requirement to provide wastewater treatment by the regulatory deadline of December 31, 2020. The CRD Board have approved an increase in the Project's budget by $10M, to $775M. Many contractors have advised that there are cost impacts from the COVID-19 public health emergency. It is too early to determine the cost impact to the Project, but given the ability to offset the unforeseen costs of COVID-19 through the finance cost savings, the Project Team remain confident that, if construction continues at the current pace, the Project cost will be within the Project's $775M budget.

* A TRIF of no more than 1 means that there is 1 or fewer recordable incidents (being a work-related injury or illness that requires medical treatment beyond first aid or causes death, days away from work, restricted work or transfer to another job, or loss of consciousness) for every 200,000 person-hours of work	
Status	Description
	KPI unlikely to be met
	KPI at risk unless correction action is taken
	KPI at risk but corrective action has been identified/is being implemented
	Good progress against KPI

2 Wastewater Treatment Project Progress

2.1 Safety

Safety information for the reporting period and cumulative for the Project from January 1, 2017 is summarized in Table 3.

The Project Team is actively monitoring the status of the COVID-19 public health emergency and is taking additional precautions to protect our staff, contractors, and the public. The BC Government has designated construction as an essential service, and issued guidelines for construction sites to minimize the risks of COVID-19 transmission or illness.

All Project contractors have implemented additional precautions to ensure the health and safety of their workers. These measures follow the direction set by the BC Government, including emphasizing the importance of maintaining social distance, increasing handwashing stations, reducing in-person meetings and increasing cleaning of common areas. The Project Team will continue to monitor contractors' compliance with the direction of the government during this evolving situation.

Site safety tours and weekly safety inspections were carried out by Project Management Office ("PMO") construction and safety personnel over the reporting period at all active worksites: McLoughlin Point WWTP, RTF, Macaulay Point Pump Station, Clover Point Pump Station, Clover Forcemain, Residual Solids Pipes; Residual Solids Pump Stations; Arbutus Attenuation Tank and Trent Forcemain.

Over the reporting period (August 2020) six safety incidents occurred, comprising: two first-aid, one high potential for harm and three report-only incidents, as summarized in Table 2.

Table 2: Safety Incidents over the Reporting Period

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
August 13, 2020	McLoughlin Pt WWTP	First Aid	Worker chipping concrete sustained minor eye injury.	A small piece of concrete entered right eye. Worker was wearing safety glasses, but was not wearing a face shield.	Tool-box talk with crews to remind them of personal protective equipment requirement of wearing a face-shield over safety glasses when chipping or grinding.
August 13, 2020	McLoughlin Pt WWTP	First Aid	While moving a door on a rack the load shifted pinching the worker's left index finger.	Worker reported to first aid where the small laceration was attended to. No follow up was required. Worker was wearing gloves at time of incident which lessened the injury.	Reminder to crews to always be aware of their surrounding and potential for injury when undertaking activities

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
August 17, 2020	McLoughlin Pt WWTP	High Potential for Harm First Aid	A worker fell through an opening in the Tertiary building floor when a fiberglass cover panel that was not secured correctly gave way.	The channel cover panel was not secured properly, nor cordoned off and gave way beneath the worker. Worker fell approximately 15 feet into a water filled channel. Prime Contractor's Emergency Response Plan was initiated and worker was quickly retrieved from the channel area with minor abrasions. Worker was assessed onsite by first aid and paramedics and then transported to hospital for further assessment. Site stand down was initiated. Worker returned to work the following day, no further medical follow up required.	WorkSafeBC called, attended site and full investigation completed. Control zone established around the loose channel covers. All channel covers were inspected and covers not fastened were immediately secured.
August 17, 2020	McLoughlin Pt WWTP	Report Only	During commissioning clean water was directed to the effluent channel, instead of the dirty backwash tank.	Personnel working in the tertiary area noticed water level rise in channel and reported it to operations team.	Procedures review with staff to ensure awareness of systems and operations protocols to prevent unintended direction of flows.
August 17, 2020	Residual Solids Pump Station	Report Only	Car damaged from contractors temporary fence.	Fencing blew over and landed on the vehicle	Additional securing of the fencing was completed to prevent a reoccurrence.
August 17, 2020	McLoughlin Pt WWTP	Report Only	A loader carrying pipe contacted a parked vehicle causing minor damaged.	Owner contacted and contractor will be responsible for the repairs	Tool-box talk to remind loader operator to be aware of their surroundings and proximity in and around the work area. Crews to avoid travel on non-project roads as they are narrow with cars are parked on both sides.

Key safety activities conducted during August included:

- bi-weekly project update meetings with prime contractors: Kenaidan, Windley, Don Mann, HRP, Knappett, Jacob Bros and NAC;
- monthly update meetings with prime contractors: Don Mann, HRP;
- monthly Incident Investigation reviews;
- reviewed site specific safety plans and high risk tasks;
- WTP Safety Manager and/or Construction Manager conducting regular site inspections at all active Project work sites; and
- hosted Prime Contractor Safety Coordination Meeting with Project safety representatives.

Table 3: WTP Safety Information

	Reporting Period (August 2020)	Project Totals
Person Hours		
PMO	2,877	154,954
Project Contractor	64,412	2,126,373
Total Person Hours	67,289	2,281,327
PMO	29	
Project Contractors (& Project Consultants) working on Project Sites	371	
Total Number of Employees	400	
Near Miss Reports	0	46
High Potential Near Miss Reports	1	7
Report Only	3	173
First Aid	2	67
Medical Aid	0	10
Medical Aid (Modified Duty)	0	2
Lost Time	0	5
Total Recordable Incidents	0	17
		Project Frequency (from January 1, 2017)
First Aid Frequency		5.9
Medical Aid Frequency		1.1
Lost time Frequency		0.4
Total Recordable Incident Frequency		1.5

2.2 Environment and Regulatory Management

Environmental and regulatory activities continued over the reporting period relating to both the planning of upcoming work and the execution of current work.

2.2.1 Environment

Environmental work progressed as planned over the reporting period. The focus was on environmental monitoring of construction activities and planning for upcoming work.

Key environmental management activities completed in August included:

- Don Mann and their environmental consultant McElhanney completed in-stream work at the site of the Peers Creek culvert replacement on Interurban Road. The in-stream work involved isolating the stream from fish and installing dewatering equipment in preparation for culvert construction. There were no fish present in the isolation zone.

2.2.2 Regulatory Management

During the reporting period, the Project Team continued to monitor the advancement of the remaining construction-related regulatory approvals and supported or led the advancement of remaining permit applications.

Key permitting activities for August included:

- The CRD provided a draft Statutory Right-of-Way Plan to the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development. The Plan would be used to convert the current Licence of Occupation for the McLoughlin Point outfall into a long term tenure.

The status of key Project permits are summarized in Table 4. The table is not a list of all required Project permits, but rather a summary of the status of key Project permits. There were no changes made from the table presented in the Project's July 2020 Monthly Report.

Table 4- Key Permits Status

Permit/Licence	*Anticipated Date*	*Status*	*Party Responsible for Obtaining Perming*
McLoughlin Point Harbour Crossing			
Transport Canada Lease	Following completion of construction	On track	HRP
McLoughlin Point Outfall			
Transport Canada Lease	Following completion of construction	On track	HRP

2.3 First Nations

First Nations communication and engagement was ongoing over the reporting period. Meetings with the Esquimalt and Songhees' liaisons continued, as did meetings with the W̱SÁNEĆ Leadership Council's (WLC) liaison. The meetings are a forum for covering both Project-related issues with the potential to impact First Nations, as well as an opportunity for broader discussion of CRD-related issues.

Key activities in August included:

- The CRD and the Esquimalt, Songhees and WLC, during their respective meetings, discussed screening of archaeological material that was encountered during construction. The purpose of these discussions was to identify potential locations for the material that remained after screening.

2.4 Stakeholder Engagement

The Project maintained its ongoing two-way Communications and Engagement Plan to provide Project information to stakeholders, communities and the public and to respond to public inquiries. The key focus of the communications and engagement activities over the period was to keep residents and stakeholders informed of Project plans, progress and construction information, and to receive and respond to questions and concerns raised by the community. A variety of communications tools and engagement activities were utilized to support the implementation of the plan, including stakeholder meetings, Project website updates and notifications of construction through notices and a public inquiry program, among other methods.

Construction Communications

A letter providing information to residents about a change in working hours for the Trent Forcemain was hand delivered to 142 residents along the route (Appendix A). In addition, as part of ongoing construction communications, residents affected by localized, temporary disruptions, such as driveway impacts, were notified by hand delivery of notices.

Signs were posted near the entrances to the Dallas Road seawall pedestrian path describing the work that would be taking place for the Trent Forcemain (Appendix B).

A postcard was mailed to 2,959 households in James Bay and Fairfield providing residents with an update regarding the timing for the remaining construction work and public amenities along Dallas Road (Appendix C).

Project Website

Over the reporting period the Project website, wastewaterproject.ca, was updated with information about the Project. The Dallas Road Update postcard and Dallas Road Seawall sign were posted.

The CRD's Twitter and Facebook accounts was used to provide Project information to the public, including an update on the work taking place along Dallas Road.

Community Meetings

Over the reporting period, the Project Team held meetings with the following municipality representatives:

- City of Victoria Technical Working Group; and
- District of Saanich Technical Working Group;

Public Inquiries

Public inquiry numbers from the Project email address and 24/7 information phone line (1 844 815-6132) are noted in Table 5.

Table 5 – Project Inquiries- July 2020

Inquiry Source	Contacts for August 2020
Information phone line inquiries	18
Email inquiries responded to	17

Key themes of the public inquiries were as follows:

- interest in restoration, landscaping and public amenities;
- questions regarding noise associated with construction; and
- interest in when construction in specific areas will be finished.

2.5 Resolutions from Other Governments

There were no resolutions related to the Project passed by other governments during the reporting period.

2.6 Schedule

Progress over the reporting period is summarized in Section 2.9.

Figure 1 shows the high-level Project schedule. This schedule is unchanged from that shown previously.

Over the reporting period the COVID-19 public health emergency continued to have impacts on the Project. Specifically, the COVID-19 public health emergency is impacting construction progress and may delay some interim project milestones, such as the transition to commissioning. However, construction is ongoing at all of the Project's sites, in accordance with provincial guidelines, and based on current progress the Wastewater Treatment Project remains on schedule to meet the provincial and federal regulations for treatment for the Core Area's wastewater by December 31, 2020.

Figure 1- High-Level Project Schedule

2.6.1 30 day look ahead

Key activities and milestones for the next 30 days (September) are outlined below by function.

Safety

- CRD corporate occupational health and safety coordination committee meeting;
- host Prime Contractor Safety Coordination Meeting with Project safety representatives;
- prime contractor progress meetings;
- review of any site specific safety plans or high risk tasks;
- review prime contractor document submissions;
- issue safety notices for trending observations or similar incidents occurring on project sites;
- WTP Safety Manager and/or Construction Manager will conduct regular site inspections at all active Project work sites; and
- incident reporting review with prime contractors at active work locations.

Environment and Regulatory Management

- finalizing the Licence Agreements for the Harbour Crossing and McLoughlin Point Outfall with Transport Canada.

First Nations

- continue meeting with First Nation liaisons.

Stakeholder Engagement

- ongoing construction communications with stakeholders; and
- ongoing community liaison meetings.

Cost Management and Forecast

- prepare cost reports;
- monitor schedule;
- prepare for Quarter 3 close and interim audit; and
- submit funding claims to Infrastructure Canada (under the Building Canada Fund and Green Infrastructure Fund).

Construction

McLoughlin Point

- commission security systems, mechanical systems, fire systems, and plumbing systems;
- building systems integration; and
- biological growth and process optimization.

Clover Point Pump Station

- install split stone to exterior walls;
- install firestop and smoke seals;
- install green roof system;
- plant trees and shrubs;
- complete final painting and touch ups;
- spray foam insulation; and

- backfill north retaining wall.

Macaulay Point Pump Station
- install outdoor site furnishings;
- commence demolition of existing structure;
- remove and salvage existing equipment; and
- plant trees and shrubs, and install green roof system.

Residuals Treatment Facility
- continue functional start-up, wet testing and initial system verification;
- commence process commissioning with residual solids;
- complete exterior insulation and hydro test Digester #1;
- complete exterior insulation Digester #2;
- hydro testing and pneumatic testing Digested Solids Storage Tank;
- complete pipe insulation, jib crane and weather cover at Other Municipal Solids Receiving Facility;
- continue testing and commissioning activities at the Residuals Handling Building;
- continue testing and commissioning activities at the Dryer Building;
- install lime stabilization unit; and
- continue site grading, fencing, road paving, and retention ponds.

Clover Forcemain
- final paving of Dallas Rd from Lewis Street to Dock Street; and
- clean-up and demobilize.

Residual Solids Pipes
- commence conveyance operations; and
- complete Peers Creek culvert and supporting utility replacement.

Residual Solids Pump Stations
- commence conveyance operations; and
- final grading, trail restoration; and installation of fence and landscaping at Pump Station #2;
- final grading and install fence at Pump Station #3; and
- remove scaffolding from Admirals and Tillicum bridges.

Arbutus Attenuation Tank (AAT)
- install valve chamber piping;
- commence construction of concrete walls, columns, stairs within the attenuation tank; and
- install manhole and associated piping.

Trent Forcemain
- commence installation of sanitary sewer on Dallas Road;
- install sanitary sewer and valve chamber at Memorial Crescent from Dallas Road to Thurlow Road; and
- restoration and paving at Memorial Crescent.

2.6.2 60 day look ahead

Key activities and milestones for the next 60 days (October) are outlined below by function.

Safety

- prime contractor progress meetings;
- review of any site specific safety plans or high risk tasks;
- review prime contractor document submissions;
- issue Safety Notices for trending observations or similar incidents occurring on project sites;
- WTP Safety Manager and/or Construction Manager will conduct regular site inspections at all active Project work sites; and
- incident reporting review with prime contractors at active work locations.

Environment and Regulatory Management

- finalizing a long term tenure with the Province for the portion of the McLoughlin Point outfall that is outside of the Victoria Harbour boundary.

First Nations

- delivering archaeological screening material to the Esquimalt and Tsartlip Nations.

Stakeholder Engagement

- ongoing construction communications with stakeholders;
- ongoing community liaison meetings; and
- planning and execution of opening media event.

Cost Management and Forecast

- prepare cost reports;
- prepare Q3 financial close reporting;
- prepare for interim audit; and
- balance and confirm all funding claims to Infrastructure Canada (under the Building Canada Fund and Green Infrastructure Fund) are submitted.

Construction

McLoughlin Point

- achieve functional completion;
- complete landscaping;
- complete commissioning;
- complete integration of remote SCADA; and
- commence acceptance testing.

Clover Point Pump Station

- install grass Crete pavers;
- reinstate curbs, walkway and roadways;
- install pathways;
- form and pour upper plaza level;
- install public art to generator exhaust stack; and
- install water fountain, City of Victoria benches, trash cans and bike maintenance station.

Macaulay Point Pump Station

- achieve substantial completion;
- plant trees and shrubs;
- place topsoil and finish grading;
- install gravel pathways;
- install boardwalk and viewing plaza; and
- place seeded turf.

Residuals Treatment Facility

- achieve Functional Completion;
- continue process commissioning with residuals;
- complete odour control biotrickling filter acclimation period; and
- complete retention ponds, perimeter fencing and commence site landscaping.

Clover Forcemain

- final clean up;
- demobilize site; and
- achieve total completion.

Residual Solids Pipes

- Complete Peers Creek culvert and supporting utility replacement.

Residual Solids Pump Stations

- final clean up; and
- demobilization.

Arbutus Attenuation Tank (AAT)

- install curb, pipe supports, monorail and aluminium platform for the valve chamber;
- install attenuation exterior walls; and
- install attenuation tank interior walls and columns.

Trent Forcemain

- install secant and soldier pile walls;
- removal of existing retaining wall and walkway at Dallas Road; and
- install curb and gutter and sidewalk at Memorial Crescent.

2.7 Cost Management and Forecast

The monthly cost report for August is shown in Appendix D. The cost report summarizes Project expenditures and commitments by Project Components and the major cost centres common to the Project Components.

The Project Team has been reporting budget pressures through its monthly reports to the Project Board (and CRD Board) since September 2017, primarily as a result of inflation in the Vancouver Island construction market. Other factors that have contributed to budget pressures include: design development to incorporate stakeholder input; geotechnical considerations including removal and disposal of contaminated material; and schedule constraints associated with the requirement to provide wastewater treatment by the regulatory deadline of December 31, 2020.

Based on the value of the contracts awarded to-date and the refreshed cost estimate for the scope remaining to be procured, the Project Team forecast the cost to complete the Project at $775M, or $10M (1.3%) over the Project's control budget. In May 2019 the CRD Board approved an increase in the Project's budget by $10M to $775M, and on August 14, 2019, the associated amendment to the 2019-2023 Financial Plan was approved.

Subsequent to May 2019 the Project Team have continued to manage risks and there have been two opposing budget drivers:

i) The Project's financing costs to-date have been lower than budgeted for two reasons: firstly as a result of low interest rates since the start of the Project, and secondly due to the receipt of funding from the provincial government earlier than forecast; and

ii) The Project's construction costs may be higher than budgeted as many contractors have advised that there are cost impacts from the COVID-19 public health emergency. Impacts include labour availability, work modifications to comply with provincial guidelines, and delays to the delivery of equipment and supplies.

It is too early to determine the cost impact to the Project, but given the ability to offset the unforeseen costs of COVID-19 through the finance cost savings, the Project Team remain confident that, if construction continues at the current pace, the Project cost will be within the Project's $775M budget.

2.7.1 Commitments

Commitments were made over the reporting period in furtherance of delivering the Project. The net commitments made during the reporting period resulted in an increase in committed costs of $1.3 million. The significant commitments made in the reporting period comprised the approval of provisional items in construction contracts and contract change orders.

2.7.2 Expenses and Invoicing

The Project expenditures for the reporting period were as expected and were within the budget allocations for each of the budget areas. The main Project expenditures incurred over the reporting period were associated with construction activities and project management office-related costs.

2.7.3 Contingency and Program Reserves

Over the reporting period a contingency draw of $0.28M was made and $0.4M was reallocated from savings in a budgeted line item (RTF financing) into contingency, as summarised in Table 6. The draws to-date, remaining contingency and program reserve balances are summarized in Table 6.

Table 6- Contingency and Program Reserve Draw-Down Table

WTP Contingency and Program Reserve Draws and Reallocations	Draw Date		$ Amount
Contingency and Program Reserve (in Control Budget)		**$**	**69,318,051**
Net Contingency and Program Reserve draws to July 31, 2020		$	(54,280,640)
Contingency and Program Reserve balance as at July 31, 2020		**$**	**15,037,411**
Residual Solids Discharge Line Connection to the Secondary Bypass Line	Aug-20	$	(281,522)
WWTP Total Draw		$	(281,522)
Reallocation of savings in a budgeted line item (RTF Financing) into RTF Contingency	Aug-20	$	400,000
RTF Total Increase		$	400,000
Conveyance Total Draw		$	-
PMO Total Draw		$	-
BC Hydro Total Draw		$	-
WTP Program Reserve Draw		$	-
Contingency and Program Reserve credits in the reporting period		$	400,000
Contingency and Program Reserve draws in the reporting period		$	(281,522)
Contingency and Program Reserve balance as at August 31, 2020		**$**	**15,155,889**

2.7.4 Project Funding

The federal and provincial governments are assisting the Capital Regional District in funding the Project.

The Government of British Columbia will provide $248 million towards the three components of the Project, while the Government of Canada is contributing:

- $120 million through the Building Canada Fund Major infrastructure Component towards the McLoughlin Point WWTP;
- $50 million through the Green Infrastructure Fund towards the conveyance system; and
- up to $41 million towards the RTF through the P3 Canada Fund.

The Project Team has applied to the Federation of Canadian Municipalities (FCM) for additional funding and has executed a grant agreement for the contribution of up to $346,900 towards the

delineation of the contamination and remediation and risk assessment for the McLoughlin Point Wastewater Treatment Plant.

The status of funding claims is summarised in Table 7. Note that the timing for the provision of Government of British Columbia and Government of Canada's funding differs by funding source. The Project Team will submit claims to the funding partners in accordance with the relevant funding agreements. In accordance with the funding agreements, funding from the P3 Canada Fund and the remainder of the funding from the Government of British Columbia cannot be claimed until relevant Project components are substantially complete.

Table 7- Project Funding Status

Funding Source	Maximum Contribution	Funding Received in the Reporting Period	Funding Received to Date
Government of Canada (Building Canada Fund)	$120M	-	$108M
Government of Canada (Green Infrastructure Fund)	$50M	-	$45 M
Government of Canada (P3 Canada Fund)	$41M	-	-
Government of British Columbia	$248M	-	$186.0M
Federation of Canadian Municipalities	$0.3M	-	-
TOTAL	**$459.3M**	-	**$339M**

2.8 Key Risks and issues

The Project Team actively identified and managed Project risks over the reporting period. Table 8 summarizes the highest-level risks that were actively managed over the reporting period, as well as the mitigation steps identified and/or undertaken over the reporting period.

No changes were made to the active risks summary over the reporting period:

The COVID-19 public health emergency continued to have impacts on the Project over the reporting period. It is anticipated that these impacts may affect several of the Project's risks. The Project Team are currently evaluating the impact of the public health emergency on the Project's risks, and anticipates that changes may be made to several of the risks as the situation evolves. Those risks that the Project Team have identified as potentially impacted, and that are currently under review, are identified in Table 8.

Table 8- Project Active Risks Summary

Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	Trend in risk level from previous reporting period
Project				
Misalignment between First Nations' interests and the implementation of the Project.	The assessed risk level reflects the Project Team's priority of establishing strong and effective relationships with First Nations interfacing with, or interested in, the Project.	First Nations engagement activities remained ongoing over the reporting period (see section 2.3 for further details).	L	No change
Divergent interests between multiple parties and governance bodies whose co-operation is required to successfully deliver the Project.	The assessed risk level reflects the Project Team's priority of establishing strong and effective relationships with municipal, provincial and federal government departments.	The Project Team continued engagement with municipal, provincial and federal government departments throughout the reporting period.	L	No change
Misalignment between Project objectives/scope and stakeholder expectations.	The assessed risk level reflects the Project Team's priority of establishing strong and effective community stakeholder engagement.	Community engagement activities were ongoing over the reporting period (see section 2.4 for further details).	L	No change
Lack of integration between Project Components.	Planning challenges and system integration between the McLoughlin point WWTP, RTF and Conveyance System components of the Project results in schedule delays and/or additional Project costs.	Physical and schedule interfaces are clearly delineated in all construction contracts along with the requirement for commissioning and control plans. The Project Team has used a single Owner's engineer (Stantec) to develop the indicative design for all critical project components with significant interfaces. Commissioning and control plans are under development	L	No change
Senior government funds issue delayed.	The assessed risk level reflects the Project Team's priority of ensuring Project funding commitments are honoured.	Responsibility for meeting funding commitments has been assigned and is being monitored.	L	No change

Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	Trend in risk level from previous reporting period
Downstream works delays.	Delay to the commissioning of the conveyance projects delays commissioning of the WWTP and the RTF.	Schedule has sufficient time allowance to ensure conveyance elements complete prior to requirement. Contractor agreements will include terms that require the contractor to recover schedule delays and/or allow for CRD acceleration.	M	No change but this risk may be impacted by the COVID-19 public health emergency (assessment is currently underway)
Upstream works delays.	Delay to the commissioning of either the WWTP or the RTF impacts the commissioning of the other plant.	Contracts with HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) and HRMG (as the Design-Build-Finance-Operate Maintain contractor for the RTF) include terms that require the contractor to recover schedule delays and/or allow for CRD acceleration. Liquidated damages for late delivery are included in both HRP and HRMG contracts.	L	No change but this risk may be impacted by the COVID-19 public health emergency (assessment is currently underway)
Public directly contacting contractors at sites.	Direct contact between the public and contractors could expose both parties to worksite hazards and potential injuries.	Communications and engagement plan and coverage of communications in contractor orientations.	M	No change
Change in law.	A change in law impacts the scope, cost or schedule of the Project.	Keep apprised of proposed modifications to relevant regulations so as to do the following as appropriate: submit comments on proposed modifications; and/or consider including anticipated modifications in contracts.	H	No change
Labour - availability and/or cost escalation.	There is insufficient labour available to construct the Project, and/or there is significant labour cost.	The Project Team will, through the use of competitive selection processes for all construction contracts, ensure that all Project contractors have appropriate experience and therefore understand labour risk.	L	No change

Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	Trend in risk level from previous reporting period
Disagreement on contractual obligations of the construction contractors.	There is a disagreement between the Project Team and a contractor regarding the performance of their contractual obligations.	The Project Team takes a proactive management approach to the resolution of any changes, claims and disputes that arise, working expeditiously to achieve resolution with the goal of minimizing any impacts to budget and schedule while ensuring adherence to the terms of the construction contracts.	M	No change but this risk may be impacted by the COVID-19 public health emergency (assessment is currently underway)

Risk Level Key - Assessed risk level (based on likelihood and potential impact			
Low	**Medium**	**High**	**Closed**
L	**M**	**H**	**C**

2.9 Status (Engineering, Procurement and Construction)

2.9.1 Wastewater Treatment Plant (McLoughlin Point WWTP)

The McLoughlin Point WWTP Project Component continued with Harbour Resource Partners ("HRP" as the Design-Build contractor for the McLoughlin Point WWTP) progressing construction and commissioning activities, including commencing commissioning with wastewater.

Key activities in progress or completed by HRP in August were as follows:

- Primary treatment area:
  - completed wet commissioning of Densadeg 1, 3 and 2;
  - commenced commissioning of Plate settler 1 & 2 process;
  - commenced Sludge tank, plant drain tank process commissioning; and
  - commenced fine screens process commissioning.

- Secondary treatment area:
  - commenced moving bed bio reactor (MBBR) process commissioning;
  - commenced biological aerated filter (BAF) process commissioning;
  - BAF cell 9 biolite installed, final covers and piping install underway;
  - commenced Blower process commissioning; and
  - Suez continued progressing through their pre-commissioning and commissioning tasks.

- Tertiary treatment area:
  - commenced outfall and clean water tank process commissioning;
  - commenced Backwash and Clean water pumping systems process commissioning;
  - disk filter system turned over to the commissioning team;
  - untreated wash down water system ready for influent; and
  - treated wash down water system progressed.

- O&M building:
  - Lower level interior south of the workshop nearing completion;
  - Second level throughout is nearing completion; and
  - Green roof system is complete.

- Site Works:
  - completed final north planter and tsunami walls; and
  - continued miscellaneous backfill on site.

Photographs of construction progress over the month of August at McLoughlin Point WWTP are shown in Figures 2-5.

Figure 2– McLoughlin Point Wastewater Treatment Plant – appliances being installed

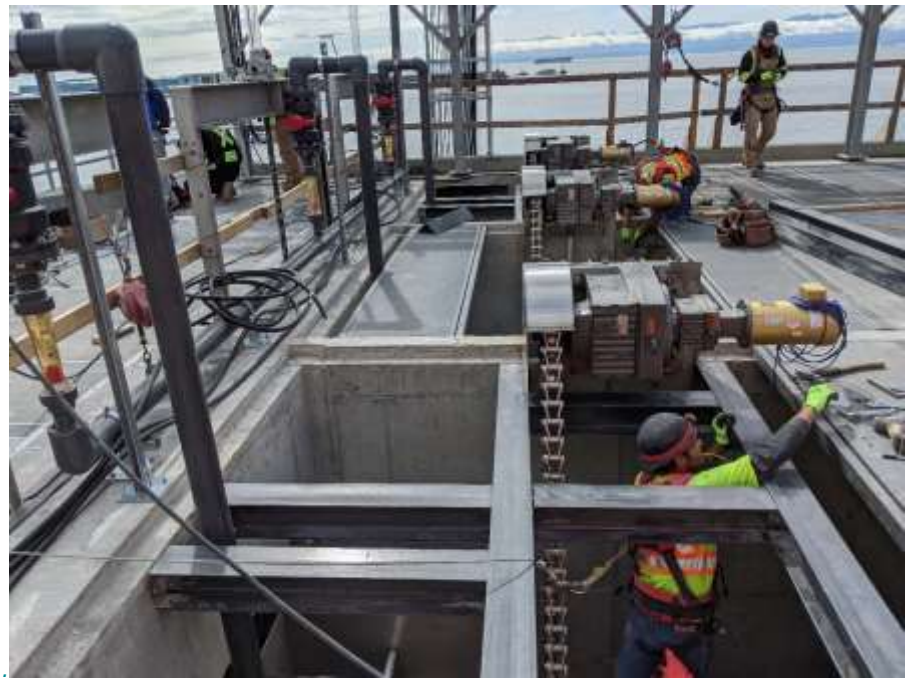


Figure 3– McLoughlin Point Wastewater Treatment Plant- Installation of rotating system on the disk filter channels.

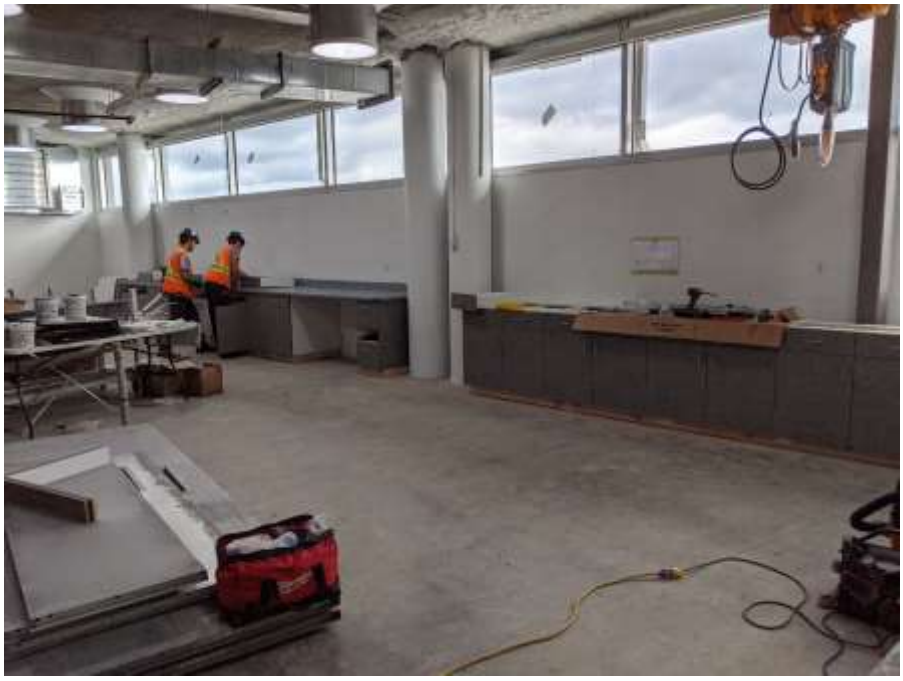


Figure 4− McLoughlin Point Wastewater Treatment Plant- Cabinet installation in workshop – Operations and Maintenance Level 1.

Figure 5− McLoughlin Point Wastewater Treatment Plant- Louvers installed at west entrance above doorway.

2.9.2 Residuals Treatment Facility

The RTF Project Component continued with Hartland Resource Management Group ("HRMG" as the Design-Build-Finance-Operate-Maintain contractor for the RTF) progressing construction and commissioning activities.

Key activities in progress or completed by HRMG in August were as follows:

- Digester Area
  - installation of insulation at Digesters 2 and 3;
  - commenced filling Digested Solids storage tanks with water for hydro test and installation of gas membrane; and
  - installation of biogas piping on roof of Digester Building tying into digester tanks.

- Other Municipal Solids Receiving Facility
  - completed install of hopper.

- Residuals Handling Building
  - commissioning of various systems including boilers; and
  - completed insulation of hot water piping.

- Residuals Drying Facility
  - commissioning of various systems in progress.

- Residuals Storage & Odour Control
  - commenced insulation of fiberglass reinforced plastic (FRP) ductwork.

- Operations Building
  - Fire alarm verification is progressing.

Photographs of construction progress over the month of August at the Residuals Treatment Facility are shown in Figures 6-8.

Figure 6– Residuals Treatment Facility- Dryer building and residuals handling building.

Figure 7– Residuals Treatment Facility- Operations building area.

Figure 8– Residuals Treatment Facility – Filling of the Digested Solids Storage Tank.

2.9.3 Conveyance System

2.9.3.1 Clover Point Pump Station

The Clover Point Pump Station continued with Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressing construction and commissioning activities over the reporting period, including commencing the pumping of wastewater from the Clover Point Pump Station, through the Clover Forcemain to the McLoughlin Point WWTP.

Other key construction activities in progress or completed by Kenaidan in August included:

- formed, placed and stripped concrete benches and upper plaza retaining walls;
- formed and poured north retaining wall;
- installed stone exterior to pump station;
- installed pipe supports to storm pumps;
- installed crane stops for electrical room monorail;
- installed public washroom accessories and finishes;
- completed installation of pigging chamber; and
- installed acoustic panels in generator room.

Photographs of construction progress over the month of August at Clover Point are shown in Figures 9-11.

Figure 9−Clover Point Pump Station- Stonework masonry completed on exterior of public washroom.

Figure 10−Clover Point Pump Station- concrete pour of north retaining wall.

Figure 11- Clover Point Pump Station – Backfill and grading around the landscaping walls.

2.9.3.2 Macaulay Point Pump Station and Forcemain

The Macaulay Point Pump Station and Forcemain continued with Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressing construction and commissioning activities over the reporting period, including commencing the pumping of wastewater from the Macaulay Point Pump Station, through the Macaulay Forcemain, to the McLoughlin Point WWTP.

Other key construction activities in progress or completed by Kenaidan in August were as follows:

- Diversion Chamber:
  - ongoing backfill around the existing drop structure; and
  - installation of vent pipes.

- Pump Station:
  - installed additional air release valves in the pump room;
  - ongoing installation of fiberglass reinforced plastic (FRP) platform and stairs in the pump room;
  - ongoing FRP grating installation in the bin room;
  - installation of Acoustic Insulation Panels in Genset Room and Pump Rooms;
  - ongoing vent pipe installation on the East side;
  - continued backfill on the East side; and
  - ongoing installation of electrical sleeves to the low level chamber.

Photographs of construction progress over the month of August at Macaulay Point Pump Station are shown in Figures 12-13.

Figure 12–Macaulay Point Pump Station- Installation of acoustic panels in Drywell.

Figure 13−Macaulay Point Pump Station- Clean up and landscaping east of the blue house.

2.9.3.3 Clover Forcemain (CFM)

Windley Contracting Ltd. (“Windley” as the Construction Contractor) continued construction and commissioning activities over the reporting period, including supporting the commencement of pumping of wastewater from the Clover Point Pump Station, through the Clover Forcemain to the McLoughlin Point WWTP.

Key construction activities in progress or completed by Windley in August included:

- seawall balustrade replacement construction continues; and
- construction of enhanced sidewalk.

Photographs of construction progress over the month of August on the Clover Forcemain are shown in Figures 14-15.

Figure 14−Clover Forcemain- new aluminium railing is installed and sidewalk ongoing

Figure 15−Clover Forcemain- Parking bollards installed.

2.9.3.4 Residual Solids Conveyance Line

The RSCL is being delivered through two construction contracts:

- Residual Solids Pipes; and
- Residual Solids Pump Stations

Residual Solids Pipes: Don Mann Excavating Ltd. (“Don Mann” as the Construction Contractor for the Residual Solids Pipes) continued construction activities over the reporting period for the Saanich infrastructure improvement being undertaken at Peers Creek.

Key construction activities in progress or completed by Don Mann in August were as follows:

- fish salvage and creek dewatering was conducted with supervision by McElhanney;
- existing concrete-encased BC Hydro transmission duct bank was exposed, and more concrete was added to the surround;
- realigned a section of an existing watermain, the new section was successfully tested and tied in to the existing main by Saanich with support from Don Mann;
- existing sewer pipe was replaced with ductile iron pipe within a casing;
- removal of existing storm drain manhole and culvert pipes;
- installed twin culverts across Interurban Road;
- installation and connection of a new storm drain manhole; and
- two boreholes were advanced to assess soil conditions as part of concrete
- Headwall design.

Photographs of construction progress over the month of August on the Residual Solids Pipes are shown in Figures 16-17.

Figure 16− Residual Solids Pipes- Peers Creek – Base gravel being placed and graded over culverts.

Figure 17−Residual Solids Pipes – Peers Creek – Backfilling and compacting of culverts.

Residual Solids Pump Stations: Knappett Projects Inc. (“Knappett” as the Construction Contractor for the Residual Solids Pump Stations) continued construction and commissioning activities over the reporting period.

Key construction activities in progress or completed by Knappett in August included:

- form and pour new pump bases and continue installation of mechanical equipment and piping for the Hartland water system improvements;
- replaced threaded hanger rods on Admirals and Tillicum bridges;
- installed valve chamber hatch drains at pump stations 2 & 3;
- install odour control unit vent piping at all pump stations; and
- completed site grading at the Marigold pump station.

Photographs of construction progress over the month of August on the Residual Solids Pump Stations are shown in Figures 18-19.

Figure 18−Residual Solids Pump Stations– Tillicum Bridge – Installing new hanger rods.

Figure 19 −Residual Solids Pump Stations – Pump Station # 1: installing pipe stands on the Odour Control Unit vent piping.

2.9.3.5 Arbutus Attenuation Tank

NAC Constructors Ltd. (as the Construction Contractor for the Arbutus Attenuation Tank) continued construction activities over the reporting period.

Key construction activities in progress or completed by NAC Constructors Ltd. in August include:

- sections of Attenuation Tank mud mat poured and completed;
- completed valve chamber excavation, subbase placement, and mud mat placement;
- commenced coring of valve chamber piping and doorway;
- completed 90% of the main tank and 100% of the valve chamber base slab reinforcing steel, injection and PVC water stop;
- completed and backfilled installation of culvert extension;
- additional anchors were proof tested to resolve the failed anchor along with supplementary reinforcing steel installation around adjacent anchors; and
- Completed base slab pours of the Valve Chamber, the Lower Sump and Trough area of the Main Tank.

Photographs of construction progress during the month of August at the Arbutus Attenuation Tank are shown in Figures 20 and 21.

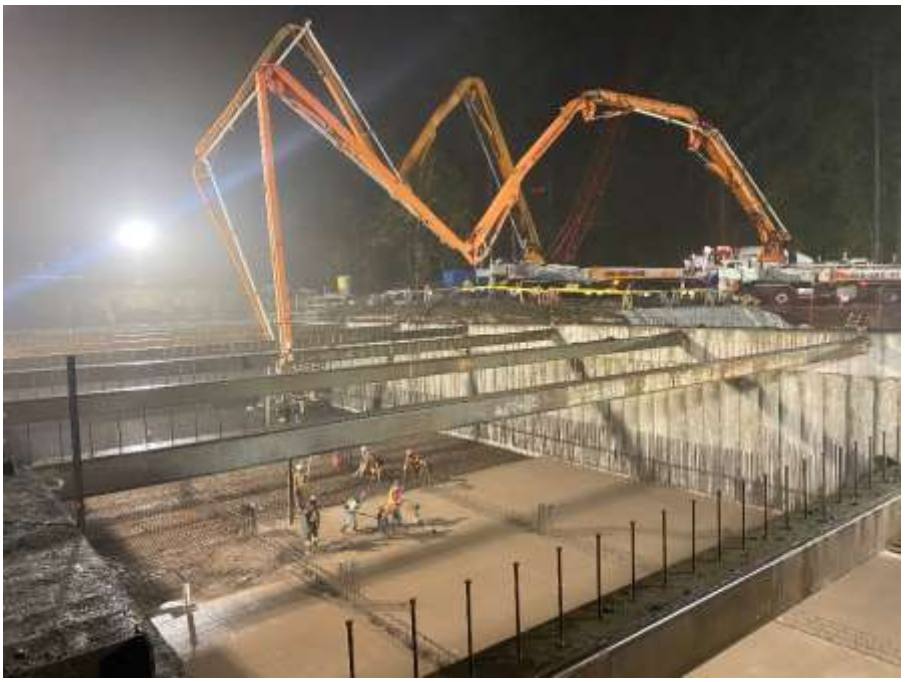


Figure 20−Arbutus Attenuation Tank- Base Slab night time concrete pour

Figure 21−Arbutus Attenuation Tank- slab pour complete and covered with wet blankets for curing.

2.9.3.6 Trent Forcemain

Jacob Bros. Construction Inc. (as the Construction Contractor for the Trent Forcemain) progressed continued construction activities over the reporting period.

Key construction activities in progress or completed by Jacob Bros. in August included:

- installed Memorial Crescent air valve chamber and internal hardware setup ready for commissioning;
- installation of forcemain on Stannard Avenue and Brooke Street;
- reinstated three external drop structure manholes on Brooke Street prior to backfill; and
- completed Memorial Crescent watermain grade adjustment work.

A photograph of construction progress during the month of August at the Trent Forcemain is shown in Figure 22.

Figure 22−Trent Forcemain- base course paving on Eberts Street.

Appendix A− Trent Forcemain: Updated Work Hours (August 6, 2020)

Wastewater Treatment Project

August 6, 2020

Dear Resident,

We are writing to notify you that the contractor for the Trent Forcemain project will be changing their work hours on Saturdays and will be starting at 8:00 a.m. beginning August 8.

Work hours are now Monday to Friday from 7:00 a.m. to 7:00 p.m. and Saturday from 8:00 a.m. to 7:00 p.m.

Construction for the Trent Forcemain continues with over 50% of the pipes installed (1,000m of 1,900m).

We appreciate your patience while this work is being completed. Please feel free to contact us at our 24/7 phone line 1-844-815-6132 or email wastewater@crd.bc.ca if you have any questions.

Thank you,

Wastewater Treatment Project Team

Appendix B− Dallas Road Update (August 6, 2020)

Wastewater Treatment Project
Treated for a cleaner future

Dallas Road Update
August 2020

Clover Point

The majority of construction on the pump station is complete and commissioning (or system testing) is underway.

Public space improvements are currently being built: a new viewing plaza, connecting pathways, benches, water fountain, public art, bike racks, and a new public washroom. Anticipated opening: November 2020.

Clover Point Road remains closed and the City of Victoria will determine when it will reopen.

The site trailer and laydown area will be fully restored to its original condition in fall 2020.

Dallas Road

The City of Victoria is replacing the seawall balustrade near Ogden Point on Dallas Road and adding a plaza to the sidewalk. Anticipated completion: September 2020.

The City of Victoria has designated the new bike path along Dallas Road as a multi-use path for cyclists and pedestrians to share as a pilot project, similar to the Galloping Goose or E&N Rail Trail. Signs and pathway markings anticipated to be complete: end of August 2020.

Final paving of Dallas Road between Lewis and Dock streets: September. Standard and accessible parking stalls marked on Dallas Road: fall 2020.

Pathway lighting, garbage cans, and bike racks have been installed along the path and 88 trees have been planted in Beacon Hill Park.

Any questions about the work, please contact the Project Team.

24/7 Phone Line
1.844.815.6132

Email
wastewater@crd.bc.ca

Website
wastewaterproject.ca

Appendix C− Trent Forcemain: Dallas Road Seawall (August 17, 2020)

Dallas Road Seawall

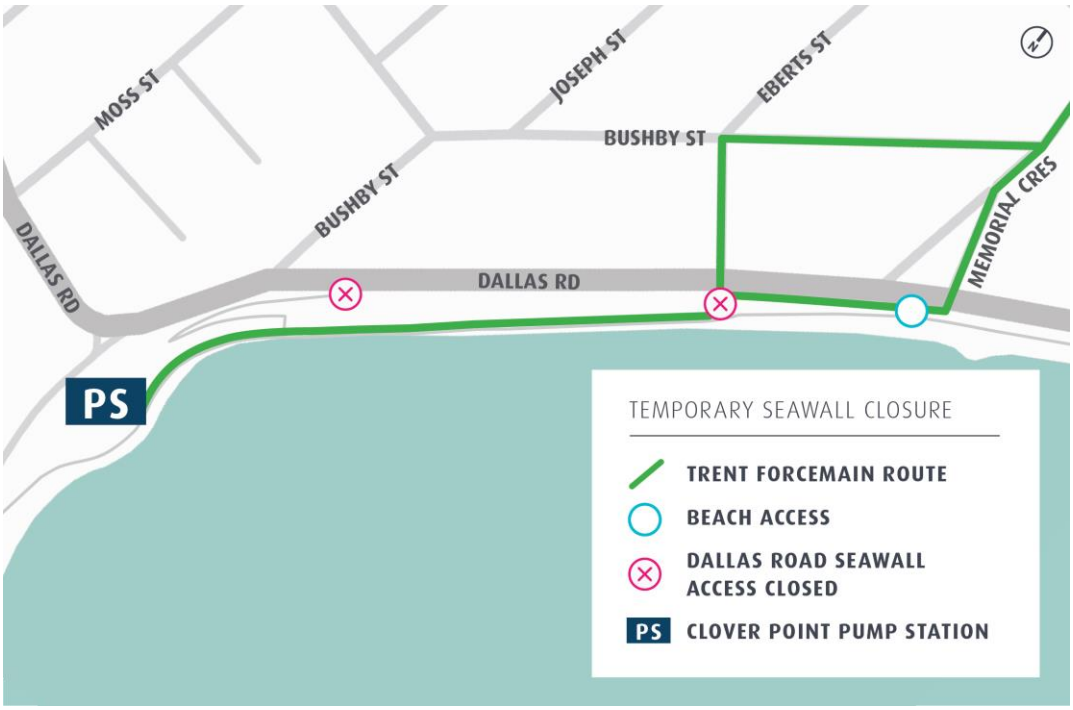
The Wastewater Treatment Project includes construction of the Trent Forcemain, 1.9km of pipes that will be installed from the intersection of Chandler Avenue and St. Charles Street to the Clover Point Pump Station. This work includes installing a pipe under the pedestrian path on the Dallas Road Seawall. The path will be temporarily closed and some parking will be restricted during construction. Beach access will be maintained.

What's Happening

- The Dallas Road Seawall between Memorial Crescent and the Clover Point Pump Station will be excavated and a pipe will be installed.
- Final restoration of the pedestrian path will take place after this section has been tested and completed.

Timeline

- Pipe installation is expected to begin in August 2020.
- Restoration of the seawall is anticipated to be complete in fall 2020.



Thank you for your patience as this work is completed.

Any questions about the work, please contact the Project Team.

24/7 Phone Line
1.844.815.6132

Email
wastewater@crd.bc.ca

Website
wastewaterproject.ca

Appendix D– Monthly Cost Report (August)

MONTHLY COST REPORT
as at August 31, 2020

Description	BUDGET		COST EXPENDED					COMMITMENTS			FORECAST		VARIANCE	
	Control Budget	Allocated Budget	Expended to July 31, 2020	Expended over reporting period (August 2020)	Expended to August 31, 2020	Expended to August 31, 2020 as a % of Allocated Budget	Remaining (Unexpended) Allocated Budget at August 31, 2020	Total Committment at August 31, 2020	Unexpended Commitment at August 31, 2020	Uncommitted Allocated Budget at August 31, 2020	Forecast to Complete	Forecast at Completion	Variance at Completion $	Variance at Completion as a % of Allocated Budget
McLoughlin Point Wastewater Treatment Plant	**331.4**	**328.1**	**303.0**	**4.2**	**307.2**	**94%**	**20.9**	**321.2**	**14.0**	**6.9**	**20.9**	**328.1**	**-**	**0%**
Construction	306.7	321.1	302.6	4.2	306.8	96%	14.3	320.5	13.8	0.5	14.3	321.1	-	0%
Contingency	14.9	0.1	-	-	-	0%	0.1	-	-	0.1	0.1	0.1	-	0%
Financing	9.8	6.9	0.5	-	0.5	7%	6.4	0.7	0.2	6.2	6.4	6.9	-	0%
Residuals Treatment Facility	**159.4**	**140.1**	**11.4**	**0.0**	**11.4**	**8%**	**128.7**	**139.1**	**127.7**	**1.0**	**128.7**	**140.1**	**-**	**0%**
Construction	145.4	139.1	11.4	0.0	11.4	8%	127.6	139.1	127.6	0.0	127.6	139.1	-	0%
Contingency	12.3	0.6	-	-	-	0%	0.6	-	-	0.6	0.6	0.6	-	0%
Financing	1.7	0.4	0.0	-	0.0	3%	0.4	0.0	0.0	0.4	0.4	0.4	-	0%
Conveyance System	**158.0**	**215.6**	**170.4**	**5.1**	**175.6**	**81%**	**40.1**	**196.2**	**20.7**	**19.4**	**40.1**	**215.6**	**-**	**0%**
Macaulay Point Pump Station	25.4	30.9	27.7	0.8	28.5	92%	2.4	30.9	2.4	0.0	2.4	30.9	-	0%
Macaulay Forcemain	5.6	7.4	7.4	-	7.4	100%	-	7.4	-	-	-	7.4	-	0%
Craigflower Pump Station	12.5	12.4	12.4	-	12.4	100%	-	12.4	-	-	-	12.4	-	0%
Clover Point Pump Station	23.7	27.3	24.7	-	24.7	91%	2.5	27.3	2.5	0.0	2.5	27.3	-	0%
Currie Pump Station^	2.8	0.1	0.1	-	0.1	100%	-	0.1	-	-	-	0.1	-	0%
Arbutus Attenuation Tank	14.2	24.6	14.7	1.0	15.7	64%	8.9	23.3	7.6	1.3	8.9	24.6	-	0%
Clover Forcemain	14.6	32.5	30.3	0.3	30.6	94%	1.9	31.9	1.3	0.6	1.9	32.5	-	0%
Currie Forcemain^	3.3	0.2	0.2	-	0.2	100%	-	0.2	-	-	-	0.2	-	0%
Trent Forcemain	9.5	11.3	3.9	0.9	4.8	42%	6.5	8.5	3.7	2.8	6.5	11.3	-	0%
Residual Solids Conveyance Line	19.1	36.6	34.4	0.8	35.2	96%	1.4	36.6	1.4	0.0	1.4	36.6	-	0%
Residual Solids Pump Stations & Bridge Crossings	4.6	18.0	14.1	1.3	15.5	86%	2.5	17.1	1.6	0.9	2.5	18.0	-	0%
Residual Solids Conveyance Line – Highway Crossing	-	0.4	0.3	-	0.3	76%	0.1	0.4	0.0	0.1	0.1	0.4	-	0%
Contingency	16.8	9.9	-	-	-	0%	9.9	-	-	9.9	9.9	9.9	-	0%
Financing	5.8	4.1	0.2	-	0.1	4%	3.9	0.3	0.2	3.7	3.9	4.1	-	0%
Project Management Office ("PMO")	**75.8**	**77.9**	**57.4**	**1.6**	**59.1**	**76%**	**18.8**	**70.4**	**11.4**	**7.4**	**18.8**	**77.9**	**-**	**0%**
Project costs Aug 2016-Dec 2016	2.2	2.2	2.2	-	2.2	100%	-	2.2	-	-	-	2.2	-	0%
Owner's Engineering	17.2	17.7	14.5	0.9	15.4	87%	2.3	17.7	2.3	-	2.3	17.7	-	0%
Conveyance Design	5.0	9.5	7.8	0.2	8.0	85%	1.5	8.9	0.9	0.6	1.5	9.5	-	0%
Advisors & Professional Support	7.0	14.8	10.3	0.1	10.4	71%	4.4	11.6	1.1	3.2	4.4	14.8	-	0%
Project Board	2.0	1.3	0.9	0.0	1.0	76%	0.3	1.0	-	0.3	0.3	1.3	-	0%
Project Board Expenses	0.3	0.1	0.1	-	0.1	64%	0.0	0.1	-	0.0	0.0	0.1	-	0%
Project Team	29.1	23.1	16.5	0.4	16.9	73%	6.3	22.9	6.1	0.2	6.3	23.1	-	0%
Project Leadership Team Expenses	0.7	0.4	0.2	-	0.2	62%	0.1	0.2	-	0.1	0.1	0.4	-	0%
Project Support Team Expenses	0.5	0.2	0.1	-	0.1	67%	0.0	0.1	-	0.0	0.0	0.2	-	0%
CRD Financial Services	1.5	1.4	0.9	0.0	1.0	70%	0.4	1.4	0.4	-	0.4	1.4	-	0%
CRD Human Resources	0.3	0.3	0.2	0.0	0.2	92%	0.0	0.3	0.0	-	0.0	0.3	-	0%
CRD Corporate Communications	0.2	0.2	0.2	-	0.2	90%	0.0	0.2	0.0	-	0.0	0.2	-	0%
CRD Real Estate	0.3	0.3	0.2	-	0.2	92%	0.0	0.3	0.0	-	0.0	0.3	-	0%
CRD Information Technology	0.4	0.4	0.3	0.0	0.3	74%	0.1	0.4	0.1	-	0.1	0.4	-	0%
CRD Insurance	0.1	0.0	0.0	-	0.0	100%	-	0.0	-	-	-	0.0	-	0%
CRD Operations	0.6	0.6	0.5	0.0	0.5	88%	0.1	0.6	0.1	-	0.1	0.6	-	0%
CRD Legislative Services	0.1	0.1	0.1	-	0.1	100%	-	0.1	-	-	-	0.1	-	0%
CRD Corporate Safety	0.2	0.2	0.2	-	0.2	100%	-	0.2	-	-	-	0.2	-	0%
CRD Executive Services	-	0.1	0.1	-	0.1	86%	0.0	0.1	0.0	-	0.0	0.1	-	0%
Office Lease	1.9	1.3	0.9	0.0	0.9	71%	0.4	1.2	0.3	0.1	0.4	1.3	-	0%
Office Supplies	0.1	0.2	0.2	-	0.2	92%	0.0	0.2	-	0.0	0.0	0.2	-	0%
Vehicles	0.2	0.2	0.2	-	0.2	95%	0.0	0.2	0.0	-	0.0	0.2	-	0%
Connections Call Center	-	0.0	0.0	-	0.0	100%	-	0.0	-	-	-	0.0	-	0%
Communication support materials	0.5	0.2	0.1	-	0.1	61%	0.1	0.1	-	0.1	0.1	0.2	-	0%
Computer Hardware, Software & Training	1.0	1.1	0.7	-	0.7	61%	0.4	0.7	-	0.4	0.4	1.1	-	0%
Contingency	4.8	2.3	-	-	-	0%	2.3	-	-	2.3	2.3	2.3	-	0%
BC Hydro	**12.9**	**4.3**	**2.0**	**0.0**	**2.1**	**48%**	**2.2**	**2.1**	**0.0**	**2.2**	**2.2**	**4.3**	**-**	**0%**
Third Party Commitments	**8.1**	**8.1**	**4.1**	**0.1**	**4.1**	**51%**	**4.0**	**6.9**	**2.7**	**1.3**	**4.0**	**8.1**	**-**	**0%**
Program Reserves	**19.2**	**0.9**	**-**	**-**	**-**	**0%**	**0.9**	**-**	**-**	**0.9**	**0.9**	**0.9**	**-**	**0%**
Core Area Wastewater Treatment Project	**765.0**	**775.0**	**548.4**	**11.0**	**559.4**	**72%**	**215.5**	**735.9**	**176.5**	**39.1**	**215.5**	**775.0**	**-**	**0%**

* Values presented in $millions, results in minor rounding differences
** Cost report presents approved expenditures
^ Component no longer required, and would not provide any value therefore removed from Project Scope; Costs include Seaterra initiation, planning and design

Making a difference...together

CALWMC 20-01

REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, OCTOBER 7, 2020

SUBJECT 2019-2022 Wastewater Service Planning

ISSUE SUMMARY

To provide the Core Area Liquid Waste Management Committee with an overview of relevant initiatives undertaken by Integrated Water Services department in 2020 and planned for 2021 to deliver on approved Board Priorities and the Corporate Plan.

BACKGROUND

The CRD Board completed its strategic planning early in 2019 and approved the CRD Board Strategic Priorities 2019-2022.

The four priorities are:

1. Community Wellbeing – Transportation & Housing;
2. Climate Action & Environmental Stewardship;
3. First Nations Reconciliation; and
4. Advocacy, Governance & Accountability.

The priorities were confirmed at the annual check-in on May 13, 2020.

The 2019-2022 CRD Corporate Plan is aligned to the Board direction. It highlights the initiatives the CRD needs to deliver over the Board's four-year term to address the region's most important needs. The Corporate Plan identified six initiatives under the Wastewater initiative, that fall under the Core Area Liquid Waste Management Committee's mandate.

Appendix A *Community Need Summary - Wastewater 2021* is a summary of the planned activities for 2021. It contains details about core service levels, new initiatives proposed and performance metrics.

Appendix B *Wastewater - Initiatives Progress Report* provides insights into what has been delivered through the two delivery initiatives approved last year, for delivery in 2020.

The Service Planning process gathered information necessary to assemble a provisional budget for Committee and Board review. The purpose of this report is to explain how the adjustments to the work program connects to the Board Priorities, Corporate Plan and provisional budget.

ALTERNATIVES

Alternative 1

The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:

That Appendix A Community Need Summary - Wastewater be approved as presented and advanced to the October 28, 2020 provisional budget review process.

Alternative 2

The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:

That Appendix A Community Need Summary - Wastewater be approved as amended and advanced to the October 28, 2020 provisional budget review process.

IMPLICATIONS

Financial Implications

Initiatives identified in the Corporate Plan (including Board Priorities) cannot be undertaken without resourcing. The Board determines resourcing through its annual review and approval of financial plans. To support the Board's decision-making, staff, through the service planning process, provide recommendations on funding, timing and service levels.

During this years' service planning process, staff have been mindful of the fiscal challenges facing the region in the months ahead. To that end, budget increases or other impacts have been mitigated, where possible, however this has been particularly challenging with the preparation of a 'new' operating and capital budget for the service, given the uncertainties associated with the first year of operation of the McLoughlin WWTP. Although the majority of the new staff required to operate the new facilities were hired in 2019/2020, five staff positions were deferred to 2021 to help mitigate pre-operating costs and confirm operation and maintenance requirements and resource capacity.

Service Delivery Implications

The Community Need Summary provides an overview of all work that needs to be undertaken in order to meet our regulatory requirements, satisfy Board direction and meet the needs of the communities we serve.

Alignment with Board & Corporate Priorities

Staff have identified two initiatives that will have budget and/or staffing implications for 2021 (Table 1).

Table 1: Community Needs Summary - Wastewater, Delivery Initiatives

#	Initiative	Description	Year(s)	FTE impacts in 2021	Budget Impacts in 2021
8a-1.1	Wastewater Planning	Advance management of liquid waste management through a review and update of the core area liquid waste management plan	2021	0	Included in Provisional Budget
8a-1.1	Wastewater Management	Advance strategy for construction/maintenance of facilities	2021	4 Ongoing	Included in Provisional Budget
8a-1.2	Facilities Management Centralization Strategy	Facility operations and maintenance support for CAWTP facilities.	2021	1 Ongoing	Included in Provisional Budget
8a-1.3	Saanich Peninsula Liquid Waste Management Plan	Development of a detailed inflow and infiltration reduction program for the Peninsula	2021	0	Included in Provisional Budget

Blue highlighted areas are initiatives that directly address a Board Priority.

Delivery Initiatives

8a-1.1 Wastewater Planning

The recent changes to Core Area wastewater management need to be incorporated into an updated Liquid Waste Management Plan. The Plan was recently consolidated and audited and the next steps are to update the Plan (individual chapters) and revise the document in consultation with the regulator. This will also include some public consultation.

8a-1.1 Wastewater Management and 8a-1.2 Facilities Management Centralization Strategy

The CRD is responsible for implementing wastewater treatment in the Core Area. Construction of new and upgraded wastewater facilities will be completed in Q3 and Q4 of 2020. The new facilities will help protect the marine receiving environment by providing tertiary treatment for wastewater from the core area municipalities (Victoria, Esquimalt, Saanich, Oak Bay, View Royal, Langford and Colwood) and the Esquimalt and Songhees First Nations. This is the final stage of a large scale multi-year, capital project led by the CRD with funding assistance from the federal and provincial governments.

The operation of the new and upgraded facilities requires additional staff to ensure effective operations and maintenance of facilities going forward. To this end and building on new staffing

positions filled in 2019/2020, initiative 8a-1.1 seeks to create four ongoing positions in the Infrastructure Operations division and initiative 8a-1.2 seeks to create one additional position in the Facilities Management & Engineering Services division. These positions are critical to ensure adequate maintenance support for building systems, including safety inspections, and other operational duties. The positions will be filled between late 2020 and end of 2021.

8a-1.3 – Saanich Peninsula Liquid Waste Management Plan

A recent audit of the Saanich Peninsula Liquid Waste Management Plan has identified unfulfilled commitments to evaluate and manage inflow and infiltration (I&I) to the sanitary sewer. The Saanich Peninsula Wastewater system has not had any documented wet weather related overflows but inflow and infiltration increases as infrastructure ages so it would be prudent to manage this risk proactively.

This initiative seeks to develop a more detailed inflow and infiltration reduction program for the Peninsula. Developing flow calculations for each catchment area will allow the CRD and municipalities to plan and implement the most cost-effective capital upgrades/replacement program for the sanitary sewer infrastructure. This work will build on the 2020 work done to collect additional flow data and pinpoint areas with the highest inflow and infiltration levels in the Saanich Peninsula conveyance system.

CONCLUSION

Staff have been progressing initiatives and actions identified in the Corporate Plan, including Board Priorities. The Board determines resourcing through its annual review and approval of financial plans. As per previous years, to support the Board's decision-making, staff are providing recommendations on funding, timing and service levels through the service and financial planning processes. The comprehensive budget information for the Core Area Liquid Waste Management Service, including the above noted initiatives, is presented under a separate report to the Committee.

RECOMMENDATION

The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:

That Appendix A Community Need Summary - Wastewater be approved as presented and advanced to the October 28, 2020 provisional budget review process.

Submitted by:	Ted Robbins, B. Sc., C. Tech., General Manager, Integrated Water Services
Submitted by:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENTS

Appendix A: Community Need Summary - Wastewater
Appendix B: Initiatives Progress Report - Wastewater

Community Need

2021 Summary

Wastewater

Strategy

Target Outcome
We envision efficient and effective management of the region's wastewater

Strategic Context

Strategies

- Core Area Liquid Waste Management Plan
- Transition to stable operation of McLoughlin Point Wastewater Treatment Plant and Residuals Treatment Facility
- Transition of residual solids from other wastewater treatment facilities to the Residuals Treatment Facility
- Continue to effectively operate and maintain the Saanich Peninsula Wastewater Treatment Plant.
- Continue to effectively operate and maintain five small wastewater systems in the Electoral Areas.

Trends, risks and issues

- Monitoring programs for new wastewater infrastructure in the Core Area to be implemented
- Enhanced Key Manhole study to inform CRD source control initiatives and wastewater operations to be completed 2021-2022.
- Biosolids short-term implementation, and long term planning, options analysis and pilot testing
- Transition of residual solids from other wastewater treatment facilities to the Residuals Treatment Facility
- Optimization of operation and maintenance of new infrastructure in the Core Area
- Continued onboarding of new staff to operate and maintain the new infrastructure
- Continue to operate and maintain the other wastewater infrastructure in the Core Area, Saanich Peninsula, and the Electoral Areas. This infrastructure is of various ages and in several cases large scale infrastructure renewal is required.
- Facilities Management's role in supporting maintenance of superstructures in wastewater is evolving.

Community Need

2021 Summary

Services

Core Services Levels	
Service	**Levels**
Core Area, Saanich Peninsula Wastewater Systems and Small Wastewater Systems in the Electoral Areas Services include wastewater conveyance and tertiary treatment for Core Area, and conveyance and secondary treatment for Saanich Peninsula, and the small wastewater systems in the Electoral Areas.	
Wastewater System Operations Wastewater treatment collection and transmission system operation and monitoring. System and facility maintenance, consumables management and preventative maintenance	• Wastewater treatment • System operation, monitoring and maintenance • Consumables management
Emergency Response/System Failure Wastewater overflows and unplanned service interruptions	• Wastewater overflows and public and environmental health protection • Unplanned service interruptions
Capital Project Delivery and Works Project design, procurement and delivery of projects planned each year, on time and budget. Installations, equipment replacement and capital projects support	• Capital program value for seven services • Infrastructure renewal and upgrades • Capital project support
Infrastructure planning Strategic asset management for all services/systems including modeling and capacity analysis, vulnerability assessment, infrastructure renewal plans.	• Asset management Plans • Manage capital plans for seven wastewater services
Engineering services Support of Infrastructure Operations through engineering services such as process, civil, electrical and mechanical troubleshooting	• Engineering support of utility operations for the seven wastewater services.
Environmental Protection Regulatory and non-regulatory services and a support role across the organization that focuses on contaminant reduction, monitoring and assessment associated with liquid waste treatment.	
Regional Source Control Administration, monitoring, and reporting of compliance with regional bylaw	• Inspect, monitor and enforcement for businesses and institutions connected to sanitary sewer • Promote contaminant reduction associated with sanitary and stormwater systems.

Community Need

2021 Summary

Core Services Levels	
Service	**Levels**
Core Area and Saanich Peninsula Wastewater & Marine Environmental Program Oversight for wastewater monitoring and assessment and reporting to meet regulatory requirements	• Marine outfall monitoring, assessment and reporting services to demonstrate compliance with federal and provincial legislation • Update of Liquid Waste Management Plans
Residuals Treatment Facility Administration of the Project Agreement for operation of the RTF and biosolids beneficial use strategy	• Monitoring and compliance reporting
Onsite Wastewater Management Regulatory oversight for onsite wastewater systems and education and outreach services across the region	• Promote and monitor compliance with regional bylaw
Septage Service Administration, monitoring and reporting of regional septage service	• Negotiate and manage one septage disposal contract servicing the capital region
Watershed Management Program Promote environmental stewardship associated with sanitary and stormwater systems, contaminants and flows	• Promote public awareness and stewardship initiatives • Public education and engagement in the region to promote sustainable behavior through campaigns, initiatives and services
Support Services The core services listed rely on the support of several corporate and support divisions to effectively operate on a daily basis. These services are reported on in the Accountability Community Need Summary.	• Services include Human Resources & Corporate Safety, Corporate Communications, Asset Management, Financial Services, Information Technology & GIS, Information Services, Legislative Services, Facility Management, Fleet Management, Legal Services, Risk & Insurance and Real Estate Services.

Community Need

2021 Summary

Initiatives					
Ref	Initiative	Description	Year(s)	Status	2021 impacts
8a-1	Wastewater Management through LWMP	Advance management of wastewater & storm water through liquid waste management planning & construction/ maintenance of facilities Update of Core Area and Saanich Peninsula liquid waste management plans	2020	Absorbed in Core, see 8a-1.1-3 for follow-on initiatives	
8a-1.1	Wastewater Management	New resources to support Core Area Wasterwater Treatment facility coming into service at the end of 2020 Biosolids short-term implementation, and long term planning, options analysis and pilot testing	2021	NEW Not started	4.0 Ongoing
8a-1.2	Facilities Centralization Strategy – FMW (CAWTP)	New facility operationas and maintenance support for Core Area Wasterwater Treatment facility coming into service at the end of 2020	2021	NEW Not started	1.0 Ongoing
8a-1.3	Saanich Peninsula Liquid Waste Management Plan – I&I	Develop detailed inflow and infiltration reduction program for the Peninsula	2021	NEW Not started	

*New – Initiatives not in the 2019-2022 Corporate Plan

Initiative approved in prior years which have now been delivered or absorbed in Core Services:

- 8a-2 – Stormwater Contaminant Sources

Community Need

2021 Summary

Business Model

Funding

Who contributes

- Core Area Municipalities (Colwood, Esquimalt, Langford, Oak Bay, Saanich, Victoria, View Royal) and Songhees and Esquimalt First Nations
- Saanich Peninsula Municipalities (Central Saanich, North Saanich, Sidney) and Saanich Peninsula First Nations Bands
- Local Wastewater Service Areas in the Electoral Areas
- Support Services: varies per service

Funding Sources

- Requisitions

Reporting Structure

- Core Area Liquid Waste Management Committee
- Saanich Peninsula Wastewater Commission

Community Need Key Performance Indicator (KPI)

Discussion

Link to Target Outcome

The following KPIs link to the CRD's goals of safe, resilient and environmentally sound wastewater conveyance and treatment for our customers in the Capital Region and protection of the environmental and public health. These KPIs are being established with new performance targets that will be reported in future service plans.

- Compliance with provincial and federal regulatory requirements and operational certificates
- Total volume of wastewater collected and treated
- Operating cost per megaliter if wastewater collected and treated
- Energy use per megalitre of wastewater treated
- Volume/percent of biosolids beneficially used
- Utilization of gas generated at the Residuals Treatment Facility
- Annual number of wet-weather related sanitary sewer overflow events from CRD systems (resulting in near-shore discharges/beach closures)
- Delivery of annual capital program
- Number of complaints related to operation (noise/odour)

Community Need

Initiative Progress Report

Wastewater

Initiatives approved in 2020 Budget		
Ref	**Initiative**	**Progress to date**
8a-1	Wastewater Management through Liquid Waste Management Plan (LWMP)	**Progressing** • Regulatory approval of new wastewater infrastructure discharges (McLoughlin WWTP and RTF) • Implementation of short-term biosolids plan, initiated planning for long-term biosolids management. • Audit of Core Area LWMP, to be followed by review and update of LWMP chapters.
8a-2	Stormwater Contaminant Sources	**Part of core service delivery**

* New - Initiatives not in the 2019-2022 Corporate Plan

Making a difference...together

CALWMC 20-02

REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, OCTOBER 7, 2020

SUBJECT **Core Area Wastewater Service - 2021 Operating and Capital Budget**

ISSUE SUMMARY

To provide an overview of the 2021 Core Area Liquid Waste Management Service budget including 2020 year end budget projections and transitional budget highlights, as the operating budget is set for the new and existing conveyance systems and the new treatment plant, and the capital budget is set for the longer term infrastructure renewal and future capacity upgrades on the existing systems.

BACKGROUND

By the end of this year, the Core Area Wastewater System will provide wastewater collection, conveyance and tertiary treatment for the sewered areas of the seven participating municipalities and two First Nations, serving a population equivalent of approximately 320,000 and treating an average of almost 82 million litres of wastewater per day. The Capital Regional District (CRD) will achieve compliance with the federal effluent quality standards under the Canadian Wastewater Systems Effluent Regulation and the conditions of the provincially approved Core Area Liquid Waste Management Plan.

This 2021 Core Area Liquid Waste Management Service budget has been prepared for the Core Area Liquid Waste Management Committee's (Committee) consideration. The Committee will make budget recommendations to the CRD Board, who has the authority to approve the budget. The 2021 budget will be the first budget that reflects the operating costs of the new McLoughlin Point Wastewater Treatment Plant (WWTP) and new conveyance system combined with the existing conveyance system. Also new for 2021 are the combined capital costs and reserve fund contributions. The operating budget has been developed based on:

- Advice from consultants with extensive wastewater treatment design and operational experience, particularly with the Biological Aerated Filter Process (Secondary Treatment) and Disk Filter Process (Tertiary Treatment).
- An assessment of the Operations and Maintenance (O&M) requirements for all of the WWTP components and processes and new conveyance infrastructure, including the new wastewater/combined stormwater pumping stations at Clover Point and Macaulay Point, the interconnecting gravity and pressure mains, and the Arbutus Attenuation Tank, as submitted through the various contracts.
- A detailed analysis of staffing requirements for the 24/7 WWTP and support services such as trade and technology services, as well as a review of existing conveyance operations staffing capacity and operational requirements for the new conveyance infrastructure.
- More recent confirmation of biosolids end-use and trucking costs and Residuals Treatment Facility costs
- Review of operational readiness documents by EMA Canada Inc.

The operating budget will continue to be refined over the next two to three years as:

- The operation of the WWTP is optimized through the two year contractual performance period.
- Actual field O&M requirements are compared to equipment/process supplier O&M recommendations that were used as the basis for the maintenance management plans
- The outcome of the disk filter chemical pilot testing is known and the future chemical requirements (alum or ferric chloride) are confirmed
- Biosolids disposal solutions and costs are determined (beyond three year time period)

2020 Year End Financial Projections

The 2020 budget for Trunk operations and Core Area Wastewater Treatment Project (CAWTP) operating start-up costs totals $13.0 million. Expenses are forecast at $12.0 million for year-end 2020. Combined Trunk operations are trending over budget by $0.4 million. This is mostly due to Clover Point and Macaulay Point Pump station handovers being later than planned in the 2020 budget. CAWTP start-up operating costs are trending under budget and forecast to end 2020 in a $1.5 million surplus position. In parallel with the forecast deficit in Trunk operations, this surplus is predominantly as a result of handover timing. Savings from plan are generated through decreased staffing costs due to Q3 and Q4 hiring, reduced departmental allocations supporting operations start-up, and reduced power and water costs in 2020. The surplus was split and used to offset 2021 budget costs with a $0.7 million carryforward and, used to support CAWTP capital funding with a $0.7 million transfer which, in turn, will reduce debt issuances required at project completion.

The 2020 budget for trunk and CAWTP revenues totals $43.9 million. Revenues are forecast at $48.0 million for year-end 2020. This $4.1 million in additional revenues is comprised of $0.4 million in transfers from operating reserve to support the 2020 existing trunk operations cost variance plus $4.5 million from proceeds on sale of the Viewfield property, including surplus from lease operations, less $0.7 million surplus carryforward to 2021. CAWTP Debt costs in 2020 were $1.6 million less than budget primarily due to receipt of Provincial grant funding ahead of plan. Cumulatively, with increased revenues and reduced debt costs the total transfer to the CAWTP capital reserve increased by $6.8 million. This increased transfer will reduce future debt levels.

2021 Operating Budget

Conveyance and Treatment Operations

The 2021 operating budget for conveyance and treatment operations reflects non-discretionary expenses such as negotiated staff wages/salaries, regulatory program and corporate support services, residuals treatment and disposal costs, and other operating expenses such as chemicals and electricity. The 2021 budget also includes $0.2 million in one-time expenses for carbon replacement (existing odour control systems – $0.1 million funded from maintenance reserve fund), final lease payment for Tennyson Operations Building (temporary operations centre during WWTP/Macaulay Point Pumpstation construction), and WWTP optimization consulting support.

The total 2021 operating expenditures are budgeted at $28.2 million, of which $8.1 million is associated with conveyance system operations, including the new and existing collection system

and new residual solids conveyance infrastructure. The remaining $20.1 million is associated with liquid and solids treatment operations.

The previous 2021 estimate as approved in the 2020 5-Year Financial Plan was $19.2 million. Since then, updates to assumptions and estimates have been incorporated into the current 2021 budget. Operating costs such as electricity, insurance, environmental programs and permit fees have increased (through costing refinement) while costs such as general office and some allocations have decreased. Partial cost increases in 2021 are offset by increases in recoveries from payments in lieu, other municipal solids tipping fees and Hartland leachate fees as well as a surplus carry forward from the 2020 operating budget.

Environmental Services Programs Operations

There are several environmental programs that the Core Area Wastewater Service participates in as part of the liquid waste management function which are also critical to achieving the CRD's commitments under the LWMP. These programs and 2021 requisition budget adjustments are summarized below and within the benchmark increase of CPI or 1.7% unless otherwise noted. In addition, municipal participation varies across the various programs.

Regional Source Control Program – The program is aimed at reducing contaminants that industries, institutions and households discharge into sanitary sewers. The program will be more important than ever in point-of-discharge contaminant reduction in order to protect the sewage collection and treatment systems, the quality of the treatment plant sludge and biosolids, the marine receiving environment, and public and worker health and safety.

Septage Disposal Program – The program provides oversight for the contract between the CRD and SPL Wastewater Recovery Ltd. who provides septage receiving and processing services for the CRD.

Onsite Sewage System Management Program – The program manages septic system maintenance through bylaw compliance monitoring and educational materials in order to reduce the impacts of failing septic systems on human health and the environment. The 2021 requisition for the program remains the same as 2020.

Core Area Liquid Waste Management Plan Administration – The program manages the LWMP and oversees implementation of the commitments. The program also conducts all reporting and plan amendment preparation for the service.

Harbours Studies Program – The program provides for the CRD to work in partnership with other stakeholders, including communities, local governments and senior governments, to protect and improve the environmental quality of Victoria and Esquimalt harbours. The 2021 requisition for the program remains the same as 2020.

Core Area Stormwater Quality Management Program – Using an integrated watershed management approach, the program coordinates the management of stormwater quality, including investigations to assess shoreline discharges and contaminant sources, in order to protect the marine environment.

Inflow and Infiltration Enhancement Program – The program provides for the CRD to engage with the participants to identify and reduce the amount of rain and ground water that enters the sanitary sewer systems. The program budget is funded through the conveyance and treatment budget.

Marine Monitoring Program - The program provides for the marine environment sampling and testing and regulatory reporting related to the effluent discharges from CRD wastewater facilities. The program budget is funded through the conveyance and treatment budget.

2021 Capital Budget

Capital Plan

As noted in previous reports, for over ten years while the treatment and conveyance options were being considered and the project scope was being determined, the capital program that would normally address on-going infrastructure renewal and capacity upgrades was largely deferred to ensure that investments were not being made in infrastructure that could become redundant. A long term capital plan has now been prepared for the 5, 10, 20 and 30 year time horizons for the major asset categories. The plan includes projects that will replace infrastructure at end of service life to ensure the system continues to operate reliably without service interruptions or risk to property, public health or the environment. The plan also includes projects that add conveyance capacity 'just in time' in order to convey flows to 2045 and utilize the ultimate design capacity of existing conveyance facilities, such as pump stations, and the McLoughlin WWTP. The value of the 30 year capital plan is estimated at $116.4 million.

The project list originally set out in Section 16 of the (2005) Core Area Liquid Waste Management Plan (LWMP), formed the basis for the current, updated long term capital plan. The 2005 plan called for $140.6 million (2004 dollars) in conveyance system improvement projects that were to be completed between 2005 and 2045. The value of the completed projects under this plan is approximately $32 million (2004 dollars). The value of the projects originally identified in this plan but that were completed under the CAWTP scope is approximately $51.3 million (2004 dollars). The value of the projects originally identified in this plan but no longer required due to the final CAWTP conveyance and treatment configuration is approximately $36.2 million (2004 dollars). The value of the projects originally identified in this plan but not yet completed is $22.7 million (2020 dollars based on original 2004 project budgets).

The capital budget for 2021 is $11.7 million (excluding CAWTP debt); the 2021-2025 capital budget is $56.7 million (see Appendix A). This capital program will be funded entirely by long-term debt as there are currently no capital reserve funds in place. There are projects planned in each of the major asset categories including pump stations upgrades, gravity sewer and manhole upgrades and replacements, pressure pipe upgrades, flow meter installations and replacements, system control and communications upgrades, and outfall retrofits.

Loan authorization bylaws will be required for the new loan which will be approximately $57.0 million. In most cases a loan authorization bylaw requires approval of the electors in the service area or municipal consent (on behalf of the electors). However, under the Provincial Environmental Management Act and the Regional District Liabilities Regulation, approval is not required if the loan is incurred to implement an approved Liquid Waste Management Plan (LWMP). Given that the currently approved LWMP includes $22.7 million of the $56.7 million 2021-2025 capital plan, staff are recommending that approval be obtained through the municipal

consent process, for the value of the capital plan that is not currently in the LWMP, or approximately $34.3 million. This process will address the legislated requirements through this transitional period, while staff undertake an amendment of the LWMP to reflect the updated long term capital plan. As with past loan authorization bylaws for the service, future loan authorization bylaws will be approved in accordance with the above noted Act and Regulation. The loan authorization bylaws will be considered under a separate report.

Capital Funding

There are two primary elements to the capital program funding. There are reserve funds established through annual contributions to allow accumulation of funds for future expenditures or pay-as-you-go funding; there are four reserve funds for the Service which are explained in more detail below. Then there are debt servicing costs (principal and interest payments) associated with long term capital infrastructure financing; in summary, for treatment and conveyance, there are three different debt programs, one associated with legacy conveyance system project financing (debt outstanding estimated at the end of 2020 of $2.8 million which will be retired by 2025), one associated with the CAWTP financing (debt outstanding estimated at the end of 2020 of 77.5 million which will be retired by 2032 based on current financing strategy), and one associated with the new financing proposed to begin in 2021 as noted above, for the on-going conveyance system renewal and capacity upgrades (anticipated initial loan/debt outstanding estimated at $11.7 million at the end of 2021, noting that only $117,000 in debt servicing expenses impact the 2021 budget). In summary, future capital funding will be a combination of reserves and debt financing. Debt financing in this case is supporting an appropriate level of investment in system capital while balancing a lower annual funding requirement. As the capital program progresses, any project surpluses will be used to fund upcoming capital and offset future borrowing requirements.

The 2021 budget for the Residuals Treatment Facility (RTF) Hartland Resource Management General Partnership (HRMG) payment under the P3 Agreement is set at $5.5 million. Based on the terms of the agreement, this budget amount is fixed over the next 20 years.

Reserve Funding

As previously noted, there are four reserve funds for the service, two of which require establishment bylaws covered by a separate report.

The Operating Maintenance Reserve fund is used to pay for significant O&M expenses that do not occur on an annual basis, such as odour control system carbon replacement, marine outfall inspections and pipe pigging/cleaning.

The Equipment Replacement Reserve fund is used to pay for ‘minor’ equipment replacement that typically has a service life of less than five years and/or a value of less than $25,000. The 2021 reserve fund contributions are set at $1.3 million. Based on projected expenses to meet operational requirements, this is the anticipated level of annual funding, with inflationary adjustments over time.

CAWTP Debt Retirement Reserve Fund – is used to accumulate funds sufficient to pay down the treatment program debt issuances, in full, as they hit their 10 year renewal option. The establishment of this fund aligns with the financing strategy approved by the Board in 2019 which

was designed to deliver the most cost effective financing structure, with the lowest overall cost to the participants. The combined annual contribution to the Debt Retirement Reserve and the debt servicing costs for the CAWTP financing totals $12 million (plus issuance costs in 2021).

Capital Replacement Reserve Fund – This fund is used to pay for 'major' equipment and infrastructure replacement that has a service life of 5 to 25 years or more, such as major mechanical, electrical and instrumentation equipment, treatment process and odour control equipment and WWTP building equipment such as heating and cooling systems. The replacement and funding of other components of the wastewater system that have a service life of up to 75 years, such as gravity trunk sewers and forcemains, large pumps, electrical distribution systems, concrete tanks and superstructures and major building components, will be part of the long term capital plan and largely funded through a combination of reserves and long term financing. The 2021 reserve fund contribution has been set at $2.7 million. Based on an evaluation of the service lives and value of the assets that would be replaced using this fund, and given that the need for the funding will significantly increase 20 to 25 years from now, the annual contribution will likely be smaller and vary for the next ten years while the CAWTP debt is paid down, then it is proposed to increase the annual contribution to a level in the range of $12 million in order to ensure there is sufficient funding in reserves when required.

Existing capital reserve funds held for each participant are expected to be credited to the each participant, subject to Ministry approval.

In summary and to illustrate the long range forecasts of the operating, capital and reserve expenditures, Appendix B demonstrates the allocation of total budget.

2021 Budget Context – Conveyance and Treatment

The following tables summarize the total 2021 wastewater conveyance and treatment expenditures and revenues. The totals are also summarized in Appendix C, along with 2020 year end projections and 2022-2025 budget projections.

Table 1: 2021 Budgeted Expenses

Budget Component	2021 Budget (millions)	% of Total
Treatment Plant O&M	13.4	26.3%
Conveyance System O&M	8.1	16.0%
Residuals Treatment Facility Operating	6.7	13.2%
Residuals Treatment Facility Capital	5.5	10.9%
Operating Reserve Fund Contributions	1.0	2.0%
Equipment Replacement Reserve Fund Contribution	0.3	0.5%
Long-term Capital Reserve Fund Contribution	2.7	5.4%
CAWTP Debt Retirement Reserve Fund Contribution	6.3	12.4%
CAWTP Debt Servicing	6.6	13.0%
Capital Renewal & Capacity Upgrades Debt Servicing	0.1	0.2%
Total	**$ 50.8**	**100.0%**

Table 2: 2021 Budgeted Revenue

Budget Component	2021 Budget (millions)	% of Total
Other Municipal Solids - SPWWTP	0.9	1.8%
Hartland Leachate	0.2	0.4%
Core Area Wastewater Operations - Surplus Carryforward	0.7	1.4%
Core Area Wastewater Operations - Ops Reserve	0.1	0.1%
Core Area Wastewater Operations Payments in Lieu	0.8	1.6%
Core Area Wastewater Operations - Requisition	27.5	54.2%
Core Area Wastewater Capital - Payments in Lieu	0.6	1.1%
Core Area Wastewater Capital - Requisition	20.0	39.3%
Total	**$ 50.8**	**100.0%**

Note regarding Other Municipal Solids Revenue –The Saanich Peninsula Wastewater Treatment Plant has been landfilling dewatered raw sludge resulting from the treatment process since 2012, when the biosolids production and land application ban was implemented. However, the Saanich Peninsula Liquid Waste Management Plan commits the CRD and the service's participating members to beneficially use biosolids produced with the residuals. The RTF has been designed and constructed with capacity to accept wastewater residuals (raw sludge) from other wastewater facilities in the CRD. As discussed previously with the Committee, it is proposed to utilize this available capacity by accepting approximately 4,000 tonnes of dewatered sludge (>20% solids content) from the Saanich Peninsula Wastewater Treatment Plant. Staff have evaluated the range of likely costs associated with the RTF operation and beneficial use, and have recommended a tipping fee of $225/tonne for the sludge. The Saanich Peninsula Wastewater Commission has agreed to this rate and directed staff to incorporate this expense in the service's 2021 budget. This results in an estimated $0.9 million in annual revenue for the Core Area Liquid Waste Management service.

Requisition

The 2021 requisition is $47.5 million after incorporating the requisition for capital and debt servicing of the new and existing conveyance and treatment system works, as well as system operations. Appendix C, illustrates the difference between the combined expenditures and revenues and the target requisition excluding existing operations and the new capital renewal program.

ALTERNATIVES

Alternative 1
That the Core Area Liquid Waste Management Committee recommends that the Capital Regional District Board:

1. Review and approve the 2021 Core Area Liquid Waste Management Service operating and capital budgets as presented, at the October 28, 2020 provisional budget meeting; and
2. Direct staff to balance the 2020 actual revenue and expenses on the transfer to the debt retirement reserve fund at year end.

Alternative 2
That the Core Area Liquid Waste Management Committee refer the budget back to staff for additional information for the Capital Regional District Board's consideration at its October 28, 2020 provisional budget meeting.

IMPLICATIONS

Environmental & Climate Implications

With the operation of the McLoughlin WWTP in 2021, the CRD will be in compliance with the provincial and federal effluent quality regulations. Disinfection of treated effluent is not required to meet the regulations at this time. However, future consideration of the need to disinfect effluent will be subject to on-going monitoring of the impact of wet weather overflows and treated discharges. Management of wet weather discharges will be advanced through the on-going implementation of CRD and municipal inflow and infiltration reduction programs. Progress on inflow and infiltration initiatives and other commitments under the Core Area LWMP will be reported regularly to the Committee.

Staff are developing several performance indicators for the Core Area Liquid Waste Service that will be tracked once the new liquid and solids treatment systems are in full operation, including the following indicators with an environmental and climate focus:

- Compliance with Operational Certificates
- Total volume and cost per megalitre of wastewater collected and treated
- Energy use per megalitre of wastewater treated
- Beneficial use of biosolids
- Utilization of gas generated at the Residuals Treatment Facility

Intergovernmental Implications

Staff will continue to work closely with Esquimalt and Songhees First Nations to finalize Wastewater Service Agreements for each Nation.

With respect to residual solids treatment operations, the province recently confirmed acceptance of the short-term biosolids contingency plan. As directed by the province, the CRD will continue to develop the long-term biosolids strategy for implementation by January 1, 2025. The budget implications of the final strategy will be considered by the Committee in advance and will be reflected in future budgets.

Social Implications

The potential neighbourhood impacts related to the operation of the conveyance system and WWTP, including noise and odour, will be closely monitored by the CRD. The CRD will continue to respond to concerns and engage with the Esquimalt Liaison Committee

Financial Implications

As forecasted in previous reports to the Committee, the 2021 operating and capital budgets include requisitions to offset projected expenditures associated with the operation of the

expanded conveyance system and new WWTP, as well as on-going capital investment and longer-term reserve contributions. The operating and capital cost apportionments for each participant will be as per CRD Bylaw No. 4304, adopted by the CRD Board in August 2020.

Alignment with Board & Corporate Priorities

The 2019-2022 CRD Corporate Plan is aligned to the Board direction. It highlights the initiatives the CRD needs to deliver over the Board's four-year term to address the region's most important needs. The Corporate Plan identified six initiatives under the Wastewater initiative, that fall under the Core Area Liquid Waste Management Committee's mandate. Progress on these initiatives to date and upcoming initiatives affecting the 2021 budget are set out for the Committee and Board in the Service Planning report.

CONCLUSION

This 2021 Core Area Liquid Waste Management Service budget has been prepared for the Core Area Liquid Waste Management Committee's (Committee) consideration. The Committee will make budget recommendations to the Capital Regional District (CRD) Board, who has the authority to approve the budget. The 2021 budget will be the first budget that reflects the operating costs of the new McLoughlin Point Wastewater Treatment Plant (WWTP) and the existing and new conveyance system, as well as the existing and new capital costs and reserve fund contributions. The operating budget will continue to be refined over the next two to three years as the operation of the WWTP is optimized through the two year contractual performance period and the CRD gains experience with the new operation. The CRD will resume investment in the renewal of the existing conveyance system, once funding is in place, to ensure the system continues to operate reliably and without impacts on public health or the environment. The financial implications of the 2021 operating and capital budget vary by participant, depending on the operating and capital cost apportionments associated with annual flow and allocated treatment capacity.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee recommends that the Capital Regional District Board:

1. Review and approve the 2021 Core Area Liquid Waste Management Service operating and capital budgets as presented, at the October 28, 2020 provisional budget meeting; and
2. Direct staff to balance the 2020 actual revenue and expenses on the transfer to the debt retirement reserve fund at year end.

Submitted by:	Ted Robbins, B. Sc., C. Tech., General Manager, Integrated Water Services
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENTS

Appendix A: Five Year Capital Plan
Appendix B: Long-term Budget Overview
Appendix C: Combined Core Area Wastewater Service Committee Summary

APPENDIX A

CAPITAL REGIONAL DISTRICT

FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2021 to 2025

Service No.	3.798C Core Area Wastewater	Carry Forward from 2020	2021	2022	2023	2024	2025	TOTAL
	EXPENDITURE							
	Buildings	$0	$0	$0	$0	$0	$0	$0
	Equipment	$0	$0	$0	$0	$0	$0	$0
	Land	$0	$0	$0	$0	$0	$0	$0
	Engineered Structures	$7,128,745	$35,200,000	$19,125,264	$14,891,918	$16,743,472	$18,445,066	$104,405,720
	Vehicles	$425,000	$425,000	$0	$0	$0	$0	$425,000
		$7,553,745	**$35,625,000**	**$19,125,264**	**$14,891,918**	**$16,743,472**	**$18,445,066**	**$104,830,720**
	SOURCE OF FUNDS							
	Capital Funds on Hand	$7,553,745	$7,553,745	$7,385,264	$5,591,918	$5,593,472	$5,595,066	$31,719,465
	Debenture Debt (New Debt Only)	$0	$28,071,255	$11,740,000	$9,300,000	$11,150,000	$12,850,000	$73,111,255
	Equipment Replacement Fund	$0	$0	$0	$0	$0	$0	$0
	Grants (Federal, Provincial)	$0	$0	$0	$0	$0	$0	$0
	Donations / Third Party Funding	$0	$0	$0	$0	$0	$0	$0
	Reserve Fund	$0	$0	$0	$0	$0	$0	$0
		$7,553,745	**$35,625,000**	**$19,125,264**	**$14,891,918**	**$16,743,472**	**$18,445,066**	**$104,830,720**

APPENDIX A

CAPITAL REGIONAL DISTRICT CAPITAL PLAN

CAPITAL BUDGET FORM
2021 & Forecast 2022 to 2025

Service #: 3.798C
Service Name: Core Area Wastewater

Proj. No.
The first two digits represent first year the project was in the capital plan.

Capital Exp. Type
Study - Expenditure for feasibility and business case report.
New - Expenditure for new asset only
Renewal - Expenditure upgrades an existing asset and extends the service ability or enhances technology in delivering that service
Replacement - Expenditure replaces an existing asset

Funding Source Codes
Debt = Debenture Debt (new debt only)
ERF = Equipment Replacement Fund
Grant = Grants (Federal, Provincial)
Cap = Capital Funds on Hand
Other = Donations / Third Party Funding

Funding Source Codes (con't)
Res = Reserve Fund
STLoan = Short Term Loans
WU - Water Utility

Asset Class
L - Land
S - Engineering Structure
B - Buildings
V - Vehicles
E - Equipment

Capital Project Title
Input Title of Project. For example "Asset Name - Roof Replacement", "Main Water Pipe Replacement".

Capital Project Description
Briefly describe project scope and service benefits.
For example: *"Full Roof Replacement of a 40 year old roof above the swimming pool area; The new roofing system is built current energy standards, designed to minimize maintenance and have an expected service life of 35 years".*

Total Project Budget
This column represents the total project budget not only within the 5-year window.

FIVE YEAR FINANCIAL PLAN

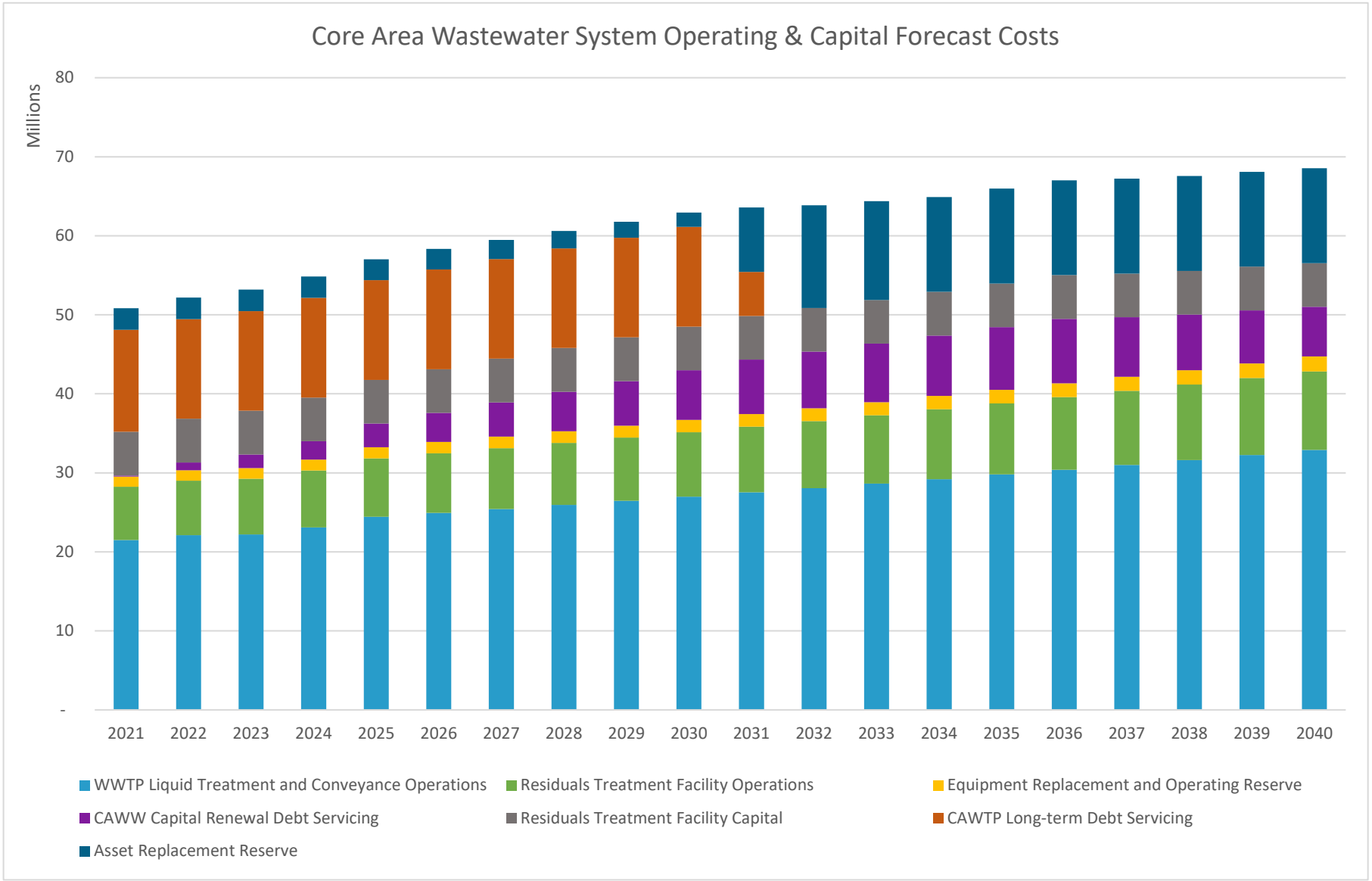
Proj. No.	Capital Exp.Type	Capital Project Title	Capital Project Description	Total Proj Budget	Asset Class	Funding Source	C/F from 2020	2021	2022	2023	2024	2025	5 - Year Total
MCLOUGHLIN WASTEWATER TREATMENT PLANT													
The new McLoughlin WWTP is being commissioned and should be fully operational by December 31, 2020. This is a new facility and should not require any significant projects in the first several years, but some upgrades maybe required to improve operational performance and/or health and safety issues that may become known after the plant is in full operation.													
16-01	New	CAWTP	Wastewater Treatment Project (including WWTP, RTF, Conveyance)	$211,900,000	S	Cap	$7,128,745	$7,128,745	$7,385,264	$5,591,918	$5,593,472	$5,595,066	$31,294,465
16-01	New	CAWTP	Wastewater Treatment Project (including WWTP, RTF, Conveyance)	$101,100,000	S	Debt	$0	$16,371,255	$0	$0	$0	$0	$16,371,255
20-02	New	New Fleet Purchases	9 new vehicles (3 EIC, 3 mechanical trades, 3 operations); 1 spider crane; 1 scissor lift; 1 portable hotsy	$850,000	V	Cap	$425,000	$425,000	$0	$0	$0	$0	$425,000
PUMP STATIONS													
21-01	Renewal	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.	$350,000	S	Debt	$0	$100,000	$250,000	$0	$0	$0	$350,000
21-02	Renewal	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.	$2,250,000	S	Debt	$0	$400,000	$1,850,000	$0	$0	$0	$2,250,000
21-03	Renewal	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.	$2,300,000	S	Debt	$0	$400,000	$0	$0	$1,900,000	$0	$2,300,000
21-04	Renewal	Craigflower Odour Control Upgrade	Increasing flows and off-gassing from the cortex drop are generating higher odours than expected. Imrpovements are required to mitigate odours and address health and safety concerns.	$400,000	S	Debt	$0	$400,000	$0	$0	$0	$0	$400,000
21-05	Replacement	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.	$1,900,000	S	Debt	$0	$200,000	$1,700,000	$0	$0	$0	$1,900,000
22-01	Renewal	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.	$200,000	S	Debt	$0	$0	$200,000	$0	$0	$0	$200,000
24-01	Renewal	Trent PLC Upgrade	The PLC needs to be upgraded to meet new software standards.	$250,000	S	Debt	$0	$0	$0	$0	$250,000	$0	$250,000
24-02	Renewal	Hood Mecahnical 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.	$420,000	S	Debt	$0	$0	$0	$0	$420,000	$0	$420,000
24-03	Renewal	Currie Minor Mecahnical and Electrical Renewal	Upgrades are based upon Delcan's 2013 condition assessments and revised inspections. The work includes pump and valve replacement.	$230,000	S	Debt	$0	$0	$0	$0	$230,000	$0	$230,000
24-04	Renewal	Humber Electrical and Mecahnical 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.	$290,000	S	Debt	$0	$0	$0	$0	$290,000	$0	$290,000
24-05	Renewal	Rutland Electrical and Mecahnical 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.	$290,000	S	Debt	$0	$0	$0	$0	$290,000	$0	$290,000

24-06	Renewal	Penrhyn Electrical and Mecahnical 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.	$670,000	S	Debt	$0	$0	$0	$0	$120,000	$550,000	$670,000
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.	$2,400,000	S	Debt	$0	$100,000	$100,000	$2,000,000	$0	$0	$2,200,000
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 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.	$15,000,000	S	Debt	$0	$200,000	$200,000	$0	$0	$0	$400,000
21-08	Replacement	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.	$400,000	S	Debt	$0	$400,000	$0	$0	$0	$0	$400,000
21-09	Renewal	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.	$8,600,000	S	Debt	$0	$4,300,000	$4,300,000	$0	$0	$0	$8,600,000
21-10	Renewal	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.	$450,000	S	Debt	$0	$150,000	$0	$0	$150,000	$150,000	$450,000
21-11	Renewal	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.	$1,500,000	S	Debt	$0	$500,000	$250,000	$250,000	$250,000	$250,000	$1,500,000
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.	$300,000	S	Debt	$0	$0	$0	$300,000	$0	$0	$300,000
PRESSURE PIPES AND APPURTENANCES													
21-12	Renewal	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.	$500,000	S	Debt	$0	$500,000	$0	$0	$0	$0	$500,000
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.	$9,600,000	S	Debt	$0	$300,000	$300,000	$4,500,000	$4,500,000	$0	$9,600,000
21-14	Renewal	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.	$8,300,000	S	Debt	$0	$400,000	$0	$0	$0	$7,900,000	$8,300,000
22-02	Renewal	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.	$250,000	S	Debt	$0	$0	$250,000	$0	$0	$0	$250,000
23-02	Renewal	Penrhyn Siphon Assessment	The Penrhyn Siphon is PVC pipe, and has never been flushed or assessed. Flushing and assessment of the pipe is required.	$400,000	S	Debt	$0	$0	$0	$400,000	$0	$0	$400,000
24-07	Renewal	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.	$400,000	S	Debt	$0	$0	$0	$0	$400,000	$0	$400,000
25-01	Renewal	Admirals Siphon Assessment	The Admirals Siphon is PVC pipe, and has never been flushed or assessed. Flushing and assessment of the pipe is required.	$400,000	S	Debt	$0	$0	$0	$0	$0	$400,000	$400,000
FLOW METERS													
21-15	Replacement	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).	$250,000	S	Debt	$0	$250,000	$0	$0	$0	$0	$250,000
21-16	New	Gorge & Chapman Meter	Based on KWL's 2018-19 Flow Meter Audit review, KWL recommended a new flodar meter to measure the unmetered Gorge and Champman catchments. Includes installation of new metering manhole.	$130,000	S	Debt	$0	$130,000	$0	$0	$0	$0	$130,000
21-17	New	Esquimalt Nation Meter	Based on KWL's 2018-19 Flow Meter Audit review, KWL recommended a new custom weir, kisok and conduit to measure the unmetered Esquimalt Nation catchment.	$200,000	S	Debt	$0	$200,000	$0	$0	$0	$0	$200,000
21-18	New	Shoreline Trunk Meter	Based on KWL's 2018-19 Flow Meter Audit review, KWL recommended a new flodar meter to measure the unmetered Shoreline catchment. Includes installation of FloDar meter, kiosk and conduit.	$240,000	S	Debt	$0	$50,000	$190,000	$0	$0	$0	$240,000
21-19	New	Selkirk Meter	Based on KWL's 2018-19 Flow Meter Audit review, KWL recommended a new flume meter to measure the unmetered Selkirk catchment (install weir, kiosk and conduit).	$190,000	S	Debt	$0	$190,000	$0	$0	$0	$0	$190,000
21-20	Replacement	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.	$40,000	S	Debt	$0	$40,000	$0	$0	$0	$0	$40,000
21-21	Replacement	Penrhyn Meter	Based on KWL's 2018-19 Flow Meter Audit review, the ADFM insertion probe meter is damaged and needs to be replaced.	$90,000	S	Debt	$0	$90,000	$0	$0	$0	$0	$90,000

APPENDIX A

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	$0	$250,000	$0	$0	$0	$0	$250,000
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	$0	$300,000	$100,000	$0	$0	$0	$400,000
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.	$500,000	**S**	Debt	$0	$100,000	$100,000	$100,000	$100,000	$100,000	$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. Replacement will happen over many years commencing in 2022.	$3,150,000	**S**	Debt	$0	$150,000	$750,000	$750,000	$750,000	$750,000	$3,150,000
22-03	Renewal	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.	$1,200,000	**S**	Debt	$0	$0	$200,000	$0	$0	$1,000,000	$1,200,000
21-26	Replacement	Annual Provisional Emergency Repairs	Unforeseen and unplanned emergency repairs can occur which require immediate attention.	$5,000,000	**S**	Debt	$0	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$5,000,000
OUTFALLS													
24-08	Renewal	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 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.	$500,000	S	Debt	$0	$0	$0	$0	$500,000	$0	$500,000
25-02	Renewal	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.	$750,000	S	Debt	$0	$0	$0	$0	$0	$750,000	$750,000
RESIDUAL SOLIDS													
21-27	New	Biosolids Beneficial Use Building	Modular storage facility for mixing biosolids for application at Hartland.	$300,000	S	Debt	$0	$300,000	$0	$0	$0	$0	$300,000
21-28	New	Lafarge Biosolids Receiving	Lafarge Biosolids Receiving Silo Interconnect or Purchase of two used Pneumatic Bulk Trailers	$250,000	S	Debt	$0	$250,000	$0	$0	$0	$0	$250,000
21-29	Renewal	Quonset removal	Demo old storage facility	$50,000	S	Debt	$0	$50,000	$0	$0	$0	$0	$50,000
			GRAND TOTAL	**$385,390,000**			**$7,553,745**	**$35,625,000**	**$19,125,264**	**$14,891,918**	**$16,743,472**	**$18,445,066**	**$104,830,720**

Appendix B - Long-term Budget Overview



Appendix C: Combined Service - Core Area Wastewater Operations and Capital

CORE AREA WASTEWATER - COMBINED VIEW	2019 BOARD BUDGET	2020 BOARD BUDGET	2020 ESTIMATED ACTUAL	BUDGET REQUEST 2021 CORE BUDGET	BUDGET REQUEST ongoing	BUDGET REQUEST one time	2021 TOTAL	FUTURE PROJECTIONS 2022 TOTAL	2023 TOTAL	2024 TOTAL	2025 TOTAL
Operating Costs											
Trunk Operating Costs	6,949,924	6,350,583	6,769,334	-	-	-	-	-	-	-	-
CAWW Operating Costs	-	-	-	28,011,554	-	224,527	28,236,081	29,008,461	29,251,583	30,299,789	31,827,711
CAWTP Operating Start-up Costs	1,681,067	6,647,997	5,181,993	-	-	-	-	-	-	-	-
TOTAL OPERATING COSTS	**8,630,991**	**12,998,580**	**11,951,327**	**28,011,554**	**-**	**224,527**	**28,236,081**	**29,008,461**	**29,251,583**	**30,299,789**	**31,827,711**
		50.6%					117.2%	2.7%	0.8%	3.6%	5.0%
Capital / Reserve											
Trunk Reserve Transfers	184,913	234,718	212,531	-	-	-	-	-	-	-	-
CAWW Reserve Transfers (ORF & ERF)		-	-	1,302,547	-	-	1,302,547	1,328,598	1,355,170	1,382,273	1,409,919
CAWTP Reserve Transfers	27,093,347	24,125,243	30,940,930	-	-	-	-	-	-	-	-
RTF Capital	-	-	-	5,529,745	-	-	5,529,745	5,529,745	5,529,745	5,529,745	5,529,745
CAWTP Debt Retirement Reserve Transfer	-	-	-	6,318,949	-	-	6,318,949	4,590,106	4,590,106	630,000	4,971,429
Capital Replacement Reserve Transfer	-	-	-	2,721,119	-	-	2,721,119	2,721,119	2,721,119	2,721,119	2,721,119
TOTAL CAPITAL / RESERVES	**27,278,260**	**24,359,961**	**31,153,461**	**15,872,360**	**-**	**-**	**15,872,360**	**14,169,568**	**14,196,140**	**10,263,137**	**14,632,212**
							-				
Debt Expenditures											
CAWTP	4,032,558	6,576,699	4,944,506	6,593,320	-	-	6,593,320	8,022,163	8,022,162	11,982,269	7,640,840
CAWW	-	-	-	-	-	117,000	117,000	985,158	1,716,048	2,312,921	3,001,668
DEBT EXPENDITURES	**4,032,558**	**6,576,699**	**4,944,506**	**6,593,320**	**-**	**117,000**	**6,710,320**	**9,007,321**	**9,738,210**	**14,295,190**	**10,642,508**
TOTAL COSTS	**39,941,809**	**43,935,240**	**48,049,294**	**50,477,234**	**-**	**341,527**	**50,818,761**	**52,185,350**	**53,185,933**	**54,858,116**	**57,102,431**
*Percentage Increase over prior year		10.0%					15.7%	2.7%	1.9%	3.1%	4.1%
FUNDING SOURCES											
Trunk Revenues	(483,682)	(405,534)	(802,098)	-	-	-	-	-	-	-	-
CAWW Revenue	-	-	-	(1,923,404)	-	(70,000)	(1,993,404)	(2,420,999)	(2,080,957)	(2,534,328)	(3,447,192)
CAWTP PILT Revenue	(1,594,869)	(1,889,339)	(1,878,849)	(560,671)	-	-	(560,671)	(560,671)	(560,671)	(560,671)	(560,671)
CAWTP 2020 Operating Surplus			724,602	(724,602)	-	-	(724,602)	-	-	-	-
Viewfield Revenue (Gain on sale EA's)	(1,212,103)	(460,600)	(4,913,182)	-	-	-	-	-	-	-	-
REVENUE	**(3,290,654)**	**(2,755,473)**	**(6,869,527)**	**(3,208,677)**	**-**	**(70,000)**	**(3,278,677)**	**(2,981,670)**	**(2,641,628)**	**(3,094,999)**	**(4,007,863)**
							-				
REQUISITION											
Trunk Requisition	(6,651,155)	(6,179,767)	(6,179,767)	-	-	-	-	-	-	-	-
CAWW Requisition	-	-	-	(27,390,697)	-	(154,527)	(27,545,224)	(27,916,060)	(28,525,796)	(29,147,734)	(29,790,438)
CAWTP Requisition	(30,000,000)	(35,000,000)	(35,000,000)	(19,877,860)	-	(117,000)	(19,994,860)	(21,287,620)	(22,018,509)	(22,615,383)	(23,304,130)
REQUISITION	**(36,651,155)**	**(41,179,767)**	**(41,179,767)**	**(47,268,557)**	**-**	**(271,527)**	**(47,540,084)**	**(49,203,680)**	**(50,544,305)**	**(51,763,117)**	**(53,094,568)**
*Percentage Increase over prior year requisition		12.4%					15.4%	3.5%	2.7%	2.4%	2.6%

Maximum Requisition Capacity	2021			2021	2022	2023	2024	2025
Conveyance System O&M prior to pre-implementation	(7,423,084)			(7,423,084)	(7,571,546)	(7,722,977)	(7,877,437)	(8,034,985)
CAWW Capital renewal program debt costs	-	-	(117,000)	(117,000)	(985,158)	(1,716,048)	(2,312,921)	(3,001,668)
REQUISITION:	**(39,845,473)**	**-**	**(154,527)**	**(40,000,000)**	**(40,646,976)**	**(41,105,280)**	**(41,572,759)**	**(42,057,915)**
					1.6%	1.1%	1.1%	1.2%

Making a difference...together

REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, OCTOBER 07, 2020

SUBJECT **Bylaw Nos. 4374 and 4375: Core Area Wastewater Loan Authorizations**

ISSUE SUMMARY

A Capital Regional District (CRD) Board resolution is required to commence the loan authorization process for Bylaw No. 4374, planned borrowing as set out in the Liquid Waste Management Plan; and Bylaw No. 4375, borrowing required to implement a long-term capital program for the Core Area Wastewater program.

BACKGROUND

On August 12, 2020, the Board agreed to a cost-apportionment system for the Core Area and Western Communities Liquid Waste management service, per Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 1, 1995, Amendment Bylaw No. 3, 2020 (Bylaw No. 4304). All conveyance and treatment capital is to be cost apportioned on the basis of treatment capacity as outlined in Schedule C to Bylaw No. 4304.

As of January 1, 2021, the entire conveyance and treatment system will be administered under one regulatory and administrative framework. Long term system infrastructure renewal and capacity upgrades will be a 'one-system' model. Capital projects are prioritized together across the entire system.

The 2021 - 2025 Provisional Financial Plan includes planned projects totaling $57.0 million. The plan reflects infrastructure renewal projects required on existing conveyance systems and are planned in each of the major asset categories including pump stations upgrades, gravity sewer and manhole upgrades and replacements, pressure pipe upgrades, flow meter installations and replacements, system control and communications upgrades, and outfall retrofits.

To fund the provisional capital program, long-term borrowing is required. The following two bylaws are proposed:

Service Area	Action	Purpose	Bylaw
3.798C	Loan Authorization Bylaw	To permit long-term borrowing related to the capital plan for this service, to conduct planned works approved by the Province in the CRD's Liquid Waste Management Plan (LWMP).	4374 Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 1, 2020

3.798C	Loan Authorization Bylaw	To permit long-term borrowing related to the capital plan for this service, to conduct planned works arising since the approval of the LWMP.	4375 Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 2, 2020

A portion of these upgrades were approved by the Province in the CRD's LWMP after public consultation and Ministerial review in accordance with the *Environmental Management Act*. These works are reflected in Bylaw No. 4374, the $22.7 million. Additional capital upgrades and maintenance works arising since the approval of the LWMP are reflected in Bylaw No. 4375, the $34.3 million.

ALTERNATIVES

Alternative 1
The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:

1. That Bylaw No. 4374, "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 1, 2020" be introduced and read a first, second, and third time;
2. That Bylaw No. 4374 be referred to the Inspector of Municipalities for approval.
3. That Bylaw No. 4375, "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 2, 2020" be introduced and read a first, second, and third time;
4. That Bylaw No. 4375 be referred to the municipal councils of the participants for approval, and if two-thirds of approval is received, to the Inspector of Municipalities.

Alternative 2
The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:

1. That Bylaw No. 4374, "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 1, 2020" be introduced and read a first, second, and third time;
2. That Bylaw No. 4374 be referred to the Inspector of Municipalities for approval.
3. That Bylaw No. 4375, "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 2, 2020" be introduced and read a first, second, and third time;
4. That Bylaw No. 4375 be referred to alternative approval process for the entire service area, and if approval is received, to the Inspector of Municipalities.

Alternative 3
The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:

That Bylaw Nos. 4374 and 4375, "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 1, 2020" and "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 2, 2020", be deferred pending further information.

IMPLICATIONS

Legislative Implications

Long-term borrowing (i.e. loans with a term of more than 5 years) must be supported by a loan authorization bylaw, requiring elector approval and the approval of the Inspector of Municipalities.

Pursuant to the *Regional District Liabilities Regulation,* BC Reg 261/2004, as elector consultation and Provincial approval has occurred as part of establishing a LWMP, elector approval is not required for the $22.7 million loan, as it is for works implementing the plan. CRD may proceed with Bylaw No. 4374, provided the Inspector of Municipalities approves.

For the additional borrowing of $34.3 million, elector approval or a LWMP amendment is required. Elector approval can be obtained through consent on behalf by two-thirds of municipal participants' councils; or by alternative approval process for the entire service area. In a service area of this size municipal counsel consent would require less administrative resources.

Obtaining elector approval will address the legislated requirements through this transitional period. CRD continues to undertake an amendment of the LWMP to reflect the updated long term capital plan.

Financial Implications

The loan authorizations for the provisional capital program total $57 million and will support the planned 5 year capital plan starting 2021. There are no existing capital reserves in place requiring borrowings to fund the capital plan. To enable optimization of interest and timing of long term debt issuance a temporary borrowing is also being proposed.

The timing of the debt issuance will be based on the timing of expenditures and will be dependent on prevailing interest rates at the time. Before long term debt issuance can be exercised a security issuing bylaw will be brought forward for approval. The term of any debt issuances under this loan authorization will be 15 years.

The cost of borrowing is included in the Provisional Budget to be presented on October 28 with an estimated impact of $117k in 2021.

CONCLUSION

Capital program work is planned for 2021 and ongoing. The work will be funded through a combination of requisition and borrowed funds. Timely access to the borrowed funds in 2021 is critical to meeting the capital program spending needs. To that end, a CRD Board resolution is required to commence the loan authorization process for Bylaw No. 4374, planned borrowing as set out in the Liquid Waste Management Plan; and Bylaw No. 4375, borrowing required to implement a long-term capital program for the Core Area Wastewater program.

RECOMMENDATION

The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:

1. That Bylaw No. 4374, "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 1, 2020" be introduced and read a first, second, and third time;
2. That Bylaw No. 4374 be referred to the Inspector of Municipalities for approval.
3. That Bylaw No. 4375, "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 2, 2020" be introduced and read a first, second, and third time;
4. That Bylaw No. 4375 be referred to the municipal councils of the participants for approval, and if two-thirds of approval is received, to the Inspector of Municipalities.

Submitted by:	Rianna Lachance, B.Com, CPA, CA, Senior Manager, Financial Services
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer
Concurrence:	Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer
Concurrence:	Ted Robbins, B. Sc., C. Tech., General Manager, Integrated Water Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENT(S)

Appendix A: Bylaw 4374, "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 1, 2020"
Appendix B: Bylaw 4375, "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 2, 2020"

CAPITAL REGIONAL DISTRICT

BYLAW NO. 4374

****

A BYLAW TO AUTHORIZE PLANNED BORROWING OF TWENTY-TWO MILLION, SEVEN HUNDRED THOUSAND ($22,700,000) FOR THE IMPLEMENTATION OF THE LIQUID WASTE MANAGEMENT PLAN IN THE CORE AREA AND WESTERN COMMUNITIES LIQUID WASTE SERVICE

****

WHEREAS:

A. By Supplementary Letters Patent, Division VII dated December 28, 1967, the Capital Regional District obtained the function of acquisition, design, construction, operation, maintenance, renewal and administration of trunk sewers and sewage disposal facilities within all member municipalities of the Regional District, except the electoral areas of Sooke and Outer Gulf Islands, converted to establishing bylaw per Bylaw No. 2312, "Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 1, 1995";

B. Pursuant to the *Regional District Liabilities Regulation*, BC Reg 261/2004, adoption of a loan authorization bylaw is permitted if the borrowing is to implement all or part of an approved liquid waste management plan and Inspector of Municipalities approval is obtained.

C. The Capital Regional District Core Area Liquid Waste Management Plan, dated July 12, 2000, was approved March 26, 2003 by the Minister of Water, Land and Air Protection pursuant to now s. 24(5) of the *Environmental Management Act.* Approved works include the planning, study, public consultation, site selection, design, land and material acquisition, construction, supply and installation of all material, equipment and components and all construction necessary for the preparation and works relating to wastewater treatment and conveyance system in the Core Area;

D. The estimated cost is twenty-two million seven-hundred thousand dollars ($22,700,000);

E. Financing is proposed to be undertaken by the Municipal Finance Authority of British Columbia pursuant to agreements between it and the Capital Regional District;

NOW THEREFORE the Capital Regional District Board in open meeting assembled hereby enacts as follows:

1. For the purposes of the Liquid Waste Management Core Area and Western Communities Service, the Board is hereby empowered and authorized to undertake and carry out or cause to be carried out the planning, study, public consultation, site selection, design, land and material acquisition, construction, supply and installation of all material, equipment and components, and all construction necessary for the wastewater treatment facilities in the Core Area; and to do all things necessary in connection therewith and without limiting the generality of the foregoing:

(a) to borrow upon the credit of the Capital Regional District a sum not exceeding twenty-two-million, seven-hundred-thousand dollars ($22,700,000); and

(b) to acquire all such real property, easements, rights-of-way, licenses, rights or authorities as may be requisite or desirable for or in connection with construction of the said facilities.

2. The maximum term for which debentures may be issued to secure the debt intended to be created by this bylaw is 15 years.

3. This Bylaw may be cited as “Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 1, 2020”.

READ A FIRST TIME THIS	__th	day of	202_
READ A SECOND TIME THIS	__th	day of	202_
READ A THIRD TIME THIS	__th	day of	202_
APPROVED BY THE INSPECTOR OF MUNICIPALITIES THIS	__th	day of	202_
ADOPTED THIS	__th	day of	202_

CHAIR

CORPORATE OFFICER

CAPITAL REGIONAL DISTRICT

BYLAW NO. 4375

****

A BYLAW TO AUTHORIZE THE BORROWING OF THIRTY FOUR MILLION, THREE HUNDRED THOUSAND DOLLARS ($34,300,000) FOR THE ESTIMATED COST OF WORKS RELATING TO THE LIQUID WASTE MANAGEMENT CORE AREA AND WESTERN COMMUNITIES SERVICE PROGRAM

****

WHEREAS:

A. By Supplementary Letters Patent, Division Vll dated December 28, 1967, the Capital Regional District obtained the function of acquisition, design, construction, operation, maintenance, renewal and administration of trunk sewers and sewage disposal facilities within all member municipalities of the Regional District, except the electoral areas of Sooke and Outer Gulf Islands, converted to establishing bylaw per Bylaw No. 2312, "Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 1, 1995";

B. It is deemed desirable to fund works relating to wastewater treatment facilities in the Core Area that had been deferred pending determination of a funding model and the final scope of the Core Area Wastewater Treatment Project, as well as future anticipated works, including the planning, study, public consultation, site selection, design, land and material acquisition, construction, supply and installation of all material, equipment and components and all construction necessary for the preparation and works relating to wastewater treatment and conveyance system in the Core Area;

C. The estimated cost of the works is the sum of thirty-four million, three-hundred thousand dollars ($34,300,000) dollars;

D. Pursuant to s. 407 of the *Local Government Act*, participating area approval is required for this borrowing and shall be obtained by municipal council consent under s. 346 of the *Local Government Act*;

E. Financing is proposed to be undertaken by the Municipal Finance Authority of British Columbia pursuant to agreements between it and the Capital Regional District;

NOW THEREFORE the Capital Regional District Board in open meeting assembled hereby enacts as follows:

1. For the purposes of the Liquid Waste Management Core Area and Western Communities Service, the Board is hereby empowered and authorized to undertake and carry out or cause to be carried out the planning, study, public consultation, site selection, design, land and material acquisition, construction, supply and installation of all material, equipment and components, and all construction necessary for the wastewater treatment facilities in the Core Area; and to do all things necessary in connection therewith and without limiting the generality of the foregoing:

   (a) to borrow upon the credit of the Capital Regional District a sum not exceeding thirty-four million, three-hundred thousand dollars ($34,300,000); and

(b) to acquire all such real property, easements, rights-of-way, licenses, rights or authorities as may be requisite or desirable for or in connection with construction of the said facilities.

2. The maximum term for which debentures may be issued to secure the debt intended to be created by this bylaw is 15 years.

3. This Bylaw may be cited as "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 2, 2020".

READ A FIRST TIME THIS	__th	day of	202_
READ A SECOND TIME THIS	__th	day of	202_
READ A THIRD TIME THIS	__th	day of	202_
APPROVED BY TWO-THIRDS OF PARTICIPANTS PER S.346 OF THE *LOCAL GOVERNMENT ACT* THIS	__th	day of	202_
APPROVED BY THE INSPECTOR OF MUNICIPALITIES THIS	__th	day of	202_
ADOPTED THIS	__th	day of	202_

_____ _____

CHAIR CORPORATE OFFICER

Making a difference...together

REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, OCTOBER 07, 2020

SUBJECT **Bylaw Nos. 4376, 4377, 4378: Core Area Sewer Reserve Bylaws**

ISSUE SUMMARY

A series of bylaws are required to facilitate administration of the combined Core Area Wastewater service.

BACKGROUND

On August 12, 2020, the Board amended the cost-sharing framework for the Core Area Wastewater Service pursuant to Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 1, 1995, Amendment Bylaw No. 3, 2020 (Bylaw No. 4304, amending Bylaw No. 2312). Now, all conveyance and treatment costs will be combined and cost apportioned as per Bylaw 4304. The bylaw contains two methods of cost apportionment, one for operating based on actual flows and one for capital costs based on treatment capacity allocation. To administer this, the operating costs will be accounted for in a new service area referred to as Service Area 3.717 Core Area Wastewater Operations and capital costs will be accounted for within the existing Service Area 3.798C Core Area Wastewater Capital, effective January 1, 2021.

In order to facilitate financial administration of the 2021–2025 Provisional Financial Plan, as will be presented to Committee of the Whole on October 28, 2020, staff are seeking approval of a number of bylaws to establish and amend reserve funds. The following reserve funds are required:

- Operating Reserve Fund (3.717)
- Equipment Replacement Fund (ERF) (3.717)
- Debt Retirement Reserve Fund, (3.798C) and
- Capital Replacement Reserve Fund (3.798C)

The following three (3) bylaws are recommended for approval:

Service Area	Action	Purpose	Bylaw
3.717	Amending Bylaw	Amendment to the Operating Sewer and Water Reserve Fund bylaw to include the new Core Area Wastewater Service	4376 Capital Regional District Sewer and Water Services Operating Reserve Fund Bylaw No. 1, 2016, Amendment Bylaw No. 2, 2020 (Bylaw No. 4376)

3.798C	Reserve Fund Establishment Bylaw	Establishment of a Debt Repayment Reserve Fund	4377 Liquid Waste Management Core Area and Western Communities Service Debt Repayment Reserve Establishment Bylaw No. 1, 2020 (Bylaw No. 4377)
3.798C	Reserve Fund Establishment Bylaw	Establishment of a Capital Reserve Fund	4378 Liquid Waste Management Core Area and Western Communities Service Capital Reserve No. 1, 2020 (Bylaw No. 4378)

The function of an equipment replacement reserve fund is authorized through the existing Bylaw No. 945 Equipment Replacement Fund By-law No.1, 1981. A separate bylaw is not required to establish an account.

Future Bylaws
The new combined service and apportionment comes into effect January 1, 2021. At this time the historical trunk operations and respective reserves will need to be wound up and funds transferred to the new operating and equipment replacement reserve funds. Early in 2021, Staff anticipate seeking approval on two (2) Reserve Transfer Bylaws, one for Operating and one for ERF. The following bylaws will be brought forward in 2021 once final balances are determined:

3.717	Transfer Bylaw	Transfer bylaw to move reserve funds in individual Trunks Operating Reserves to the CAWW Operating Reserve	Proposed Bylaw 2021
3.717	Transfer Bylaw	Transfer bylaw to move reserve funds in individual Trunks Equipment Replacement Reserves to the CAWW Equipment Replacement Reserve	Proposed Bylaw 2021

ALTERNATIVES

Alternative 1
The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:

1. That Bylaw No. 4376, "Capital Regional District Sewer and Water Services Operating Reserve Fund Bylaw No. 1, 2016, Amendment Bylaw No. 2, 2020" be introduced and read a first, second, and third time; and
2. That Bylaw No. 4376 be adopted.
3. That Bylaw No. 4377, "Liquid Waste Management Core Area and Western Communities Service Debt Repayment Reserve Establishment Bylaw No. 1, 2020", be introduced and read a first, second, and third time; and
4. That Bylaw No. 4377 be adopted.

5. That Bylaw No. 4378, "Liquid Waste Management Core Area and Western Communities Service Capital Reserve No. 1, 2020", be introduced and read a first, second, and third time; and
6. That Bylaw No. 4378 be adopted.

Alternative 2
The Governance and Finance Committee recommends to the Capital Regional District Board:
That Bylaws No. 4376, 4377, and 4378 be deferred pending further analysis by CRD staff.

IMPLICATIONS

Financial Implications

Operating Reserve (3.717)

Due to the cyclical nature of some operating and maintenance costs within the wastewater service, an operating reserve is recommended to minimize fluctuations in revenue requirements in any given year. Additionally, unforeseen or extraordinary operating costs can be mitigated through use of the operating reserve.

To establish the operating reserve Bylaw No. 4376 to amend the existing Operating Sewer and Water Reserve Fund Bylaw No. 4242 by replacing Schedule A. Schedule A has been amended to remove 'Trunk Sewers & Sewage Disposal' and replace with Core Area and Western Communities Liquid Waste Management Service.

The operating reserve fund will be funded through surplus fund transfers and required amounts to meet cyclical or irregular operating expenditures commitments from year to year.

Equipment Replacement Reserve Fund (3.717)

The Equipment Replacement Reserve fund is used to pay for 'minor' equipment replacement that typically has a service life of less than five years and/or a value of less than $25,000. The reserve fund contributions are set to meet replacement lifecycle requirements of ongoing operations.

Debt Repayment Reserve Fund (3.798C)

The debt repayment reserve fund will be used to set aside funding sufficient to exercise the 10-year early payout option on debt issuances within the CAWTP debt program.

The establishment of this fund aligns with the financing strategy approved by the Board in 2019 which was designed to deliver the most cost effective financing structure, with the lowest overall cost to the participants. The annual contribution to the debt repayment reserve will be based on the forecasted obligations of early payout.

Capital Reserves (3.798C)

Establishment of the capital reserve is required to facilitate savings for long-term (over 15 years) capital works as required in the new amalgamated service and for future system betterments or expansions. Planned annual contributions to the capital reserve fund have been set low initially

to offset impacts of the debt repayment reserve contributions and with lifecycle replacement requirements further in the future on a largely new asset base. Once debts are paid in full (planned in 2032), reserve contribution levels will be maintained, but transfers will build up the capital reserve rather than service debts.

CONCLUSION

In order to facilitate financial administration of the 2021–2025 Provisional Financial Plan, as will be presented to Committee of the Whole on October 28, 2020, staff are seeking Committee recommendation for the Board to approve Bylaw Nos. 4376, 4377 and 4378. The bylaws amend and establish reserve funds required to facilitate transactions within the Core Area Wastewater Service, in compliance with the *Local Government Act.*

RECOMMENDATION

The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:

1. That Bylaw No. 4376, "Capital Regional District Sewer and Water Services Operating Reserve Fund Bylaw No. 1, 2016, Amendment Bylaw No. 2, 2020" be introduced and read a first, second, and third time; and
2. That Bylaw No. 4376 be adopted.
3. That Bylaw No. 4377, "Liquid Waste Management Core Area and Western Communities Service Debt Repayment Reserve Establishment Bylaw No. 1, 2020", be introduced and read a first, second, and third time; and
4. That Bylaw No. 4377 be adopted.
5. That Bylaw No. 4378, "Liquid Waste Management Core Area and Western Communities Service Capital Reserve No. 1, 2020", be introduced and read a first, second, and third time; and
6. That Bylaw No. 4378 be adopted.

Submitted by:	Rianna Lachance, BCom, CPA, CA, Senior Manager, Financial Services
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer
Concurrence:	Ted Robbins, B. Sc., C. Tech., General Manager, Integrated Water Services
Concurrence:	Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENT(S)

Appendix A: Bylaw 4376 "Capital Regional District Sewer and Water Services Operating Reserve Fund Bylaw No. 1, 2016, Amendment Bylaw No. 2, 2020"
Appendix B: Bylaw 4377 "Liquid Waste Management Core Area and Western Communities Service Debt Repayment Reserve Establishment Bylaw No. 1, 2020"
Appendix C: Bylaw 4378 "Liquid Waste Management Core Area and Western Communities Service Capital Reserve No. 1, 2020"

CAPITAL REGIONAL DISTRICT

BYLAW NO. 4376

****

A BYLAW TO AMEND THE CAPITAL REGIONAL DISTRICT OPERATING RESERVE FUNDS BYLAW

****

WHEREAS:

A. Under Bylaw No. 4144, "Capital Regional District Sewer and Water Services Operating Reserve Fund Bylaw No. 1, 2016", the Board of the District established operating reserve funds for sewer and water services;

B. Bylaw No. 4242, "Capital Regional District Sewer and Water Services Operating Reserve Fund Bylaw No. 1, 2016, Amendment Bylaw No. 1, 2018", was adopted by the Board of the District on June 6, 2018, amending Bylaw No. 4144, "Capital Regional District Sewer and Water Services Operating Reserve Fund Bylaw No. 1, 2016".

C. This bylaw is required to be amended to update the language to agree to the 4304 service amendment in order to advance the objective of eliminating separate trunks and consolidating them into one amalgamated service.

D. The Board wishes to amend Bylaw 4242, "Capital Regional District Sewer and Water Services Operating Reserve Fund Bylaw No. 1, 2016, Amendment Bylaw No. 1, 2018", to expire the historic trunk sewer services language and to include the Core Area and Western Communities Liquid Waste Management Service as defined in the service amendment.

NOW THEREFORE the Board of the Capital Regional District enacts as follows:

1. Bylaw 4144, "Capital Regional District Sewer and Water Services Operating Reserve Fund Bylaw No. 1, 2016", is hereby amended as follows:

   a) By deleting SCHEDULE A in its entirety and replacing it with the following:

SCHEDULE A

1) Core Area and Western Communities Liquid Waste Management Service
2) Saanich Peninsula Wastewater

Salt Spring Island:

1) Highland/Fernwood Water
2) Beddis Water
3) Fulford Water
4) Cedar Lane Water
5) Septage Composting – Salt Spring
6) Ganges Sewer Utility
7) Maliview Sewer Utility

Southern Gulf Islands:

1) Magic Lake Estates Water
2) Lyall Harbour Boot Cover Water (Saturna)
3) Skana Water (Mayne)
4) Sticks Allison Water (Galiano)
5) Surfside Park Estates (Mayne)
6) Magic Lake Sewer Utility

Juan de Fuca:

1) Port Renfrew Water
2) Port Renfrew Sewer
3) Wildnerness Mountain Water

2. This Bylaw may be cited as “Capital Regional District Sewer and Water Services Operating Reserve Fund Bylaw No. 1, 2016, Amendment Bylaw No. 2, 2020”

READ A FIRST TIME THIS	th	DAY OF	2020
READ A SECOND TIME THIS	th	DAY OF	2020
READ A THIRD TIME THIS	th	DAY OF	2020
ADOPTED THIS	th	DAY OF	2020

CHAIR

CORPORATE OFFICER

CAPITAL REGIONAL DISTRICT

BYLAW NO. 4377

****

A BYLAW TO ESTABLISH A DEBT REPAYMENT RESERVE FUND FOR THE LIQUID WASTE MANAGEMENT CORE AREA AND WESTERN COMMUNITIES SERVICE

****

WHEREAS:

A. Under Bylaw No. 4304, "Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 1, 1995", Amendment Bylaw No. 3, 2020, the Regional Board converted a service established by Supplementary Letters Patent, Division VII dated December 28, 1967, as amended by further Supplementary Letters Patent, for the function of acquisition, design, construction, operation, maintenance, renewal, and administration of trunk sewers and sewage disposal facilities within all member municipalities of the Regional District except the District of Sooke and the Southern Gulf Islands, and converted such service to the authority of a bylaw under the Local Government Act;

B. Pursuant to section 377 of the *Local Government Act*, the Board of the Regional District is empowered by Section 188 of the *Community Charter* to establish a reserve fund for a specified purpose and direct that money be placed to the credit of the reserve fund.

C. It is deemed desirable to establish a reserve fund for the Liquid Waste Management Core Area and Western Communities Service to provide for expenditures related to debt servicing payments or debt retirement payments.

NOW THEREFORE the Capital Regional District Board in open meeting assembled hereby enacts as follows:

1. There shall be and is hereby established a debt repayment reserve fund pursuant to provisions of Section 188 of the *Local Government Act* to be known as the "Liquid Waste Management Core Area and Western Communities Service Debt Repayment Reserve".

2. Money from current revenues raised to pay for capital, will be paid into the reserve and will be reflected as part of the annual financial planning process.

3. Monies in the debt repayment reserve fund will fund debt servicing and early repayment of debts issued to fund the Core Area Wastewater Treatment Project.

4. This Bylaw may be cited as “Liquid Waste Management Core Area and Western Communities Service Debt Repayment Reserve Establishment Bylaw No. 1, 2020”.

READ A FIRST TIME THIS th DAY OF 2020

READ A SECOND TIME THIS th DAY OF 2020

READ A THIRD TIME THIS th DAY OF 2020

ADOPTED THIS th DAY OF 2020

CHAIR

CORPORATE OFFICER

CAPITAL REGIONAL DISTRICT

BYLAW NO. 4378

****

A BYLAW TO ESTABLISH A CAPITAL RESERVE FUND FOR THE LIQUID WASTE MANAGEMENT CORE AREA AND WESTERN COMMUNITIES SERVICE

****

WHEREAS:

A. Under Bylaw No. 4304, "Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 1, 1995", Amendment Bylaw No.3, 2020, the Regional Board converted a service established by Supplementary Letters Patent, Division VII dated December 28, 1967, as amended by further Supplementary Letters Patent, for the function of acquisition, design, construction, operation, maintenance, renewal, and administration of trunk sewers and sewage disposal facilities within all member municipalities of the Regional District except the District of Sooke and the Southern Gulf Islands, and converted such service to the authority of a bylaw under the Local Government Act;

B. Pursuant to section 377 of the *Local Government Act*, the Board of the Regional District is empowered by Section 188 of the *Community Charter* to establish a reserve fund for a specified purpose and direct that money be placed to the credit of the reserve fund.

C. It is deemed desirable to establish a reserve fund for the Liquid Waste Management Core Area and Western Communities Service to provide for capital expenditures for or 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.

NOW THEREFORE the Capital Regional District Board in open meeting assembled hereby enacts as follows:

1. There shall be and is hereby established a debt repayment reserve fund pursuant to provisions of Section 188 of the *Local Government Act* to be known as the "Liquid Waste Management Core Area and Western Communities Service Capital Reserve";

2. Monies from current revenues, raised to pay for capital, will be paid into the reserve and will be reflected as part of the annual financial planning process.

3. Monies in the reserve fund will be used to provide for new capital works and extension or renewal of existing capital works, including the planning, study, design, construction of facilities, land acquisition, as well as machinery or equipment necessary for capital works and related debt servicing payments.

4. This Bylaw may be cited as "Liquid Waste Management Core Area and Western Communities Service Capital Reserve No. 1, 2020".

READ A FIRST TIME THIS	th	DAY OF	2020
READ A SECOND TIME THIS	th	DAY OF	2020
READ A THIRD TIME THIS	th	DAY OF	2020
ADOPTED THIS	th	DAY OF	2020

CHAIR

CORPORATE OFFICER