



**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

<b>1</b>	<b><i>Executive Summary</i></b> .....	<b>3</b>
1.1	<b>Introduction</b> .....	<b>3</b>
1.2	<b>Dashboard</b> .....	<b>5</b>
<b>2</b>	<b><i>Wastewater Treatment Project Progress</i></b> .....	<b>8</b>
2.1	<b>Safety</b> .....	<b>8</b>
2.2	<b>Environment and Regulatory Management</b> .....	<b>10</b>
2.2.1	Environment .....	10
2.2.2	Regulatory Management .....	11
2.3	<b>First Nations</b> .....	<b>11</b>
2.4	<b>Stakeholder Engagement</b> .....	<b>11</b>
2.5	<b>Resolutions from Other Governments</b> .....	<b>13</b>
2.6	<b>Schedule</b> .....	<b>13</b>
2.6.1	30 day look ahead .....	15
2.6.2	60 day look ahead .....	17
2.7	<b>Cost Management and Forecast</b> .....	<b>19</b>
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	<b>Key Risks and issues</b> .....	<b>21</b>
2.9	<b>Status (Engineering, Procurement and Construction)</b> .....	<b>25</b>
2.9.1	Wastewater Treatment Plant (McLoughlin Point WWTP) .....	25
2.9.2	Residuals Treatment Facility .....	28
2.9.3	Conveyance System .....	30
	<b><i>Appendix A– Trent Forcemain: Updated Work Hours (August 6, 2020)</i></b> .....	<b>42</b>
	<b><i>Appendix B– Dallas Road Update (August 6, 2020)</i></b> .....	<b>43</b>
	<b><i>Appendix C– Trent Forcemain: Dallas Road Seawall (August 17, 2020)</i></b> .....	<b>44</b>
	<b><i>Appendix D– Monthly Cost Report (August)</i></b> .....	<b>45</b>

# 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).					<p>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.</p> <p>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.</p>

\* 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.	<p>The channel cover panel was not secured properly, nor cordoned off and gave way beneath the worker.</p> <p>Worker fell approximately 15 feet into a water filled channel.</p> <p>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.</p> <p>Site stand down was initiated.</p> <p>Worker returned to work the following day, no further medical follow up required.</p>	<p>WorkSafeBC called, attended site and full investigation completed.</p> <p>Control zone established around the loose channel covers.</p> <p>All channel covers were inspected and covers not fastened were immediately secured.</p>
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	<p>Tool-box talk to remind loader operator to be aware of their surroundings and proximity in and around the work area.</p> <p>Crews to avoid travel on non-project roads as they are narrow with cars are parked on both sides.</p>

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*

<i>Permit/Licence</i>	<i>Anticipated Date</i>	<i>Status</i>	<i>Party Responsible for Obtaining Permitting</i>
<b>McLoughlin Point Harbour Crossing</b>			
Transport Canada Lease	Following completion of construction	On track	HRP
<b>McLoughlin Point Outfall</b>			
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 WSÁNEĆ 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

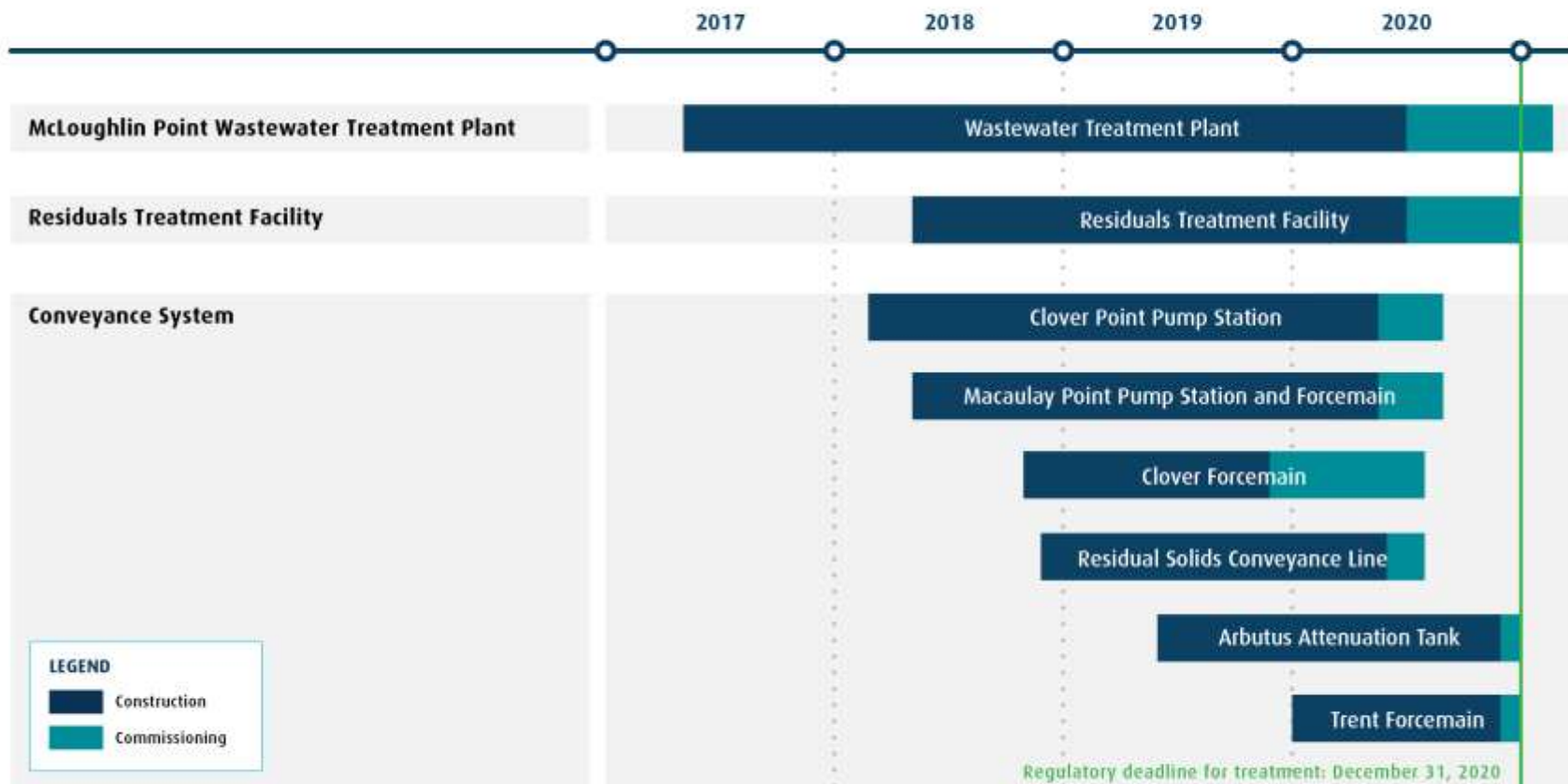
Progress over the reporting period is summarized in Section 2.9.

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

**Wastewater Treatment Project Schedule\*****Construction + Commissioning**

\*Schedule subject to updates as Project planning progresses.



### 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
<b>Contingency and Program Reserve (in Control Budget)</b>		<b>\$ 69,318,051</b>
Net Contingency and Program Reserve draws to July 31, 2020		\$ (54,280,640)
<b>Contingency and Program Reserve balance as at July 31, 2020</b>		<b>\$ 15,037,411</b>
Residual Solids Discharge Line Connection to the Secondary Bypass Line	Aug-20	\$ (281,522)
<b>WWTP Total Draw</b>		<b>\$ (281,522)</b>
Reallocation of savings in a budgeted line item (RTF Financing) into RTF Contingency	Aug-20	\$ 400,000
<b>RTF Total Increase</b>		<b>\$ 400,000</b>
<b>Conveyance Total Draw</b>		<b>\$ -</b>
<b>PMO Total Draw</b>		<b>\$ -</b>
<b>BC Hydro Total Draw</b>		<b>\$ -</b>
<b>WTP Program Reserve Draw</b>		<b>\$ -</b>
Contingency and Program Reserve credits in the reporting period		\$ 400,000
Contingency and Program Reserve draws in the reporting period		\$ (281,522)
<b>Contingency and Program Reserve balance as at August 31, 2020</b>		<b>\$ 15,155,889</b>

## 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	-	-
<b>TOTAL</b>	<b>\$459.3M</b>	-	<b>\$339M</b>

## 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
<b>Project</b>				
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.

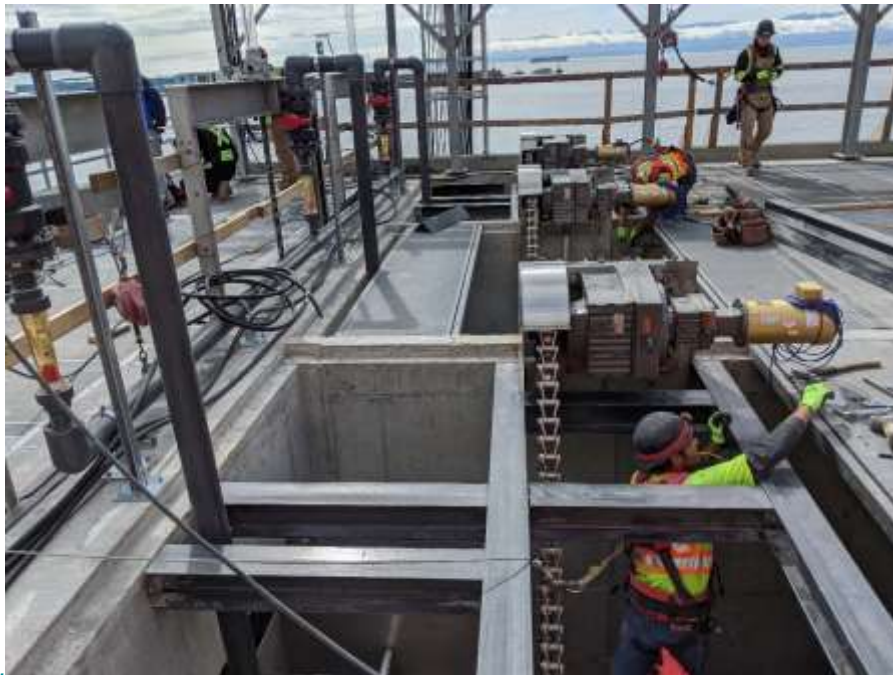
Key activities in progress or completed by HRP in August were as follows:

- 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.*

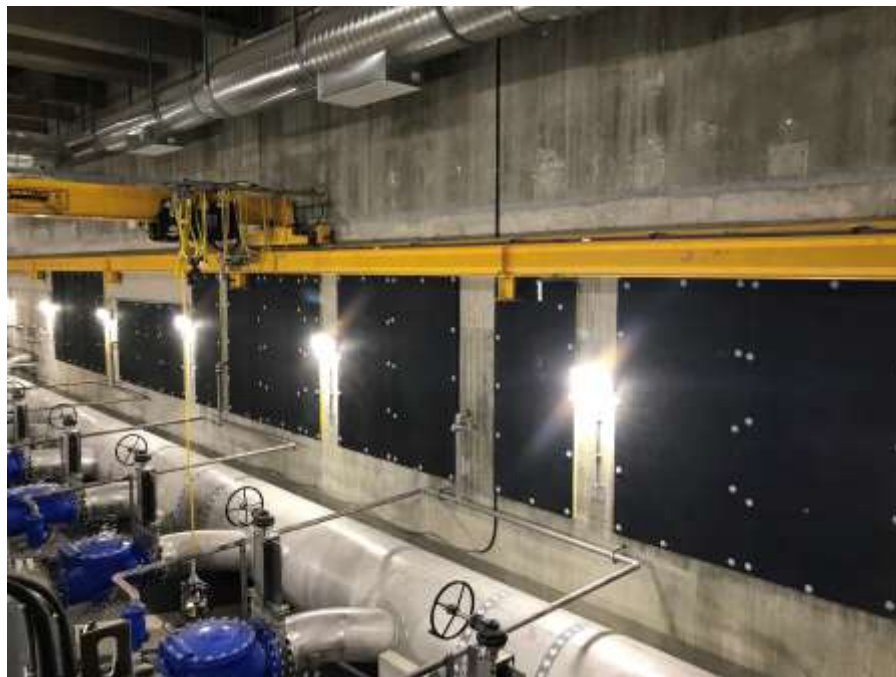
### 2.9.3.2 Macaulay Point Pump Station and Forcemain

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.*



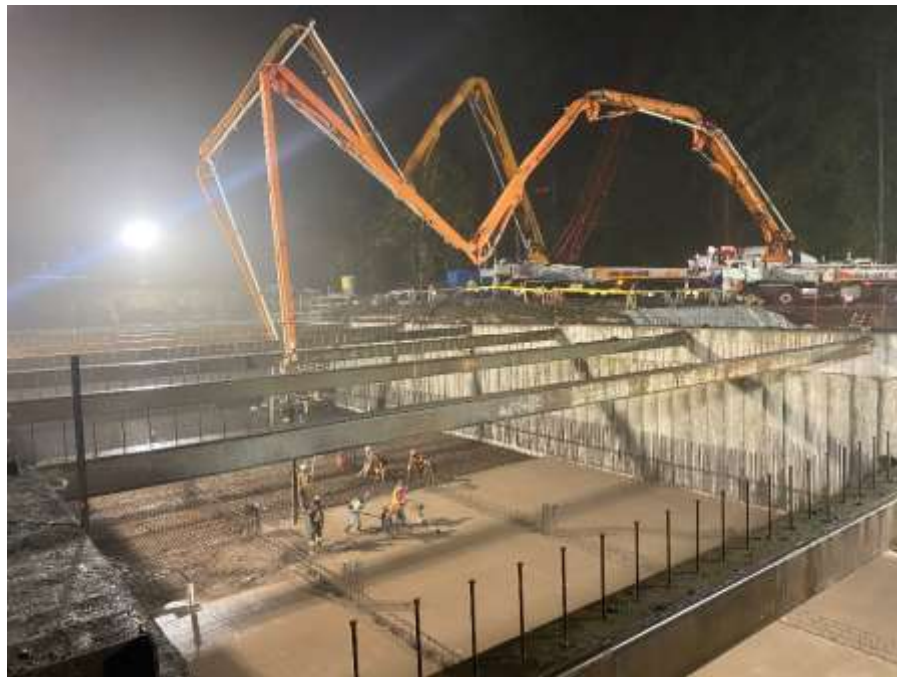
### 2.9.3.5 Arbutus Attenuation Tank

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](mailto:wastewater@crd.bc.ca) if you have any questions.

Thank you,

Wastewater Treatment Project Team



## **Appendix B– Dallas Road Update (August 6, 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](mailto:wastewater@crd.bc.ca)



**Website**  
[wastewaterproject.ca](http://wastewaterproject.ca)

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

## Dallas Road Seawall

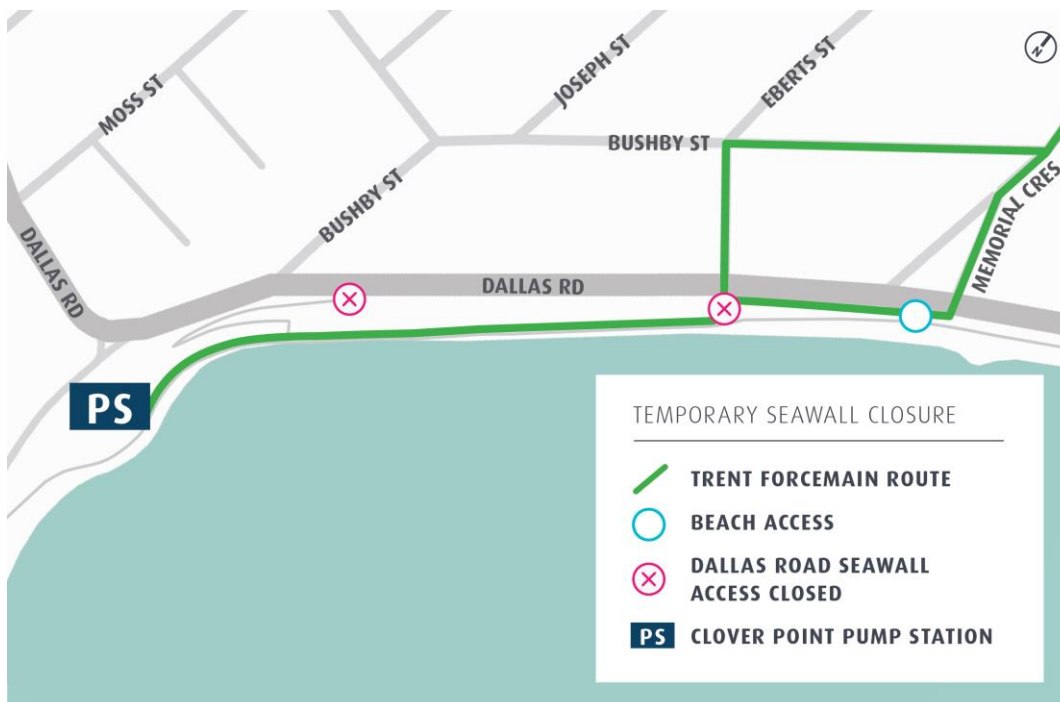
The Wastewater Treatment Project includes construction of the Trent Forcemain, 1.9km of pipes that will be installed from the intersection of Chandler Avenue and St. Charles Street to the Clover Point Pump Station. This work includes installing a pipe under the pedestrian path on the Dallas Road Seawall. 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 Commitment 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
<b>McLoughlin Point Wastewater Treatment Plant</b>	<b>331.4</b>	<b>328.1</b>	<b>303.0</b>	<b>4.2</b>	<b>307.2</b>	<b>94%</b>	<b>20.9</b>	<b>321.2</b>	<b>14.0</b>	<b>6.9</b>	<b>20.9</b>	<b>328.1</b>	-	<b>0%</b>
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%
<b>Residuals Treatment Facility</b>	<b>159.4</b>	<b>140.1</b>	<b>11.4</b>	<b>0.0</b>	<b>11.4</b>	<b>8%</b>	<b>128.7</b>	<b>139.1</b>	<b>127.7</b>	<b>1.0</b>	<b>128.7</b>	<b>140.1</b>	-	<b>0%</b>
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%
<b>Conveyance System</b>	<b>158.0</b>	<b>215.6</b>	<b>170.4</b>	<b>5.1</b>	<b>175.6</b>	<b>81%</b>	<b>40.1</b>	<b>196.2</b>	<b>20.7</b>	<b>19.4</b>	<b>40.1</b>	<b>215.6</b>	-	<b>0%</b>
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%
<b>Project Management Office ("PMO")</b>	<b>75.8</b>	<b>77.9</b>	<b>57.4</b>	<b>1.6</b>	<b>59.1</b>	<b>76%</b>	<b>18.8</b>	<b>70.4</b>	<b>11.4</b>	<b>7.4</b>	<b>18.8</b>	<b>77.9</b>	-	<b>0%</b>
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%
<b>BC Hydro</b>	<b>12.9</b>	<b>4.3</b>	<b>2.0</b>	<b>0.0</b>	<b>2.1</b>	<b>48%</b>	<b>2.2</b>	<b>2.1</b>	<b>0.0</b>	<b>2.2</b>	<b>2.2</b>	<b>4.3</b>	-	<b>0%</b>
<b>Third Party Commitments</b>	<b>8.1</b>	<b>8.1</b>	<b>4.1</b>	<b>0.1</b>	<b>4.1</b>	<b>51%</b>	<b>4.0</b>	<b>6.9</b>	<b>2.7</b>	<b>1.3</b>	<b>4.0</b>	<b>8.1</b>	-	<b>0%</b>
<b>Program Reserves</b>	<b>19.2</b>	<b>0.9</b>	-	-	-	<b>0%</b>	<b>0.9</b>	-	-	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	-	<b>0%</b>
<b>Core Area Wastewater Treatment Project</b>	<b>765.0</b>	<b>775.0</b>	<b>548.4</b>	<b>11.0</b>	<b>559.4</b>	<b>72%</b>	<b>215.5</b>	<b>735.9</b>	<b>176.5</b>	<b>39.1</b>	<b>215.5</b>	<b>775.0</b>	-	<b>0%</b>

\* 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