



**REPORT TO CORE AREA WASTEWATER TREATMENT PROJECT BOARD  
MEETING OF TUESDAY, OCTOBER 27, 2020**

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**SUBJECT**      **Wastewater Treatment Project Q3 2020 Quarterly Report**

**ISSUE**

To provide the Core Area Wastewater Treatment Project Board with the Wastewater Treatment Project Q3 2020 Quarterly 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 July- September 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 Q3 2020 Quarterly Report', be received for information and forwarded to the Core Area Liquid Waste Management Committee and CRD Board for information.



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Elizabeth Scott, Deputy Project Director  
Wastewater Treatment Project



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Dave Clancy, Project Director  
Wastewater Treatment Project  
Concurrence

Attachments: 1

Appendix A: Wastewater Treatment Project Q3 2020 Quarterly Report

ES:er



# Wastewater Treatment Project

Treated for a cleaner future

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## CRD Wastewater Treatment Project

### Quarterly Report

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Reporting Period: July - September 2020

## TABLE OF CONTENTS

<b>1</b>	<b><i>Executive Summary</i></b>	<b>4</b>
1.1	Introduction	4
1.2	Dashboard	6
<b>2</b>	<b><i>Wastewater Treatment Project Progress</i></b>	<b>9</b>
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	17
2.5	Resolutions from Other Governments	20
2.6	Schedule	20
2.6.1	30 day look ahead	22
2.6.2	60 day look ahead	24
2.7	Cost Management and Forecast	26
2.7.1	Commitments	26
2.7.2	Expenses and Invoicing	27
2.7.3	Contingency and Program Reserves	27
2.7.4	Project Funding	27
2.8	Key Risks and issues	28
2.9	Status (Engineering, Procurement and Construction)	33
2.9.1	Wastewater Treatment Plant (McLoughlin Point WWTP)	33
2.9.2	Residuals Treatment Facility	38
2.9.3	Conveyance System	41
	<b><i>Appendix A– Trent Forcemain: Road Closure at Fairfield and Stannard (July 15, 2020)</i></b>	<b>56</b>
	<b><i>Appendix B– Macaulay Point Pump Station: Transition to New Pump Station (July 13, 2020)</i></b>	<b>57</b>
	<b><i>Appendix C– Core Area Wastewater Discharge Notice (July 24, 2020)</i></b>	<b>58</b>
	<b><i>Appendix D– Residual Solids Conveyance Line Map (July 20, 2020)</i></b>	<b>59</b>
	<b><i>Appendix E– Trent Forcemain: Updated Work Hours (August 6, 2020)</i></b>	<b>60</b>
	<b><i>Appendix F– Dallas Road Update (August 6, 2020)</i></b>	<b>61</b>
	<b><i>Appendix G– Trent Forcemain: Dallas Road Seawall (August 17, 2020)</i></b>	<b>62</b>
	<b><i>Appendix H– Arbutus Attenuation Tank Overnight Work (September 11, 2020)</i></b>	<b>63</b>
	<b><i>Appendix I– Pump Station: Construction Update (September 17, 2020)</i></b>	<b>64</b>
	<b><i>Appendix J –Trent Forcemain: Dallas Road Closure (September 18, 2020)</i></b>	<b>65</b>
	<b><i>Appendix K- Macaulay Point Update (September 28, 2020)</i></b>	<b>66</b>

***Appendix L– Monthly Cost Report (September) .....67***

***Appendix M- Quarterly Cost Report .....68***

# 1 Executive Summary

## 1.1 Introduction

This Quarterly Report covers the reporting period of July - September 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 the Project. 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 the Clover Point and Macaulay Point Pump Stations to the McLoughlin Point WWTP for the first time, and residuals solids were conveyed to the Residuals Treatment Facility, 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) progressing: installation of the disk filter system piping and equipment; wet commissioning of Densadegs, 1, 2, and 3; commissioning of the primary odour control systems, plate settler one and two, sludge tank, plant drain tank and valve vault, biological aerated filter (BAF) cell nine; commissioning of wastewater treatment processes in the primary, secondary and tertiary treatment areas; and commissioning of the outfall and building automation systems in the Operations and Maintenance (O&M) 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: introduction of residual solids into the facility; installation of insulation for Digesters 2 and 3, pneumatic and hydro testing of Digester 1; erection of scaffolding for gas membrane installation; installation of biogas piping on the roof of the Digester building to tie into the Digester tanks in the Digester area; installation of hopper, and piping modifications in the Other Municipal Solids Receiving Facility; commissioning of various system including boilers and insulation of hot water piping; and air balancing in the Residuals Handling Building; installation of external stairs; commissioning of various systems in the Residuals Drying Facility; and continued 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: installation of grit separation equipment, installation of new diesel generator, exhaust and fuelling system, and completed functional and operational test for upgrades at the existing pump station; 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; completed exterior finishes to public washroom; installing landscape retaining walls in public plaza; installing stone exterior retaining walls of pump stations; and installing emergency egress corridor in generator room.
- Macaulay Point Pump Station: Kenaidan Contracting Limited (“Kenaidan” as the Design-Build Contractor) progressed construction and commissioning activities over the reporting period including: installation of flow splitters in the wet well; completion of wood siding installation; commenced fiberglass reinforced concrete (FRP) grating in the bin room; commencing pumping of wastewater to the McLoughlin Point WWTP; installation of vent pipes and 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; installation of electrical sleeves to the low level chamber; demolition of the old pump station; completed green roof installation; and completed backfill on east side.

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: installation of new aluminium fence and bollards; supporting the commencement of pumping of wastewater from the Clover Point Pump Station, through the Clover Forcemain to the McLoughlin Point WWTP; top lift of paving in front of seawall and line painting; and completed construction of the seawall balustrade replacement and new plaza.
- 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: utility locates, survey layout and equipment mobilization to site; 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; installation of new culverts and storm drain manhole; installation of

eight micro piles in the headwall locations; and formed and poured east and west headwalls.

- Residual Solids Pump Stations: Knappett Projects Inc. (“Knappett” as the Construction Contractor) continued construction and commissioning activities including: installation of curbing at pump station 1; installed odour control vent piping at all pump stations; fencing installed at pump stations 2 and 3; completed commissioning of pipes and pump stations including pigging of the lines; replaced threaded hangar rods on Admirals and Tillicum Bridges; forming and pouring new pump bases and continued installation of mechanical equipment and piping and installed pumps for the Hartland water system improvements.
- Arbutus Attenuation Tank (“AAT”): NAC Constructors Ltd. (as the Construction Contractor) continued construction activities including: commencing drilling, grouting and installation of rock anchors; completing the final excavation within the tank; pouring sections of mud mat; completing valve chamber excavation and subbase placement; backfill of culvert extension; completed base slab pours for the valve chamber, lower sump and trough areas of the main tank; commenced perimeter walls and divider wall reinforcing steel installation; and poured concrete for valve chamber walls.
- Trent Forcemain: Jacob Bros. Construction Inc. (as the Construction Contractor) progressed construction activities including: installing forcemain along Fairfield Road, Memorial Crescent, Stannard Avenue, Brooke Street and Dallas Road; installing an air valve chamber on Memorial Crescent; reinstatement of three external drop structure manholes on Brooke Street; completing Fairfield Road watermain realignment with City of Victoria.

## 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 one recordable safety incident occurred and the total recordable incident frequency decreased from 1.6 at the end of the second quarter of 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 the Project. However, construction is ongoing in accordance with provincial guidelines and commissioning of each of the key facilities commenced over the reporting period, 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. As a result of these budget pressures, 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*.					One recordable incident 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 has and is impacting the Project. The schedule KPI for the Project overall and the Project components remains green. The COVID-19 public health emergency is impacting the Project's progress. However, construction is ongoing in accordance with provincial guidelines and commissioning of each of the key facilities commenced over the reporting period, and based on current progress the Wastewater Treatment Project 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>The CRD Board approved an increase to the Project's budget by \$10M, to \$775M, based on the Project Team's forecast of the cost to complete the Project. The increase was required 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.</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 quarterly reporting period (July - September 2020) 26 safety incidents occurred, comprising: nine first-aid, one medical aid, one near miss, one high potential near miss, and fourteen 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.

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
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.
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.

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
<b>July 22, 2020</b>	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.
<b>July 27, 2020</b>	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.
<b>August 13, 2020</b>	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.
<b>August 13, 2020</b>	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
<b>August 17, 2020</b>	McLoughlin Pt WWTP	High Potential Near Miss	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 done.</p>

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
<b>August 17, 2020</b>	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.
<b>August 17, 2020</b>	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.
<b>August 17, 2020</b>	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.
<b>September 1, 2020</b>	Trent Forcemain	Report Only	Overhead Utility struck by Excavator.	While completing force main installation an excavator boom came into contact with a low hanging communication line. Utility was contacted and line repaired.	Tool-Box talk to discuss having a spotter available for operator if there is limited visibility or restricted work area.
<b>September 2, 2020</b>	McLoughlin Pt WWTP	Report Only	A driver reversed their truck and struck a piece of equipment.	While there was some damage sustained to the equipment no one was injured.	Tool-Box talk was held with the employee and emphasis placed on the requirement for a spotter to be in position before moving vehicle.
<b>September 17, 2020</b>	Macaulay Point Pump Station	Medical Aid	Worker injured their finger while moving a cabinet.	Worker was examined and treated by First Aid and taken to medical aid where they received stitches. The worker was wearing gloves at the time of the injury.	Tool-Box talk to review the safe practices of moving any tools/equipment on site was held.
<b>September 24, 2020</b>	Trent Forcemain	Report Only	A buried utility was struck by an excavator.	Locates were obtained but the utility was not identified.	City of Victoria was called to repair the line.
<b>September 25, 2020</b>	McLoughlin Pt WWTP	Report Only	The Electrical Contractor at the McLoughlin site had a Subcontractor on site conducting some programming work,	Worker did not have an orientation and no permit submitted for work being conducted.	Safety meeting with Electrical Company to ensure that no workers access site without a proper orientation conducted and a permit issued for any work that needs to be performed.



Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
<b>September 25, 2020</b>	Residual Solids Pump Stations	Report Only	A Sub-contractor employee did not sign out on the accountability list before leaving the Hartland site.	This caused an accountability check to be performed to locate the worker to check on their well-being.	Worker was located and talked to by the Prime Contractor in regard to their responsibility when it comes to signing in/out on the Hartland Site.  Worker was required to re-take their site safety orientation to refresh them on the site rules.
<b>September 26, 2020</b>	McLoughlin Pt WWTP	Near Miss	An employee had locked out the valves on the MBBR and was preparing to enter the cell.	An issue downstream backed flow into the MBBR overflow channel prior to the employee entering.	The flow backup was resolved and additional valves isolated in order to mitigate any future issues.
<b>September 29, 2020</b>	McLoughlin Pt WWTP	Report Only	Electrical Subcontractor identified a failure of the motor control center protection relays	It was determined that the safe path forward was to disconnect the line power and transfer to generator power to maintain plant operations in order to repair the relays.	The relays were replaced and the plant was reconnected to line power.

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.

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.

Key safety activities conducted during September included:

- bi-weekly project update meetings with prime contractors: Knappett, NAC, HRMG, Kenaidan, Jacobs Brothers;
- monthly update meetings with prime contractors: Don Mann, HRP;
- monthly Incident Investigation reviews;
- close out meeting with Prime Contractor and CRD for High Potential For Harm Incident;
- issued Safety Notices covering: the non-Project-related worker fatality that occurred on a construction site in downtown Victoria, reminding contractors of fall protection and inspection requirements when using aerial work platforms; and a safety recall notice for a specific type of fall protection equipment;
- reviewed site specific safety plans and high risk tasks; and
- WTP Safety Manager and/or Construction Manager conducting regular site inspections at all active Project work sites.



Table 3: WTP Safety Information

	Reporting Period (Q3 2020)	Project Totals
Person Hours		
PMO	9,496	158,228
Project Contractor	213,190	2,185,789
Total Person Hours	222,686	2,344,017
PMO	28	
Project Contractors (& Project Consultants) working on Project Sites	328	
Total Number of Employees	356	
Near Miss Reports	1	47
High Potential Near Miss Reports	1	7
Report Only	14	179
First Aid	9	67
Medical Aid	1	11
Medical Aid (Modified Duty)	0	2
Lost Time	0	5
Total Recordable Incidents	1	18
		Project Frequency (from January 1, 2017)
First Aid Frequency		5.7
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 primarily to 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.

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.

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.

Key environmental management activities completed in September included:

- In preparation for the first heavy rainfall of the season, all contractors were reminded to check their erosion and sediment control measures. It was determined that most erosion and sediment control measures were functioning properly, and some improvements were identified that were immediately implemented.

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

- Overnight on July 23<sup>rd</sup> 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.
- In July, 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

Over the reporting period, the Project Team continued to support or lead the advancement of remaining permit applications.

Key permitting activities over the reporting period included:

- In July, the CRD and Transport Canada met to discuss the Harbour Crossing Licence Agreement.
- In August, 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.
- In September, the CRD met with Transport Canada to discuss the McLoughlin Point outfall Licence Agreement.

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 to the status of the key outstanding permits from the table presented in the Project's Q2 2020 Quarterly Report.

Table 4- Key Permits Status

Permit/Licence	Anticipated Date	Status	Party Responsible for Obtaining Permitting
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 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 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.

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.

Key activities in September included:

- Millennia and members of the Songhees, Esquimalt, Tsartlip, Tsawout and Pauquachin Nations began screening archaeological soils at two separate locations. The archaeological soils were previously recovered from Dallas Road and Interurban Road.

## 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.

## July Overview

Two construction notices were issued to stakeholders in July:

- 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)

Over the month of July, the Project website, [wastewaterproject.ca](http://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 accounts 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.

Over the month of July, 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.

## August Overview

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 E). 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 F).

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 G).

Over the month of August, 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 were used to provide Project information to the public, including an update on the work taking place along Dallas Road.

Over the month of August, the Project Team held meetings with the following municipality representatives:

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

## **September Overview**

Three construction notices and an update letter were issued to stakeholders in September:

- Arbutus Attenuation Tank: Overnight Work (September 11, 2020) (Appendix H)
- Pump Station: Construction Update (September 17, 2020) (Appendix I)
- Trent Forcemain: Dallas Road Closure (September 18, 2020) (Appendix J)
- Macaulay Point Update (September 28, 2020) (Appendix K)

The construction notices were hand delivered in the communities around the respective construction sites: Arbutus Attenuation Tank (53 residences near Haro Woods); Residual Solids Conveyance Line Pump Station (16 residences on Courtland Avenue and three residences on West Saanich Road); and Trent Forcemain (four buildings, including an apartment building, on Dallas Road near the road closure). The Arbutus Attenuation Tank notice was also circulated to stakeholders via email. 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.

The Macaulay Point update letter provided information to residents in the Work Point area about the remaining work in their neighbourhood including an upcoming pathway closure. It was distributed through the Department of National Defence and emailed to the Township of Esquimalt.

Over the month of September, the Project website, wastewaterproject.ca, was updated with information about the Project. Three construction notices and an update letter were posted. The CRD's Twitter and Facebook accounts were used to provide Project information to the public, including: a traffic advisory about the closure of Dallas Road for the Trent Forcemain work; an update on the progress of the Trent Forcemain; and information on the closure of the waterfront pathway at Macaulay Point.

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

- Esquimalt Liaison Committee meeting;
- City of Victoria Transportation Group;
- 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- Q3 2020*

Inquiry Source	Contacts for Q3 2020
Information phone line inquiries	69
Email inquiries responded to	68

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.

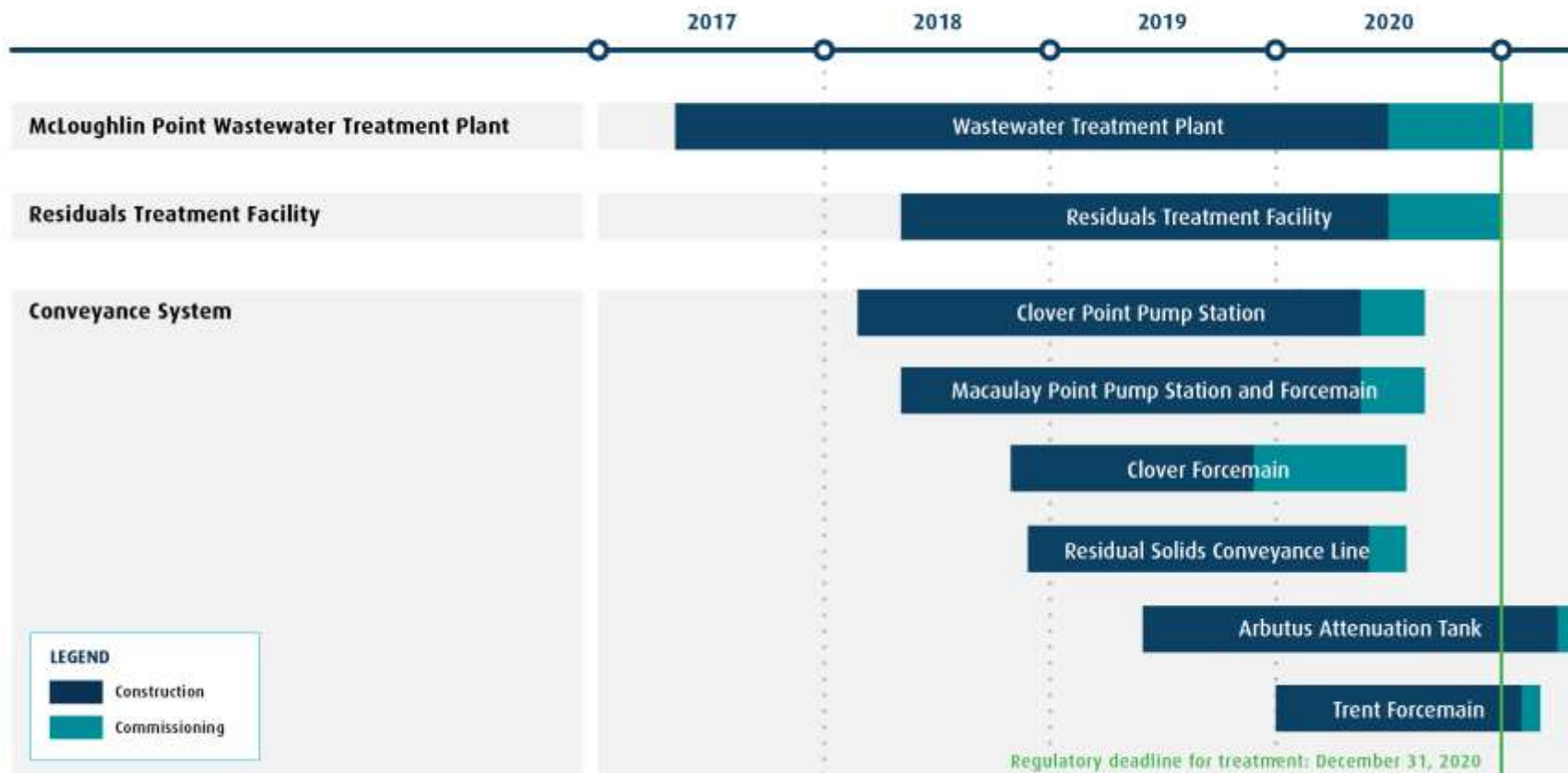
## 2.6 Schedule

Progress over the reporting period is summarized in Section 2.9.

Figure 1 shows the high-level Project schedule. This schedule has been changed from that shown in the Q2 2020 Quarterly Report with the following updates: the forecast completion of the Arbutus Attenuation Tank and Trent Forcemain conveyance components are now in 2021. This schedule change does not impact the Project's ability to meet the regulatory deadline for wastewater treatment by December 31, 2020.

Over the reporting period the COVID-19 public health emergency continued to have impacts on the Project. 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 (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;
- 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; 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 Tsartlip Nation.

#### Stakeholder Engagement

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

#### 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 pavers;
- reinstate curbs, walkway and roadways;
- install pathways;
- form and pour upper plaza level; and
- install water fountain, City of Victoria benches, trash cans and bike maintenance station.



Macaulay Point Pump Station

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

Residuals Treatment Facility

- commence seeding of digester;
- continue process commissioning with residuals;
- complete odour control bio trickling filter acclimation period; and
- complete retention ponds, perimeter fencing and commence site landscaping.

Clover Forcemain

- final clean up; and
- demobilizing from site.

Residual Solids Pipes

- Complete work on Peers Creek culvert.

Residual Solids Pump Stations

- Install site fencing and clean up.

Arbutus Attenuation Tank (AAT)

- install curb, pipe supports, monorail and aluminium platform for the valve chamber;
- commence installation of attenuation exterior walls; and
- commence installation of 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.

## 2.6.2 60 day look ahead

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

### Safety

- bi-weekly and monthly 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

- Complete restoration of riparian areas at Colquitz River and Peers Creek.

### First Nations

- Songhees and Esquimalt to host a ceremonial burning to honour the ancestors that were encountered during project construction prior to their reburial.

### Stakeholder Engagement

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

### Cost Management and Forecast

- prepare cost reports;
- monitor schedule;
- interim audit, auditors on site.

## Construction

### McLoughlin Point

- complete Operations & Maintenance (O&M) Building work to allow for occupancy;
- continue acceptance testing;
- coordinate with CRD for installation of Corporate IT equipment; and
- coordinate with CRD for move of Core Area SCADA servers to McLoughlin Point WWTP.

### Clover Point Pump Station

- install feature railings;
- Install pathway;
- landscaping and hydro seeding;
- install grass pavers; and
- commence demobilization.

### Macaulay Point Pump Station

- commence demobilization;
- landscaping, plant trees, shrubs, and hydro seeding;
- install gravel pathways; and

- install boardwalk and viewing plaza.

#### Residuals Treatment Facility

- complete process commissioning with residuals;
- complete biogas commissioning;
- commence acceptance testing; and
- complete site landscaping.

#### Residual Solids Pump Stations

- Hartland water reservoir commissioning; and
- clean up and demobilize.

#### Arbutus Attenuation Tank (AAT)

- install fiberglass reinforced plastic (FRP) walls and divider walls;
- install FRP columns;
- continue with concrete wall pours; and
- commence install of FRP overflow channel.

#### Trent Forcemain

- asphalt pavement restoration at St. Charles Street;
- continue City of Victoria improvements on Memorial Crescent; and
- commence concrete reinforced pipe shoring support, excavation and backfill along the seawall.

## 2.7 Cost Management and Forecast

The monthly cost report for September and the quarterly cost report for the reporting period (July - September 2020) are attached in Appendices L and M, respectively. The cost reports summarize 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.

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 \$3.2 million. The significant commitments made in the reporting period include the conversion of DND temporary Area D into a permanent facility, changes at the Arbutus Attenuation Tank, 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 commissioning, construction activities and project management office-related costs.

## 2.7.3 Contingency and Program Reserves

Over the reporting period contingency draws of \$0.54M were made and \$0.6M in credits were added; \$0.2M from a control and instrumentation initial deployment credit 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 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
Residual Solids Discharge Line Connection to the Secondary Bypass Line	Aug-20	(281,522)
Convert DND Temporary Area D works yard into permanent facility	Sep-20	(127,922)
WWTP Total Increase		\$ (210,117)
Reallocation - RTF contingency from RTF Financing for HRMG Lime Stabilization and Strain Press	Aug-20	\$ 400,000
RTF Total Increase		\$ 400,000
Enhance Macaulay Power Supply	Sep-20	\$ (134,583)
Conveyance Total Draw		\$ (134,583)
PMO Total Draw		\$ -
BC Hydro Total Draw		\$ -
WTP Program Reserve Draw		\$ -
Contingency and Program Reserve credits in the reporting period (July 1 - Sept 30, 2020)		\$ 599,327
Contingency and Program Reserve draws in the reporting period (July 1 - Sept 30, 2020)		\$ (544,027)
Contingency and Program Reserve balance as at September 30, 2020		\$ 14,893,384

## 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. Both the Building Canada Fund and the Green Infrastructure Fund grants were maximized during the reporting period.

*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	-	-
<b>TOTAL</b>	<b>\$459.3M</b>	<b>\$5.4M</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.

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

- The risk of "Downstream works delays – WWTP delays the commissioning of the conveyance system or the delivery of residual solids to the RTF" was closed as the WWTP has commenced commissioning;
- The risk of "Delay to the commissioning of either the WWTP or the RTF impacts the commissioning of the other plant" was closed as the WWTP and RTF have commenced commissioning; and
- The risk of "Public directly contacting contractors at sites" was reduced (from medium to low) as the number of active construction sites has reduced.

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.	C	Closed as the WWTP has commenced commissioning
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.	C	Closed as the WWTP and RTF have commenced commissioning
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.	L	Reduced (from medium to low) as the number of active construction sites has reduced.
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: this risk has been impacted by the COVID-19 public health emergency
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 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.

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.

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

- Primary treatment area:
  - systems running in automatic; and
  - systems complete for biological commissioning.
- Secondary treatment area:
  - systems running in automatic; and
  - systems complete for biological commissioning.
- Tertiary treatment area:
  - systems running in automatic;
  - systems complete for biological commissioning; and
  - disk filter system ready to be placed in service.
- O&M building:
  - building automation systems commissioning underway, HVAC, fire alarm, security; and
  - work continues in the shop space.

- Site Works:
  - tsunami planters are now landscaped;
  - Patricia Way and main plant site paved;
  - main waterline complete; and
  - continued backfill on site.

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



*Figure 2– McLoughlin Point Wastewater Treatment Plant – Railing installation in Operations & Maintenance building main entrance stairway.*



*Figure 3– McLoughlin Point Wastewater Treatment Plant- Lighting controls installation in general office level 2.*



*Figure 4– McLoughlin Point Wastewater Treatment Plant- Planting shrubs in planter next to Operations & Maintenance building workshops.*



*Figure 5– McLoughlin Point Wastewater Treatment Plant- Handrail installed in Operations & Maintenance main entrance stairwell.*



## 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.

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.

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

- Digester Area
  - completed Digester 1 Hydro and Pneumatic tests;
  - completed Digester 2 insulation;
  - completed Digester 3 insulation;
  - completed DSST hydro test and install of gas membrane; and
  - introduction of residual solids into the RTF.
- Other Municipal Solids Receiving Facility
  - Piping modifications.
- Residuals Handling Building
  - Completed air balancing.
- Residuals Drying Facility
  - Commissioning of various systems in progress.
- Residuals Storage & Odour Control
  - Continued with insulation of FRP ductwork.
- Operations Building
  - Building complete no further activities planned.

Photographs of construction progress over the month of September at the Residuals Treatment Facility are shown in Figures 6 - 7.



*Figure 6- Residuals Treatment Facility- Pipe insulation being installed on Dryer building process piping.*



*Figure 7- Residuals Treatment Facility- Ongoing installation of site perimeter fencing.*

## 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.

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.

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.

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

- completed exterior finishes to public washroom;
- install grinder pump to public washroom;
- installing landscape retaining walls and concrete benches in public plaza area;
- backfill and grading to public plaza area;
- installing stone to exterior retaining walls of pump station;
- complete coatings in Odour Control/Screening room;
- install emergency egress corridor in generator room;
- install gypsum wall cover over existing aluminium stairs in generator room; and
- demolish wall between old transformer room/control/electrical room.

Photographs of construction progress over the month of September at Clover Point are shown in Figures 8-10.



*Figure 8–Clover Point Pump Station- Exterior of public washroom.*



*Figure 9–Clover Point Pump Station- Concrete pour of north retaining wall.*



*Figure 10- Clover Point Pump Station – Control room concrete slab infills.*



### 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.

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;
  - 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.

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

- Diversion Chamber:
  - backfill around the existing drop structure; and
  - installation of vent pipes.
- Pump Station:
  - installed additional air release valves in the pump room;
  - installation of FRP platform and stairs in the pump room;
  - FRP grating installation in the bin room;
  - installation of Acoustic Insulation Panels in Genset Room and Pump Rooms;
  - vent pipe installation on the East side;
  - continued backfill on the East side; and
  - installation of electrical sleeves to the low level chamber.

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

- Diversion Chamber
  - backfill around the existing drop structure; and
  - box Manhole Concrete formwork.
- Pump Station
  - demolition of the old pump station;
  - installed lifting brackets for two flow meters;
  - installation of the FRP grating clips;
  - complete green roof installation;
  - completed backfill on the East side;
  - hydro seeding restoration; and
  - electrical works for the low level overflow chamber.

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



*Figure 11—Macaulay Point Pump Station- Macaulay signage installed.*



*Figure 12—Macaulay Point Pump Station- Green roof complete.*

### 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 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.

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

- seawall balustrade replacement construction continues; and
- construction of enhanced sidewalk.

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

- seawall replacement construction and new plaza completed;
- finishing top lift paving in front of seawall;
- line painting nearing completion;
- site office being removed; and
- final clean up underway.

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



*Figure 13–Clover Forcemain- Cycle track and Dallas Road paving complete.*





*Figure 14–Clover Forcemain- Sidewalk complete with benches and lounge chairs.*

### 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 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.

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.

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

- installed eight micro piles (four per headwall) in the headwall locations;
- formed and poured west (outlet) headwall;
- formed and poured east headwall; and
- storm drain redesign was approved by Saanich, and DME began construction on Sept 28.

Photographs of construction progress over the month of September on the Residual Solids Pipes are shown in Figure 15.



*Figure 15–Residual Solids Pipes – Peers Creek – Forming east side headwall.*

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 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.

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.

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

- RTF chamber grading and casting work on Willis Point Rd
- Pump Station 3: OCU fence posts were dug in;
- Pump Station 2: pump bases were epoxy coated and OCU fencing was erected and the handrail was installed along the retaining wall;
- Tillicum and Admirals Bridges: hanger rods were swapped out with the correct ones, and the thrust block was poured at Admirals Bridge;
- Marigold Pump Station: work continued on the Odour Control Unit system, landscaping took place, and the sump manhole received its epoxy coating;
- Hartland Reservoir saw the completion of the watermains, sanitary forcemain work, and electrical conduits were laid; and
- Hartland Pump Station, pumps were installed on the new support pads and pipe installation continued.

Photographs of construction progress over the month of September on the Residual Solids Pump Stations are shown in Figures 16-17.



*Figure 16–Residual Solids Pump Stations–Admirals Bridge additional pipe support bracket installed.*



*Figure 17 –Residual Solids Pump Stations – Pump Station 2- Tower Fence on-site installing fence on the retaining wall.*



### 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.

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.

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

- completed installation of valve chamber walls reinforcing steel, waterstop, and formwork;
- completed installation of Attenuation Tank base slab reinforcing steel and water stop;
- Caisson Wall system cleaning;
- completed coring of valve chamber penetration;
- poured Attenuation Tank base slab;
- commenced Attenuation Tank Perimeter Walls and divider wall reinforcing steel installation; and
- poured valve chamber walls.

Photographs of construction progress during the month of September at the Arbutus Attenuation Tank are shown in Figures 18 and 19.



*Figure 18–Arbutus Attenuation Tank- Valve chamber wall formwork installed.*



*Figure 19–Arbutus Attenuation Tank- Valve chamber wall reinforcing steel installation.*

### 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 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.

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.

Key construction activities in progress or completed by Jacob Bros. in September included:

- completed Fairfield Road watermain realignment in conjunction with City of Victoria;
- re-commenced pipe work on Memorial Crescent;
- installed 108m of Dallas Road pipe; and
- re-commenced Bushby Street Gravity Main at intersection with Memorial Crescent.

A photograph of construction progress during the month of September at the Trent Forcemain is shown in Figure 20.





*Figure 20–Trent Forcemain- Curb work completed on Memorial Crescent.*

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



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.

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



**24/7 Phone Line**  
1.844.815.6132



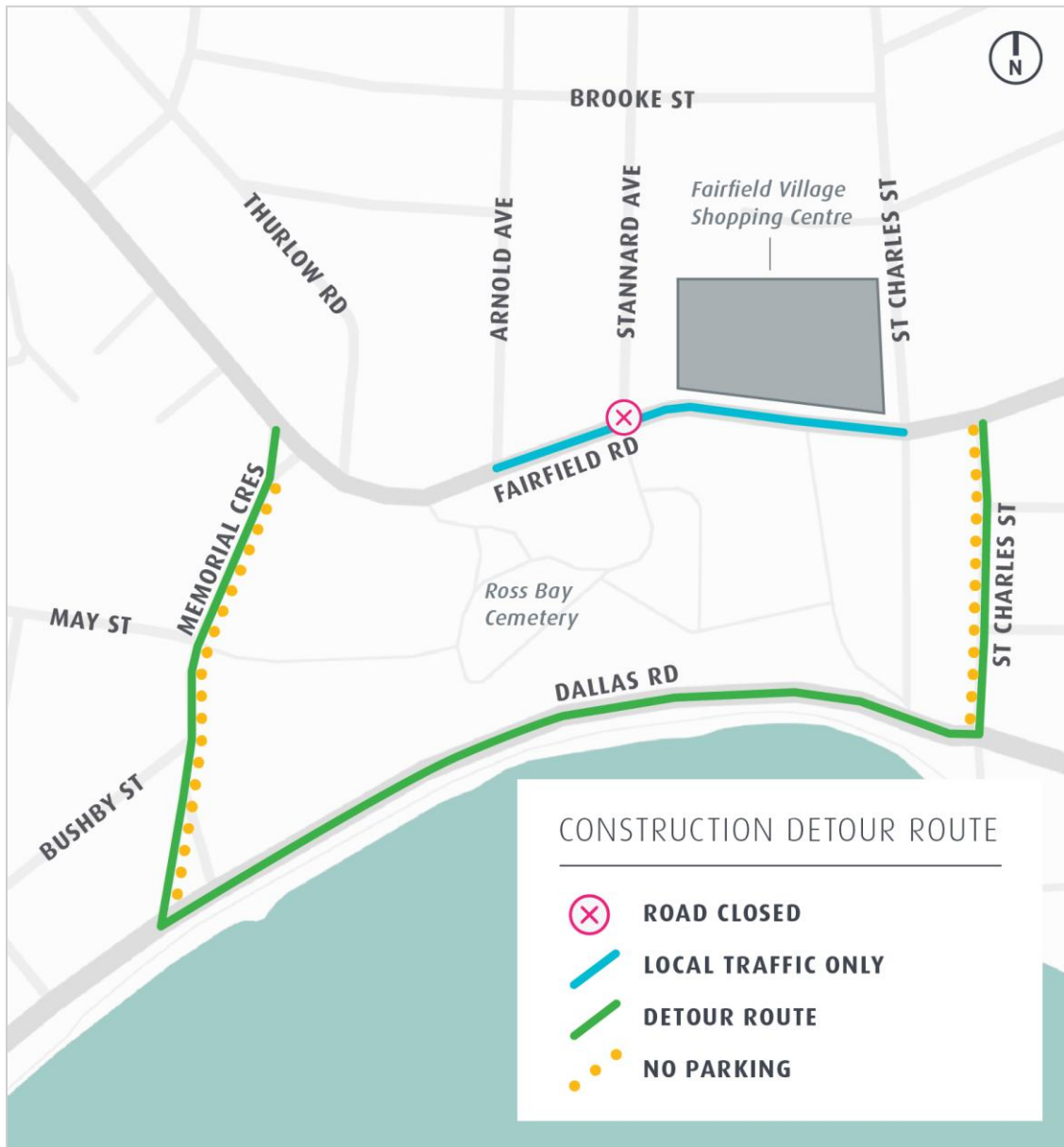
**Email**  
wastewater@crd.bc.ca



**Website**  
wastewaterproject.ca



**Detour Route**



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



**24/7 Phone Line**  
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**Email**  
wastewater@crd.bc.ca



**Website**  
wastewaterproject.ca

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



**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.

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



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## **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](http://www.crd.bc.ca) and follow us on Twitter [@crd\\_bc](https://twitter.com/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](http://www.crd.bc.ca).*

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**For media inquiries, please contact:**

Andy Orr, Senior Manager

CRD Corporate Communications

Office 250.360.3229

Cell 250.216.5492



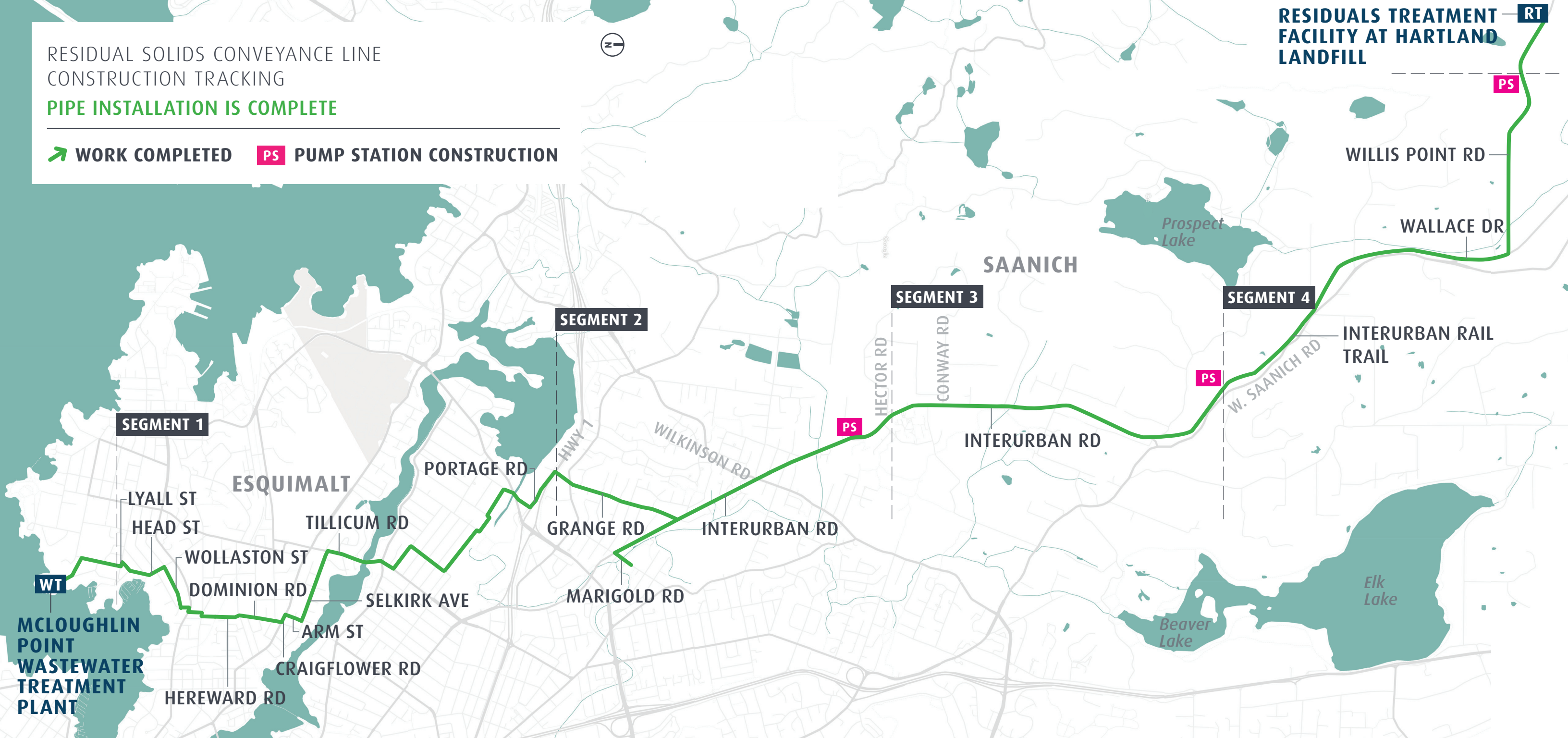
## **Appendix D– Residual Solids Conveyance Line Map (July 20, 2020)**

RESIDUAL SOLIDS CONVEYANCE LINE  
CONSTRUCTION TRACKING

PIPE INSTALLATION IS COMPLETE

 WORK COMPLETED  PUMP STATION CONSTRUCTION

RESIDUALS TREATMENT  
FACILITY AT HARTLAND  
LANDFILL 



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

## Dallas Road Seawall

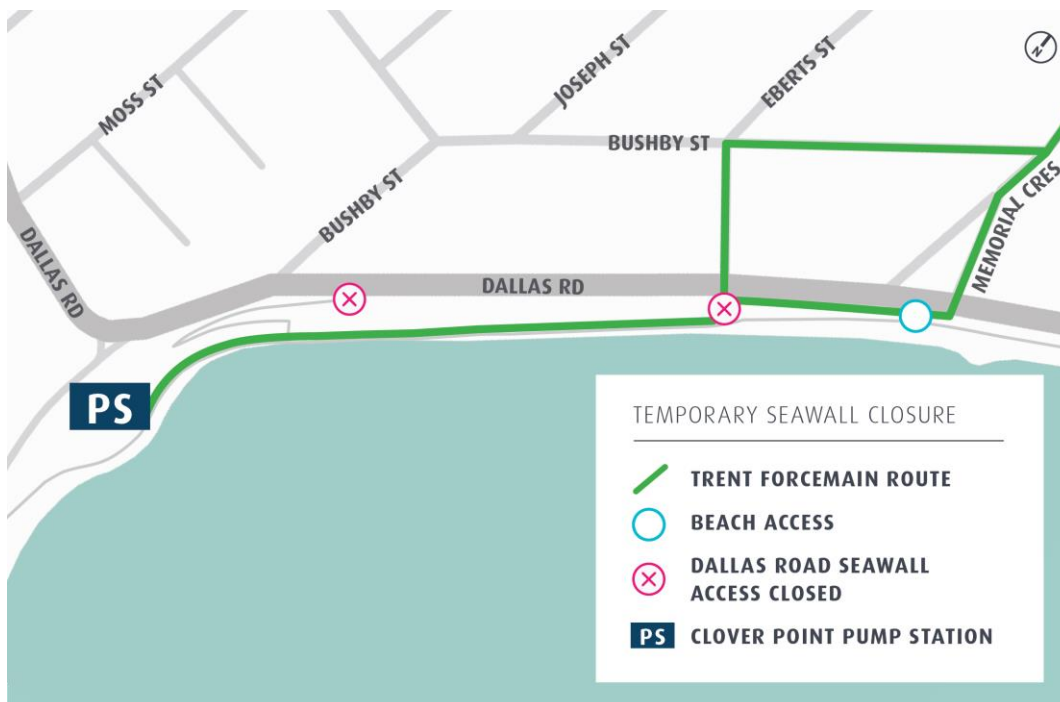
The Wastewater Treatment Project includes construction of the Trent Forcemain, 1.9km of pipes that will be installed from the intersection of Chandler Avenue and St. Charles Street to the Clover Point Pump Station. This work includes installing a pipe under the pedestrian path on the Dallas Road Seawall. 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.**



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**Email**  
wastewater@crd.bc.ca



**Website**  
wastewaterproject.ca



## **Appendix H- Arbutus Attenuation Tank Overnight Work (September 11, 2020)**



**September 11, 2020**

## **Arbutus Attenuation Tank: Overnight Work**

Construction of the Arbutus Attenuation Tank is progressing well with the majority of the excavation work complete. The contractor has started installing the base of the storage tank. In order to maintain the quality of the concrete, a large pour will take place overnight on the following date:

- Monday, September 14, 2020.

Once the concrete has cured, the contractor will begin to work on the walls of the storage tank.

### **What to Expect**

- Noise associated with construction will be ongoing overnight. Concrete pumping trucks and back-up beepers will be in operation.
- Flood lights will be used to safely illuminate the work area.

### **Work Hours**

- Construction will take place overnight.
- Once this work is complete, normal work hours will resume Monday to Saturday from 7:00 a.m. to 7:00 p.m.

If you have any questions about this work, please contact the Project Superintendent, Nicholas Ellis, at 250-208-6772.

Construction at this site is expected to be complete in early 2021. Once finished, the site will be planted with vegetation appropriate for the local woodland setting.

Thank you for your patience as this work is completed. We apologize for any disruption this work 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.

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**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 I- Pump Station: Construction Update (September 17, 2020)**



**September 17, 2020**

## **Pump Station: Construction Update**

Construction of the Wastewater Treatment Project is nearing completion on all major components. As part of the transition to operations, the next phase involves testing of the system which is now underway. For the next two to three weeks, there will be more activity at the pump stations along the Residual Solids Conveyance Line.

### **What to Expect**

- A temporary increase in noise coming from the pump station.
- Possible short-term odour may occur.
- Increased activity at the site.

### **Work Hours**

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

### **Traffic Impacts**

- No traffic impacts are expected.

Once this phase is complete, final cleanup and landscaping work will be done. This work is anticipated to be complete by the end of November.

Thank you for your continued patience while this work is completed. If you have any questions, please contact the Project Team.

### **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.

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**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 J -Trent Forcemain: Dallas Road Closure (September 18, 2020)**



**September 18, 2020**

## **Trent Forcemain: Dallas Road Closure**

As part of construction for the Trent Forcemain, a pipe will be installed along Dallas Road and under the pedestrian path on the Dallas Road Seawall. This work will require the closure of Dallas Road at Memorial Crescent during work hours on the following dates:

- Monday, September 21
- Tuesday, September 22
- Wednesday, September 23

Parking will be restricted during this work. Please refer to construction signage.

### **What to Expect**

- A trench will be excavated, the pipe will be installed, and the trench will be backfilled.
- Steel road plates may be installed overnight in some locations.
- Noise associated with this work includes excavation machinery and truck back-up beepers.
- Equipment will be temporarily stored in the area.

### **Traffic Impacts**

- Dallas Road will be closed during work hours for approximately three days. A detour will be in place.
- Traffic control areas will be delineated by cones and signs and controlled by flaggers.

### **Access**

- On street parking along Dallas Road between Eberts Street and Memorial Crescent will be removed for approximately three weeks while construction is taking place on Dallas Road.
- Access to your property may be impacted for short periods of time due to the presence of equipment.

### **Work Hours**

- Monday to Friday from 7:00 a.m. to 7:00 p.m.
- Saturday 8:00 a.m. to 7:00 p.m.

Thank you for your patience while we complete this work. We apologize for any inconvenience this may cause.

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**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- Macaulay Point Update (September 28, 2020)**



## Macaulay Point Update

Dear Resident,

We wanted to provide an update on the remaining work in your neighbourhood. We are close to the end of the Project and into the final restoration stage. Construction at Macaulay Point is anticipated to be completed by the end of November. The new pump station is currently operational and the remaining work includes completing demolition of the old pump station, landscaping, and restoration of the area.

### Upcoming Pathway Closure

**September 30 – October 21**

A portion of the waterfront trail in Macaulay Point Park will be closed for three weeks to facilitate the demolition of the old pump station and restoration of the area.

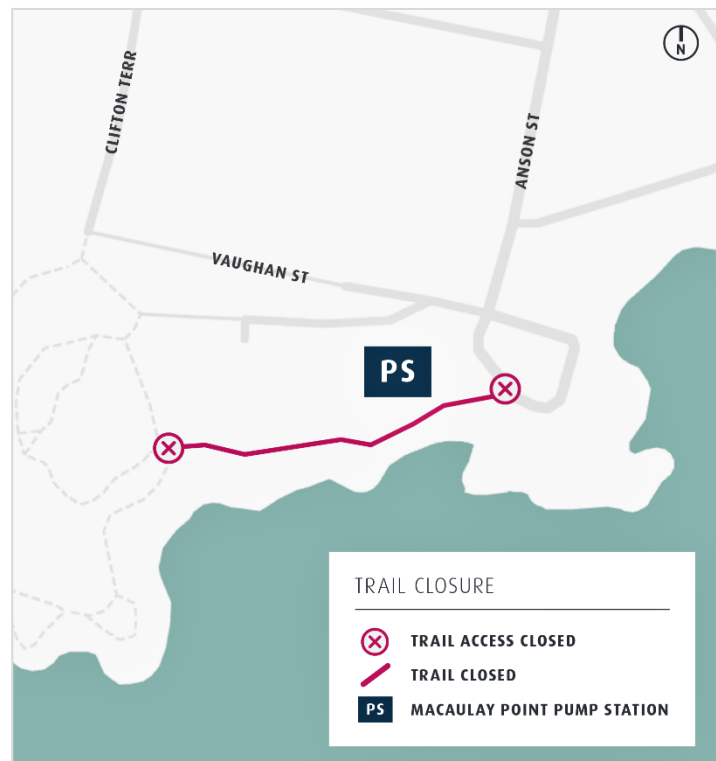
A few days of blasting will be required in early October. Notification will be provided to neighbours in close proximity.

### Final Paving

Final road paving of Peters Street and Patricia Way will be done in October.

### Temporary Odour

The McLoughlin Point Wastewater Treatment Plant is currently undergoing commissioning (or testing) so residents may smell odour in the area until end of October. Thanks to the state-of-the-art odour control system, there will be no discernible odour in the community once testing is complete.



**24/7 Phone Line**  
1.844.815.6132



**Email**  
wastewater@crd.bc.ca



**Website**  
wastewaterproject.ca

## Tree Planting

Thirty-two trees will be planted this fall replacing the trees that were removed to accommodate installation of the forcemain on Anson Street. The majority of the trees will be Green Ash with some Garry Oak and Red Maples also planted.

## Thank you!

We recognize construction has been disruptive to your daily lives over the past couple years and we want to thank you for your patience while this work has been completed. We hope you will be able to enjoy the new waterfront park area in front of the new pump station once it is complete.

In the meantime, we remain available to answer any questions or address any concerns you may have.

Wastewater Treatment 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 L– Monthly Cost Report (September)**

MONTHLY COST REPORT as at September 30, 2020														
Description	BUDGET		COST EXPENDED					COMMITMENTS			FORECAST		VARIANCE	
	Control Budget	Allocated Budget	Expended to August 31, 2020	Expended over reporting period (September 2020)	Expended to September 30, 2020	Expended to September 30, 2020 as a % of Allocated Budget	Remaining (Unexpended) Allocated Budget at September 30, 2020	Total Commitment at September 30, 2020	Unexpended Commitment at September 30, 2020	Uncommitted Allocated Budget at September 30, 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>329.7</b>	<b>307.2</b>	<b>3.8</b>	<b>311.0</b>	<b>94%</b>	<b>18.7</b>	<b>321.7</b>	<b>10.8</b>	<b>8.0</b>	<b>18.7</b>	<b>329.7</b>	-	<b>0%</b>
Construction	306.7	321.2	306.8	3.8	310.6	97%	10.6	321.1	10.5	0.1	10.6	321.2	-	0%
Contingency	14.9	1.6	-	-	-	0%	1.6	-	-	1.6	1.6	1.6	-	0%
Financing	9.8	6.9	0.5	(0.1)	0.4	6%	6.5	0.7	0.3	6.2	6.5	6.9	-	0%
<b>Residuals Treatment Facility</b>	<b>159.4</b>	<b>140.6</b>	<b>11.4</b>	<b>0.0</b>	<b>11.5</b>	<b>8%</b>	<b>129.2</b>	<b>139.2</b>	<b>127.8</b>	<b>1.4</b>	<b>129.2</b>	<b>140.6</b>	-	<b>0%</b>
Construction	145.4	139.2	11.4	0.0	11.5	8%	127.7	139.2	127.7	0.0	127.7	139.2	-	0%
Contingency	12.3	1.0	-	-	-	0%	1.0	-	-	1.0	1.0	1.0	-	0%
Financing	1.7	0.4	0.0	(0.0)	-	0%	0.4	0.0	0.0	0.4	0.4	0.4	-	0%
<b>Conveyance System</b>	<b>158.0</b>	<b>213.5</b>	<b>175.6</b>	<b>5.2</b>	<b>180.8</b>	<b>85%</b>	<b>32.7</b>	<b>196.7</b>	<b>15.9</b>	<b>16.8</b>	<b>32.7</b>	<b>213.5</b>	-	<b>0%</b>
Macaulay Point Pump Station	25.4	31.0	28.5	0.2	28.7	92%	2.3	31.0	2.3	0.0	2.3	31.0	-	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	15.7	2.3	18.0	73%	6.5	23.6	5.6	1.0	6.5	24.6	-	0%
Clover Forcemain	14.6	32.5	30.6	0.6	31.1	96%	1.3	31.7	0.6	0.7	1.3	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	4.8	1.3	6.0	53%	5.3	8.5	2.4	2.8	5.3	11.3	-	0%
Residual Solids Conveyance Line	19.1	36.6	35.2	0.6	35.8	98%	0.8	36.6	0.8	0.0	0.8	36.6	-	0%
Residual Solids Pump Stations & Bridge Crossings	4.6	17.9	15.5	0.3	15.7	88%	2.2	17.2	1.4	0.7	2.2	17.9	-	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	7.8	-	-	-	0%	7.8	-	-	7.8	7.8	7.8	-	0%
Financing	5.8	4.1	0.1	(0.0)	0.1	3%	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>59.1</b>	<b>1.1</b>	<b>60.1</b>	<b>77%</b>	<b>17.8</b>	<b>70.8</b>	<b>10.6</b>	<b>7.1</b>	<b>17.8</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	15.4	0.3	15.7	89%	2.0	17.7	2.0	0.0	2.0	17.7	-	0%
Conveyance Design	5.0	9.5	8.0	0.3	8.3	88%	1.2	8.9	0.6	0.6	1.2	9.5	-	0%
Advisors & Professional Support	7.0	14.8	10.4	0.1	10.5	71%	4.3	11.6	1.0	3.2	4.3	14.8	-	0%
Project Board	2.0	1.3	1.0	0.0	1.0	77%	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	23.2	16.9	0.3	17.1	74%	6.1	23.2	6.1	-	6.1	23.2	-	0%
Project Leadership Team Expenses	0.7	0.4	0.2	0.0	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	1.0	0.0	1.0	72%	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	-	0.3	96%	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	89%	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	73%	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	0.2	-	0%
Connections Call Center	-	0.0	0.0	-	0.0	50%	-	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	1.0	0.7	0.0	0.7	69%	0.3	0.7	-	0.3	0.3	1.0	-	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>2.1</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>4.2</b>	<b>52%</b>	<b>3.9</b>	<b>6.9</b>	<b>2.7</b>	<b>1.3</b>	<b>3.9</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>559.4</b>	<b>10.1</b>	<b>569.6</b>	<b>73%</b>	<b>205.4</b>	<b>737.3</b>	<b>167.7</b>	<b>37.7</b>	<b>205.4</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

## **Appendix M- Quarterly Cost Report**

<div> <div>QUARTERLY COST REPORT</div> <div>as at September 30, 2020</div> </div>														
Description	BUDGET		COST EXPENDED					COMMITMENTS			FORECAST		VARIANCE	
	Control Budget	Allocated Budget	Expended to June 30, 2020	Expended over reporting period (Q3 2020 July-Sept)	Expended to September 30, 2020	Expended to September 30, 2020 as a % of Allocated Budget	Remaining (Unexpended) Allocated Budget at September 30, 2020	Total Commitment at September 30, 2020	Unexpended Commitment at September 30, 2020	Uncommitted Allocated Budget at September 30, 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>329.7</b>	<b>298.8</b>	<b>12.2</b>	<b>311.0</b>	<b>94%</b>	<b>18.7</b>	<b>321.7</b>	<b>10.8</b>	<b>8.0</b>	<b>18.7</b>	<b>329.7</b>	<b>-</b>	<b>0%</b>
Construction	306.7	321.2	298.2	12.3	310.6	97%	10.6	321.1	10.5	0.1	10.6	321.2	-	0%
Contingency	14.9	1.6	-	-	-	0%	1.6	-	-	1.6	1.6	1.6	-	0%
Financing	9.8	6.9	0.5	(0.1)	0.4	6%	6.5	0.7	0.3	6.2	6.5	6.9	-	0%
<b>Residuals Treatment Facility</b>	<b>159.4</b>	<b>140.6</b>	<b>11.3</b>	<b>0.2</b>	<b>11.5</b>	<b>8%</b>	<b>129.2</b>	<b>139.2</b>	<b>127.8</b>	<b>1.4</b>	<b>129.2</b>	<b>140.6</b>	<b>-</b>	<b>0%</b>
Construction	145.4	139.2	11.3	0.2	11.5	8%	127.7	139.2	127.7	0.0	127.7	139.2	-	0%
Contingency	12.3	1.0	-	-	-	0%	1.0	-	-	1.0	1.0	1.0	-	0%
Financing	1.7	0.4	0.0	(0.0)	-	0%	0.4	0.0	0.0	0.4	0.4	0.4	-	0%
<b>Conveyance System</b>	<b>158.0</b>	<b>213.5</b>	<b>166.3</b>	<b>14.5</b>	<b>180.8</b>	<b>85%</b>	<b>32.7</b>	<b>196.7</b>	<b>15.9</b>	<b>16.8</b>	<b>32.7</b>	<b>213.5</b>	<b>-</b>	<b>0%</b>
Macaulay Point Pump Station	25.4	31.0	27.7	1.0	28.7	92%	2.3	31.0	2.3	0.0	2.3	31.0	-	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	4.6	18.0	73%	6.5	23.6	5.6	1.0	6.5	24.6	-	0%
Clover Forcemain	14.6	32.5	30.0	1.2	31.1	96%	1.3	31.7	0.6	0.7	1.3	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	3.5	6.0	53%	5.3	8.5	2.4	2.8	5.3	11.3	-	0%
Residual Solids Conveyance Line	19.1	36.6	34.3	1.6	35.8	98%	0.8	36.6	0.8	0.0	0.8	36.6	-	0%
Residual Solids Pump Stations & Bridge Crossings	4.6	17.9	13.0	2.8	15.7	88%	2.2	17.2	1.4	0.7	2.2	17.9	-	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	7.8	-	-	-	0%	7.8	-	-	7.8	7.8	7.8	-	0%
Financing	5.8	4.1	0.2	(0.1)	0.1	3%	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>56.8</b>	<b>3.3</b>	<b>60.1</b>	<b>77%</b>	<b>17.8</b>	<b>70.8</b>	<b>10.6</b>	<b>7.1</b>	<b>17.8</b>	<b>77.9</b>	<b>-</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	1.2	15.7	89%	2.0	17.7	2.0	0.0	2.0	17.7	-	0%
Conveyance Design	5.0	9.5	7.6	0.7	8.3	88%	1.2	8.9	0.6	0.6	1.2	9.5	-	0%
Advisors & Professional Support	7.0	14.8	10.3	0.2	10.5	71%	4.3	11.6	1.0	3.2	4.3	14.8	-	0%
Project Board	2.0	1.3	0.9	0.0	1.0	77%	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	23.2	16.3	0.9	17.1	74%	6.1	23.2	6.1	-	6.1	23.2	-	0%
Project Leadership Team Expenses	0.7	0.4	0.2	0.0	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	0.1	1.0	72%	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	0.0	0.2	90%	0.0	0.2	0.0	-	0.0	0.2	-	0%
CRD Real Estate	0.3	0.3	0.2	0.0	0.3	96%	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	89%	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	0.0	0.1	86%	0.0	0.1	0.0	-	0.0	0.1	-	0%
Office Lease	1.9	1.3	0.9	0.1	0.9	73%	0.4	1.2	0.3	0.1	0.4	1.3	-	0%
Office Supplies	0.1	0.2	0.2	0.0	0.2	92%	0.0	0.2	-	0.0	0.0	0.2	-	0%
Vehicles	0.2	0.2	0.2	0.0	0.2	95%	0.0	0.2	-	-	0.0	0.2	-	0%
Connections Call Center	-	0.0	0.0	-	0.0	50%	-	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	1.0	0.6	0.0	0.7	69%	0.3	0.7	-	0.3	0.3	1.0	-	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>-</b>	<b>0%</b>
<b>Third Party Commitments</b>	<b>8.1</b>	<b>8.1</b>	<b>4.0</b>	<b>0.2</b>	<b>4.2</b>	<b>52%</b>	<b>3.9</b>	<b>6.9</b>	<b>2.7</b>	<b>1.3</b>	<b>3.9</b>	<b>8.1</b>	<b>-</b>	<b>0%</b>
<b>Program Reserves</b>	<b>19.2</b>	<b>0.9</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0%</b>	<b>0.9</b>	<b>-</b>	<b>-</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>-</b>	<b>0%</b>
<b>Core Area Wastewater Treatment Project</b>	<b>765.0</b>	<b>775.0</b>	<b>539.2</b>	<b>30.4</b>	<b>569.6</b>	<b>73%</b>	<b>205.4</b>	<b>737.3</b>	<b>167.7</b>	<b>37.7</b>	<b>205.4</b>	<b>775.0</b>	<b>-</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