





Wastewater Treatment Project

Treated for a cleaner future

CRD Wastewater Treatment Project

Monthly Report

Reporting Period: January 2021



TABLE OF CONTENTS

1	Exec	utive Summary	3
	1.1	Introduction	3
	1.2	Dashboard	4
2	Was	tewater Treatment Project Progress	
	2.1	Safety	
	2.2	Environment and Regulatory Management	
	2.2.1		
	2.2.2	Regulatory Management	9
	2.3	First Nations	9
	2.4	Stakeholder Engagement	9
	2.5	Resolutions from Other Governments	
		Schedule	
	2.6 2.6.1	30 day look ahead	
	2.6.2	60 day look ahead	
	2.7	Cost Management and Forecast	15
	2.7.1	Commitments	
	2.7.2	Expenses and Invoicing	16
	2.7.3	Contingency and Program Reserves	
	2.7.4	Project Funding	17
	2.8	Key Risks and Issues	17
	2.9	Status (Engineering, Procurement and Construction)	21
	2.9.1	Wastewater Treatment Plant (McLoughlin Point WWTP)	
	2.9.2	Residuals Treatment Facility	
	2.9.3	Conveyance System	22
Αļ	pendix	A- Trent Forcemain: Dallas Road Update Letter (January 27, 2021)	30
Αļ	pendix	B– Arbutus Attenuation Tank: Overnight work (January 29, 2021)	31
Αμ	pendix	C– Monthly Cost Report (January)	32
	-		



1 Executive Summary

1.1 Introduction

This Monthly Report covers the reporting period of January 2021 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. At each of the remaining Project sites, construction is ongoing in accordance with guidelines established by the Provincial Health Officer.

The McLoughlin Point WWTP Project Component was completed by Harbour Resource Partners ("HRP" as the Design-Build contractor for the McLoughlin Point WWTP): acceptance testing was completed and the independent certifier provided a conditional certificate on January 12, 2021; one test remains for full acceptance which is a warm weather odour control test. Handover from HRP to CRD occurred on January 12, 2021 and the CRD is now in full control of the facility. Laydown areas have been restored and returned to DND.

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

The Conveyance System is being delivered through seven construction contracts: two design-build contracts and five design-bid-build contracts, one of which (the Clover Forcemain) concluded in October 2020.

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 landscaping and commissioning activities over the reporting period including: progressing landscaping and exterior works in the plaza, continuing to demobilize the site compound, and continuing acceptance testing.
- Macaulay Point Pump Station: Kenaidan Contracting Limited ("Kenaidan" as the Design-Build Contractor) progressed landscaping and commissioning activities over the reporting period including: placement of rock paths, testing of the cathodic protection system, and completed laydown area cleaning and topsoil placement.

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



- 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 construction of a BC Hydro access road in the Township of Esquimalt including: completion of rock blasting, removal of brush and stumps, completed most of the bulk of sub base gravel placement, and ongoing work on the slopes adjacent to the road.
 - Residual Solids Pump Stations: Knappett Projects Inc. ("Knappett" as the Construction Contractor) continued construction and commissioning activities including: removal and replacement of concrete pump bases at the Hartland water pump station with steel channels; trenched electrical conduit at pump station three; completed fencing and gates at the pump stations; drained the Hartland Reservoir so additional work and inspections could be completed, and completed fencing up to the existing reservoir.
- Arbutus Attenuation Tank ("AAT"): NAC Constructors Ltd. (as the Construction Contractor) continued construction activities including: delivery of equipment; finishing of dry tank rooms; and completion of valve chamber process pipe work and the suspended slab roof on the attenuation tank.
- Trent Forcemain: Jacob Bros. Construction Inc. (as the Construction Contractor)
 progressed construction activities including: installation of 120m of sheet piles along
 Ross Bay Seawall, excavated pipe trench between existing seawall and sheet pile wall,
 and installed 80m of pipe, resulting in a total installed pipe length of 1,770m, or 91% of
 the Trent Forcemain.

1.2 Dashboard

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

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

The safety KPI for the Project and the conveyance system remains yellow. Over the reporting period no recordable safety incidents occurred and the total recordable incident frequency at the end of the reporting period remained at 1.5 as it was at the end of December 2020.

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 the Project met the requirement to provide wastewater treatment by the regulatory deadline of December 31, 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*.	0	•	•	•	No recordable incidents occurred over the reporting period. 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.	•	•	•	(a)	There were no environmental incidents over the reporting period. Project contractors continued construction with environmental management measures in place.	
Regulatory Requirements	Deliver the Project such that the Core Area complies with provincial and federal wastewater regulations.	•	•	•	•	In December 2020 the Project met the requirement to provide wastewater treatment by the regulatory deadline of December 31, 2020. The majority of construction is complete on the major components of the Wastewater Treatment Project. Construction continues on the Trent Forcemain and Arbutus Attenuation Tank: these are being built to increase the capacity of the conveyance system and are expected to be complete in spring 2021.	
Stakeholders	Continue to build and maintain positive relationships with First Nations, local governments, communities, and other stakeholders.	•	•	•	0	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.	•	•	(a)	•	In December 2020 the Project met the requirement to provide wastewater treatment by the regulatory deadline of December 31, 2020. The majority of construction is complete on the major components of the Wastewater Treatment Project. Construction continues on the Trent Forcemain and Arbutus Attenuation Tank: these are being built to increase the capacity of the conveyance system and are expected to be complete in spring 2021.	
Cost	Deliver the Project within the Control Budget (\$765 million).	•	•	•	•	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. Many contractors have advised that there are cost impacts from the COVID-19 public health emergency. It is too early to determine the cost impact to the Project, but given the ability to offset the unforeseen costs of COVID-19 through the finance cost savings, the Project Team remain confident that, if construction continues at the current pace, the Project cost will be within the Project's \$775M budget.	



* A TRIF of no more than 1 means that there is 1 or fewer recordable incidents (being a work-related injury or illness that requires medical treatment beyond first aid or causes death, days away from work, restricted work or transfer to another job, or loss of consciousness) for every 200,000 person-hours of work

Status	Description			
	KPI unlikely to be met			
KPI at risk unless correction action is taken				
6	KPI at risk but corrective action has been identified/is being implemented			
<u>@</u>	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: RTF, Macaulay Point Pump Station, Clover Point Pump Station, Residuals Solids Pump Stations, BC Hydro Access Road, Arbutus Attenuation Tank and Trent Forcemain.

Over the reporting period (January 2021) three report-only safety incidents occurred, as summarized in Table 2.

Table 2: Safety Incidents over the Reporting Period

Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
January 11, 2021	Trent Forcemain	Report Only	A site truck reversed into a parked personal vehicle at the site offices.	Minor cosmetic damage to driver's side of car. There were no injuries to any of the workforce.	Toolbox talk to remind crew that a spotter must be used while reversing equipment in and around the site.
January 12. 2021	BC Hydro Access Road	Report Only	An excavator struck an overhead utility.	There were no injuries to the workforce. Utility contacted and attended site to repair line.	Toolbox talk given to the crew with an emphasis on identifying all hazards and working in and around overhead lines.



Date	Work Site	Incident Type	Description	Outcome	Corrective Action Taken
January 26, 2021	Trent Forcemain	Report Only	Damage to equipment due to high wind.	Door of a loader was caught by wind causing it to collide with side of loader breaking the window. No injuries to the workforce.	Crew was reminded to take greater care while opening doors/windows in windy conditions

Key safety activities conducted during January included:

- bi-weekly project update meetings with prime contractors: Knappett, NAC, HRMG, Kenaidan, and Jacobs Brothers;
- reviewed site specific safety plans and high risk tasks;
- safety tour of Project sites with CRD Corporate Safety;
- identified Confined Space locations throughout WTP project route for updating of CRD Corporate Safety Assessments;
- Safety Manager conducting regular site inspections at all active Project work sites;
- updated office safety bulletin board and Office Hazard Assessment for 2021;
- reviewed daily progress reports and contacting Primes of any safety notations or observations contained within those reports;
- participated in CRD Corporate Health and Safety Risk Registry meeting; and
- reviewed COVID-19 document submissions from CRD Corporate.

Table 3: WTP Safety Information

	Reporting Period (January 2021)	Project Totals
Person Hours		
PMO	2664	168,954
Project Contractor	22,097	2,345,370
Total Person Hours	24,761	2,514,324
PMO	21	
Project Contractors (& Project	106	
Consultants) working on Project Sites		
Total Number of Employees	127	
Near Miss Reports	0	49
High Potential Near Miss Reports	0	7
Report Only	3	188
First Aid	0	69
Medical Aid	0	12
Medical Aid (Modified Duty)	0	2
Lost Time	0	5
Total Recordable Incidents	0	19
		Project Frequency
		(from January 1, 2017)
First Aid Frequency		5.5
Medical Aid Frequency		1.1
Lost time Frequency		0.4
Total Recordable Incident Frequency		1.5



2.2 Environment and Regulatory Management

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 January included:

 HRMG submitted an End-of-Spill report to the BC Ministry of Environment and Climate Change Strategy (ENV) to close out the reporting associated with the October 13, 2020 release of residual solids at the RTF site.

2.2.2 Regulatory Management

Over the reporting period, the Project Team continued to support or lead the advancement of the few regulatory approvals remaining.

Key permitting activities in January included:

• CRD and HRP provided landscaping information to the Department of National Defence to allow them to evaluate if HRP has met its restoration obligations.

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

Table 4- Kev Permits Status

Permit/Licence	Anticipated Date	Status	Party Responsible for Obtaining Perming
McLoughlin Point Harbour Crossing			
Transport Canada Lease	Q1 2021	On track	CRD
McLoughlin Point Outfall			
Transport Canada Lease	Q1 2021	On track	CRD

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 January included:

 Stantec, the archaeological consultant for the Trent Forcemain, began planning with the Songhees and Esquimalt for the monitoring of upcoming construction activities in registered archaeological sites.

2.4 Stakeholder Engagement

The Project maintained its ongoing two-way Communications and Engagement Plan to provide Project information to stakeholders, communities and the public and to respond to public inquiries. The key focus of the communications and engagement activities over the period was



to keep residents and stakeholders informed of Project plans, progress and construction information, and to receive and respond to questions and concerns raised by the community. A variety of communications tools and engagement activities were utilized to support the implementation of the plan, including stakeholder meetings, Project website updates and notifications of construction through notices and a public inquiry program, among other methods.

Construction Communications

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

- Trent Forcemain: Dallas Road Update Letter (January 27, 2021) (Appendix A)
- Arbutus Attenuation Tank: Overnight work (January 29, 2021) (Appendix B)

The Trent Forcemain letter provided an update to residents about the work taking place along the Dallas Road Seawall, and was hand-delivered to 107 residents along Dallas Road between Moss Street and Memorial Crescent; Bushby Street between Dallas Road and Memorial Crescent; Eberts Street between Dallas Road and Bushby Street; and Memorial Crescent between Dallas Road and Bushby street.

The Arbutus Attenuation Tank construction notice was circulated to stakeholders via email and was hand-delivered to 55 residences near Haro Woods: on Haro Road, Sutton Road, and Camelot Road including Arbutus Grove daycare.

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.

Project Website

Over the reporting period the Project website, wastewaterproject.ca, was updated with information about the Project: the construction notice and update letter outlined above were posted, as well as the End-of-Spill report that HRMG submitted to the BC Ministry of Environment and Climate Change Strategy (to close out the reporting associated with the October 13, 2020 release of residual solids at the RTF site).

Community Meetings

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

- City of Victoria Technical Working Group; 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- January 2021

Inquiry Source	Contacts for January 2021
Information phone line inquiries	27
Email inquiries responded to	27

Key themes of the public inquiries were as follows:

- questions regarding vibrations caused by Trent Forcemain work;
- · questions regarding timing for the work around Clover Point; and
- interest in providing service or employment opportunities with the McLoughlin Point Wastewater Treatment Plant.

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 updated from that shown previously to reflect the currently-forecast completion of commissioning on the various Project components.

Over the reporting period the COVID-19 public health emergency continued to have impacts on the Project. However, on December 15, 2020, the Government of Canada, the Government of British Columbia, and the Capital Regional District (CRD) announced that the Wastewater Treatment Project is treating wastewater and is exceeding regulatory requirements. The majority of construction is complete on the major components of the Wastewater Treatment Project. Construction continues on the Trent Forcemain and Arbutus Attenuation Tank. These are being built to increase the capacity of the conveyance system and are expected to be complete in spring 2021.



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 (February) 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;
- review Daily Progress reports and contact prime contractors of any safety notations or observations;
- WTP Safety 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

 HRMG to continue monitoring activities associated with the October 2020 release of residual solids at the RTF site.

First Nations

 Songhees and Esquimalt cultural monitors to support Stantec in archaeological monitoring of work on the Trent Forcemain.

Stakeholder Engagement

- ongoing construction communications with stakeholders;
- · ongoing community liaison meetings; and
- shifting into operational focused communications.

Cost Management and Forecast

- prepare cost reports;
- monitor schedule; and
- prepare for CRD 2020 Financial Statement Audit.

Construction

Clover Point Pump Station

- install asphalt walkways, and concrete curbs;
- fabricate and install feature railings; and
- operational handover to IWS.

Macaulay Point Pump Station

· complete landscaping.

Residuals Treatment Facility

- process commissioning of dryer;
- commence acceptance testing.

Residual Solids Pump Stations

progress landscaping.



Arbutus Attenuation Tank (AAT)

- install motor control centre;
- install heating ventilation and air conditioning and ductwork in tank entrance room;
- install permanent overflow for attenuation tank;
- · install fire alarm system; and
- install air intake and ducting.

Trent Forcemain

continue with installation of the gravity section of forcemain along Dallas Road.

2.6.2 60 day look ahead

Key activities and milestones for the next 60 days (March) 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 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

Environmental monitoring and restoration planning as warranted.

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

- continue shifting into operational focused communications;
- · ongoing construction communications with stakeholders; and
- ongoing community liaison meetings.

Cost Management and Forecast

- prepare cost reports;
- monitor schedule; and
- participate in the CRD 2020 Financial Statement Audit.

Construction

Clover Point Pump Station

- complete installation of asphalt walkways, and concrete curbs; and
- install public art.



Macaulay Point Pump Station

complete landscaping.

Residual Solids Pump Stations

continue to work with Contractor to finalize project turnover documentation.

<u>Arbutus Attenuation Tank (AAT)</u>

- install power and controls to pumps;
- install heating ventilation and air conditioning and ductwork in tank entrance room;
- install permanent overflow for attenuation tank;
- install lighting, gas detection and fire alarm system;
- install sump pumps;
- install manholes and pipework;
- install air intake and ducting;
- install electrical duct banks; and
- landscaping.

Trent Forcemain

• Continue with installation of the gravity section of forcemain along Dallas Road.

2.7 Cost Management and Forecast

The monthly cost report for January is attached as Appendix C. The cost report summarizes Project expenditures and commitments by Project Components and the major cost centres common to the Project Components.

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

The Project Team forecast the cost to complete the Project at \$775M, or \$10M (1.3%) over the Project's control budget. In May 2019 the CRD Board approved an increase in the Project's budget by \$10M to \$775M, and on August 14, 2019, the associated amendment to the 2019-2023 Financial Plan was approved.

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

- i) The Project's financing costs to-date have been lower than budgeted for two reasons: firstly as a result of low interest rates since the start of the Project, and secondly due to the receipt of funding from the provincial government earlier than forecast; and
- ii) The Project's construction costs may be higher than budgeted as many contractors have advised that there are cost impacts from the COVID-19 public health emergency. Impacts include labour availability, work modifications to comply with provincial guidelines, and delays to the delivery of equipment and supplies.



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

2.7.1 Commitments

Commitments were made over the reporting period in furtherance of delivering the Project. The net commitments made during the reporting period resulted in an increase in committed costs of \$1.8 million. The significant commitments made in the reporting period include: work on the Trent Forcemain (for relocation of the St. Charles and Dallas road storm mains); to BC Hydro to complete the tie-in to the WWTP; consulting services related to the optimization of the operation of the treatment plant and conveyance system; and 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 \$0.785M were made as summarised in Table 6. The draws to-date and remaining contingency and program reserve balances are also summarized in Table 6.

Table 6- Contingency	and Program	Reserve	Draw-Down	l able
----------------------	-------------	---------	-----------	--------

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 December 31, 2020		\$ (55,309,003)
Contingency and Program Reserve balance as at December 31, 2020		\$ 14,009,048
Change Room Locker Modifications	Jan-21	\$ (6,003)
DND Request to Convert Temporary Area D Yard Works Laydown into Permanent Facility	Jan-21	\$ (6,357)
WWTP Total Draw		\$ (12,360)
RTF Total Draw		\$ -
Clover Pump Station Water Service Tie-in to City of Victoria Infrastructure	Jan-21	\$ (72,869)
Macaulay Pump Station Water Service Tie-in to City of Victoria Infrastructure	Jan-21	\$ (45,364)
Macaulay Forcemain Pump Control Change as per Site Instruction - 51	Jan-21	\$ (32,738)
Conveyance Total Draw		\$ (150,971)
PMO Total Draw		\$ -
BC Hydro overhead and underground alterations to serve WTP	Jan-21	\$ (621,742)
BC Hydro Total Draw		\$ (621,742)
WTP Program Reserve Draw		\$ -
Contingency and Program Reserve draws in the reporting period		\$ (785,073)
Contingency and Program Reserve balance as at January 31, 2021		\$ 13,223,975



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, the remainder of the funding cannot be claimed until relevant Project components are substantially complete.

Table 7- Project Funding Status

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

2.8 Key Risks and Issues

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

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



- Misalignment between First Nations' interests and the implementation of the Project: risk closed as a result of the regular, ongoing and productive liaison meetings;
- Divergent interests between multiple parties and governance bodies whose co-operation is required to successfully deliver the Project: risk closed as the majority of construction is complete; and
- Misalignment between Project objectives/scope and stakeholder expectations: risk closed as the majority of construction is complete.

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



Table 8- Project Active Risks Summary

Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	Trend in risk level from previous reporting period				
Project								
Misalignment between First Nations' interests and the implementation of the Project.	The assessed risk level reflects the Project Team's priority of establishing strong and effective relationships with First Nations interfacing with, or interested in, the Project.	First Nations engagement activities remained ongoing over the reporting period (see section 2.3 for further details).	С	Closed as a result of the regular, ongoing and productive liaison meetings.				
Divergent interests between multiple parties and governance bodies whose cooperation 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.	С	Closed as the majority of construction is complete.				
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).	С	Closed as the majority of construction is complete.				
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				
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	No change.				



Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	Trend in risk level from previous reporting period		
Change in law.	A change in law impacts the scope, cost or schedule of the Project.	Keep apprised of proposed modifications to relevant regulations so as to do the following as appropriate: submit comments on proposed modifications; and/or consider including anticipated modifications in contracts.	Н	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.		
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.	М	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	С						



2.9 Status (Engineering, Procurement and Construction)

2.9.1 Wastewater Treatment Plant (McLoughlin Point WWTP)

The McLoughlin Point WWTP Project Component was completed by Harbour Resource Partners ("HRP" as the Design-Build contractor for the McLoughlin Point WWTP): acceptance testing was completed and the independent certifier provided a conditional certificate on January 12, 2021; one test remains for full acceptance which is a warm weather odour control test. Handover from HRP to CRD occurred on January 12, 2021 and the CRD is now in full control of the facility. Laydown areas have been restored and returned to DND.

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 commissioning activities.

Photographs of progress over the month of January at the Residuals Treatment Facility are shown in Figures 2-3.



Figure 2- Residuals Treatment Facility- Odour Control and Storm Pond.





Figure 3- Residuals Treatment Facility- Boardwalk and Landscaping.

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 landscaping and commissioning activities.

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

- continue demobilizing site compound;
- progressing landscaping and exterior works in plaza; and
- continuing acceptance testing.

Photographs of progress over the month of January at Clover Point are shown in Figures 4-5.





Figure 4-Clover Point Pump Station- Continuing landscaping.



Figure 5-Clover Point Pump Station- Continuing landscaping.



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 landscaping and commissioning activities.

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

- rock paths have been placed;
- completed planting and placement of topsoil;
- completed laydown area cleaning and topsoil placement; and
- tested cathodic protection system.

A photograph of progress over the month of January at Macaulay Point Pump Station is shown in Figure 6.



Figure 6-Macaulay Point Pump Station: Rain garden excavation

2.9.3.3 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 construction of a BC Hydro access road in the Township of Esquimalt.

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

- rock blasting was completed, and blast rock was used to shape the road subgrade;
- removed brush and stumps
- completed most of the bulk of sub-base gravel placement; and



ongoing work on slopes adjacent to the road.

A photograph of construction progress over the month of January on the BC Hydro access road is shown in Figure 7.



Figure 7-BC Hydro Access Road excavation

<u>Residual Solids Pump Stations</u>: 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 January included:

- removed and replaced concrete pump bases in the Hartland water pump station with steel channels; thermistors were also added to the pumps;
- pump station 3: electrical conduit was trenched;
- completed fencing and gates across the pump stations;
- Hartland Reservoir
 - o drained so additional work and inspections could be conducted;
 - o installed electrical items, anodes, float rings, and water sampling port; and
 - o completed fencing up to the existing reservoir.

Photographs of construction progress over the month of January on the Residual Solids Pump Stations are shown in Figures 8 and 9.





Figure 8-Residual Solids Pump Stations- completed fence installation at Pump Station 1



Figure 9 -Residual Solids Pump Stations - Fencing installed at the Marigold Valve Chamber

2.9.3.4 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 January included:

ongoing attenuation tank suspended slab shoring;



- delivery of submersible pumps, fire alarm system and air compressor to site;
- completed sections of attenuation tank suspended slab reinforcing steel;
- formed tank overflow chamber walls, installed reinforcing steel, and concrete pours commenced;
- ongoing concrete finishing in the dry attenuation tank rooms;
- completed valve chamber process pipe work;
- recommenced valve installation;
- ongoing valve chamber concrete finishing; and
- completed attenuation tank suspended slab roof.

Photographs of construction progress during the month of January at the Arbutus Attenuation Tank are shown in Figures 10 and 11.



Figure 10-Arbutus Attenuation Tank- Concrete pours are ongoing.





Figure 11-Arbutus Attenuation Tank- Odour Control Unit placed in Odour Control room.

2.9.3.5 Trent Forcemain

Jacob Bros. Construction Inc. (as the Construction Contractor for the Trent Forcemain) progressed construction activities over the reporting period.

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

- installation of 120m of sheet piles along Ross Bay Seawall;
- excavated pipe trench between existing seawall and sheet pile wall; and
- and installed 80m of pipe, resulting in a total installed pipe length of 1,770m, or 91% of the Trent Forcemain.

Photographs of construction progress during the month of January at the Trent Forcemain is shown in Figures 12 and 13.





Figure 12-Trent Forcemain- Backfilling at the Seawall



Figure 13-Trent Forcemain- Seawall field fusion of wye-reducer-bend section.



Appendix A- Trent Forcemain: Dallas Road Update Letter (January 27, 2021)



Wastewater Treatment Project

January 27, 2021

Dear Resident,

We would like to provide an update regarding construction on the Dallas Road Seawall.

Pipe installation along the Dallas Road Seawall is continuing to take place in segments and is over half finished. It is expected to be complete by the end of February 2021.

We understand that the vibrations and noise associated with this work is causing an impact to those who live and work nearby. The contractor is required to ensure that no damage is caused by this work and is monitoring the vibrations closely to ensure that they remain below the threshold for damage.

Once the pipe has been installed the next step will be restoration of the pedestrian path and commissioning of the pipe. This work should be less disruptive, and give rise to less noise and vibrations.

Final restoration of the pedestrian path and commissioning activities are expected to begin following pipe installation, however, this work is weather dependent and there may be sometime between completing the pipe installation and commencing restoration. We expect all surface works to be completed in spring 2021.

We appreciate your patience as this work is completed. Please feel free to email <u>wastewater@crd.bc.ca</u> if you have any questions.

Thank you,

The Wastewater Treatment Project Team



Appendix B- Arbutus Attenuation Tank: Overnight work (January 29, 2021)



January 29, 2021

Arbutus Attenuation Tank: Overnight Pumping

Construction for the Arbutus Attenuation Tank will require temporary pumping to take place 24 hours a day for approximately two weeks. This work is expected to begin during the first week of February, however, it is weather dependent so the timing may change.

This temporary pumping will allow the permanent pipes built for the Arbutus Attenuation Tank to be connected to the existing wastewater conveyance system. Once the tank has been completed it will also be connected and will be used to temporarily store wastewater flows during high volume storm events. This will reduce the number of sewage overflows.

What to Expect

- Diesel-powered pumping units will be in operation 24 hours a day and are equipped with acoustic enclosures to reduce noise.
- Flood lights will be used to safely illuminate the work area.
- Some odour may be present while this work is taking place.

Work Hours

- Construction will take place during normal work hours (Monday to Saturday from 7:00 a.m. to 7:00 p.m.)
- Pumping will take place 24 hours a day, 7 days a week for approximately two weeks.

Construction of the Arbutus Attenuation Tank is progressing well with excavation, shoring and the pouring of the concrete walls now complete. Construction is expected to be complete in spring 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.

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







Appendix C- Monthly Cost Report (January)

MONTHLY COST REPORT														
						as at January	31, 2021							
	BUDGET		COST EXPENDED				COMMITMENTS			FORECAST		VARIANCE		
Description	Control Budget	Allocated Budget	Expended to December 31, 2020	Expended over reporting period (January 2021)	Expended to January 31, 2021	Expended to January 31, 2021 as a % of Allocated Budget	Remaining (Unexpended) Allocated Budget at January 31, 2021	Total Committment at January 31, 2021	Unexpended Commitment at January 31, 2021	Uncommitted Allocated Budget at January 31, 2021	Forecast to Complete	Forecast at Completion	Variance at Completion \$	Variance at Completion as a % of Allocated Budget
McLoughlin Point Wastewater Treatment Plant Construction	331.4 306.7	329.7 321.8	315.6 315.3	0.2 0.2	315.7 315.5			322.3 321.7	6.6 6.2	7.4 0.1	14. 6.		-	0% 0%
Contingency	14.9	1.0	315.3	-	313.3	0%		321.7	- 0.2	1.0	0. 1.		-	0%
Financing	9.8	6.9	0.2	-	0.2	3%	6.7	0.7	0.4	6.2	6.	7 6.9	-	0%
Residuals Treatment Facility	159.4	140.8	12.4	-	12.4			139.5	127.1	1.3	128.		-	0%
Construction	145.4	139.5	12.4	-	12.4			139.5	127.1	-	127.		-	0%
Contingency Financing	12.3 1.7	0.9 0.4	-	-	-	0% 0%		0.0	0.0	0.9 0.4	0.i 0.e		-	0% 0%
Conveyance System	158.0	213.2	190.5	0.8	191.3			199.6	8.2	13.7	21.		-	0%
Macaulay Point Pump Station Macaulay Forcemain	25.4 5.6	31.2 7.4	30.6 7.4	0.1	30.7 7.4			31.2 7.4	0.5	0.0	0.	5 31.2 7.4	-	0% 0%
Craigflower Pump Station	12.5	12.4	12.4		12.4			12.4		-		12.4	-	0%
Clover Point Pump Station	23.7	27.4	25.8	0.4	26.2			27.4	1.2	0.0	1.:		-	0%
Currie Pump Station^ Arbutus Attenuation Tank	2.8 14.2	0.1 24.6	0.1 20.4	-	0.1 20.4			0.1 23.9	3.4	0.7	- 4.	0.1 1 24.6	-	0% 0%
Clover Forcemain	14.6	31.9	31.7		31.7			31.9	0.2	0.1	0.:			0%
Currie Forcemain^	3.3	0.2	0.2	-	0.2			0.2		-	-	0.2	-	0%
Trent Forcemain Residual Solids Conveyance Line	9.5 19.1	11.3 36.9	7.5 36.7	0.3	7.9 36.7			9.7 36.9	1.8 0.2	1.6 0.0	3.· 0.:		-	0% 0%
Residual Solids Pump Stations & Bridge Crossings	4.6	18.1	17.1	-	17.1	95%	0.9	17.8	0.7	0.2	0.	9 18.1	-	0%
Residual Solids Conveyance Line – Highway Crossing	-	0.3	0.3	-	0.3			0.3	-	- 7.4	- 7	0.3	-	0%
Contingency Financing	16.8 5.8	7.4 4.1	0.1	-	0.1	0% 3%		0.3	0.2	7.4 3.7	7. 3.		-	0% 0%
Project Management Office ("PMO")	75.8	77.9	63.0	1.9	64.9			71.7	6.8	6.1	12.		-	0%
Project costs Aug 2016-Dec 2016	2.2	2.2 17.9	2.2	- 0.3	2.2 16.6			2.2 17.9	-	- 0.0	- 1.:	2.2 2 17.9	-	0%
Owner's Engineering Conveyance Design	17.2 5.0	9.4	16.3 8.4	0.3	8.7			9.3	1.2 0.7	0.0	0.			0% 0%
Advisors & Professional Support	7.0	14.9	10.9	0.1	11.1			11.9	0.9	3.0	3.5		-	0%
Project Board Project Board Expenses	2.0 0.3	1.3 0.1	1.0 0.1	0.0	1.0 0.1			1.0 0.1	-	0.2 0.0	0.: 0.:		-	0% 0%
Project Team	29.1	23.1	18.5	0.9	19.3			23.1	3.7	0.0	3.			0%
Project Leadership Team Expenses	0.7	0.4	0.2	-	0.3			0.3	-	0.1	0.		-	0%
Project Support Team Expenses CRD Financial Services	0.5 1.5	0.2 1.4	0.1 1.1	0.3	0.1 1.4			0.1 1.4		0.0	0.	0 0.2 1.4		0% 0%
CRD Human Resources	0.3	0.3	0.3	-	0.3	100%	-	0.3	-	-	-	0.3	-	0%
CRD Corporate Communications	0.2	0.2	0.2	-	0.2			0.2	-	-	-	0.2	-	0%
CRD Real Estate CRD Information Technology	0.3 0.4	0.3 0.4	0.3 0.3	-	0.3 0.3			0.3 0.4	0.1	-	0.	0.3 1 0.4	-	0% 0%
CRD Insurance	0.1	0.0	0.0	-	0.0	100%	-	0.0	-	-	-	0.0	-	0%
CRD Operations CRD Legislative Services	0.6 0.1	0.6 0.1	0.5 0.1	0.0	0.6 0.1			0.6 0.1	-	-	-	0.6 0.1	-	0% 0%
CRD Corporate Safety	0.1	0.1	0.1		0.1			0.1		-		0.1	-	0%
CRD Executive Services	-	0.1	0.1	-	0.1	100%	-	0.1	-	-	-	0.1	-	0%
Office Lease Office Supplies	1.9 0.1	1.3 0.2	1.0 0.2	0.0	1.0 0.2			1.2 0.2	0.2	0.1 0.0	0.i 0.i		-	0% 0%
Vehicles	0.1	0.2	0.2	-	0.2			0.2	-	-	-	0.2	-	0%
Connections Call Center	-	0.0	0.0	-	0.0			0.0	-	-	-	0.0	-	0%
Communication support materials Computer Hardware, Software & Training	0.5 1.0	0.2 0.9	0.1 0.7	- 0.0	0.1 0.7			0.1 0.7	-	0.1 0.2	0. 0.:		-	0% 0%
Contingency	4.8	2.3	-	-	-	0%		-	-	2.3	2.		-	0%
BC Hydro	12.9	4.3	2.1	0.6	2.7	62%	1.6	2.7	0.0	1.6	1.	6 4.3	-	0%
Third Party Commitments	8.1	8.1	4.4	0.1	4.4	55%	3.7	6.9	2.4	1.3	3.		-	0%
Program Reserves	19.2	0.9	-	-	-	0%	0.9	-	-	0.9	0.9	9 0.9	-	0%

Core Area Wastewater Treatment Project

^{*} 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