



Wastewater Treatment Project

Treated for a cleaner future

CRD Wastewater Treatment Project

Quarterly Report

Reporting Period: April - June 2018

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1. Executive Summary

1.1. Introduction

This quarterly report covers the reporting period of April - June 2018, and outlines the progress made on the Wastewater Treatment Project over this time.

The Wastewater Treatment Project (the “Project” or the “WTP”) includes three main components (the “Project Components”): the McLoughlin Point Wastewater Treatment Plant (the “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.

Overall the Wastewater Treatment Project progressed as planned with no changes to the construction/commissioning start and completion dates.

The WWTP Project Component is continuing with Harbour Resource Partners (“HRP”, as the Design-Build Contractor for the WWTP) progressing: engineering of the WWTP and outfall; construction at McLoughlin Point including continuing installation of the foundation piles, concrete pours for the tsunami and planter walls, and installation of underground piping. Over the reporting period HRP also completed the Victoria Harbour Crossing pipe pull.

The RTF Project Component is continuing with Hartland Resource Management Group (“HRMG” as the Design-Build-Finance-Operate-Maintain Contractor for the RTF) progressing pre-construction planning and permitting, design engineering activities, tender selection and mobilization to site over the reporting period. Scheduled activities with HRMG (as the Design-Build-Finance-Operate-Maintain Contractor for the RTF) continued progressing: pre-construction planning and design engineering activities.

The Conveyance System is anticipated to be delivered through eight construction contracts: two design-build contracts and six design-bid-build contracts. The Project Team had previously anticipated delivering the conveyance system through two design-build contracts and five design-bid-build contracts, but determined over the reporting period that it would be beneficial to procure the scope of one of the design-bid-build contracts through two contracts in order to preserve schedule.

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 planning, design and construction activities over the reporting period, including completing the design of several components and progressed construction activities including: mobilization of the caisson drilling contractor; alignment and welding of king piles; drilling and casting of perimeter caissons; and layout of future openings in the existing pump station.
- Macaulay Point Pump Station and Forcemain: Kenaidan Contracting Ltd. (“Kenaidan” as the Design-Build Contractor) progressed planning, design and construction activities over the reporting period, including condition assessment of the existing incoming trunk sewer and held a corrosion protection review

meeting and progressed construction activities including: setting up remainder of the office complex trailers; preparing a temporary access road to the screening area of the pump station; and setting up permanent fencing for construction.

Two of the six design-bid-build Conveyance System contracts are in the procurement phase. Progress over the reporting period included:

- Clover Forcemain:
 - the Project Team evaluated the Request for Qualifications (“RFQ”) responses and selected the shortlist of pre-qualified contractors to participate in the Request for Proposals (“RFP”) for the construction of the Clover Forcemain;
 - in May, the Request for Proposals (RFP) was issued to pre-qualified contractors and an all-proponents meeting was held to outline key aspects of the contract to the proponents; and
 - in June, addendums to the RFP were issued to address enquiries from Proponents and City of Victoria design review comments.
- Residual Solids Conveyance Line (“RSCL”):
 - the Project Team evaluated the RFQ responses and selected the shortlist of pre-qualified contractors to participate in the RFP for the construction of the RSCL;
 - the Project Team held a workshop with the District of Saanich and Parsons to present the draft (50%) design submission;
 - the Project Team held a design review meeting with the Township of Esquimalt and Parsons to present the 50% design;
 - Parsons (as the Design Consultant for the RSCL) progressed the development of the design; and
 - the Project Team decided to procure the four pump stations to be built along the RSCL through a separate contract, in order to preserve schedule by allowing the construction of the conveyance line to start while the design of the pump stations is completed.

Related to the Clover Point Pump Station and Clover Forcemain, the Project Team held the 90% design workshop with City of Victoria staff and Lekwungen representatives for:

- Clover Point Pump Station public realm improvements and building exterior;
- Dallas Road (Clover) Cycle Path alignment and design;
- Clover Forcemain alignment and design; and
- Esquimalt and Songhees Nations considerations.

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.

Over the reporting period, two changes were made to the dashboard, both to the stakeholders key performance indicator:

- the WWTP indicator was changed from yellow to green, as the work at Ogden Point and Niagara Street was completed and the Team believes that good relationships here have been built related to the ongoing work at McLoughlin Point; and
- the Conveyance System indicator was changed from green to yellow, as the Project Team believes that more engagement will be required to build good relationships related to the conveyance components of the Project. The Project Team has a Communications and Engagement Plan in place and will continue to implement and update the Plan over the duration of the Project.

Table 1- Executive Summary Dashboard

Key Performance Indicators		Project Overall	WWTP	RTF	Conveyance System	Comments
Safety	Deliver the Project safely with zero fatalities and a total recordable incident frequency (TRIF) of no more than 1*.					No recordable incidents; site inspections ongoing.
Environment	Protect the environment by meeting all legislated environmental requirements and optimizing opportunities for resource recovery and greenhouse gas reduction					No environmental issues.
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 in the reporting period. Significant efforts were made over the reporting period (with a focus on pipe pull activities) and will continue to be made to provide accurate and timely information to stakeholders.
Schedule	Deliver the Project by December 31, 2020.					No schedule issues
Cost	Deliver the Project within the Control Budget (\$765 million).					Project expenditures within Control Budget but cost pressures identified. Corrective action has been identified and is being implemented (see section 2.7 for details).

* 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 summarised in Table 2. The total recordable incident frequency (TRIF) for the reporting period, inclusive of Project Contractors and Project Management Office (PMO) staff was zero.

Site safety tours and weekly safety inspections were carried out by PMO construction and safety personnel over the reporting period at all active worksites: Clover Point Pump Station, Macaulay Point Pump Station, Ogden Point, RTF and the McLoughlin Point WWTP.

The McLoughlin Point WWTP Project Safety Advisory Group was established by HRP in consultation with the Project Team and the kick-off meeting was held on May 1, 2018. The group includes one senior representative from the CRD, and one senior representative from each of the HRP joint-venture partners: Graham and AECOM. The purpose of the group is to provide oversight regarding HRP's safety program and make recommendations for improvements based on industry best practices. The group will meet quarterly and HRP will advise on actions they will take to address the group's recommendations.

Over the reporting period there were seven safety-related incidents that did not result in recordable incidents:

On April 4, a near-miss incident occurred at McLoughlin Point and involved a tower crane slewing ring light transformer being bumped out of position as it had not been tied down. When the operator swung the crane, the ladder in the slewing ring made contact with the transformer, bending the frame and knocking it over. The operator heard the noise and immediately stopped the crane.

HRP reviewed the incident and took the following actions:

- the tower crane was shut down and inspected by the site supervisor and electrician. No damage was found to the crane or light transformer; and
- the transformer was secured in a new position and the crane was put back into service.

A report-only incident occurred on April 10 at the intersection of Niagara Street and Oswego Street in Victoria. The incident involved a member of the public that was using the temporary stairs that had been installed by HRP to allow pedestrian access across the intersection during the pipe pull activities. A young child under the supervision of his father accidentally fell while utilizing the temporary stairs. HRP staff were at the intersection when the incident occurred and contacted ambulance services. An ambulance arrived, the boy received medical attention and as a precautionary measure the boy was taken to hospital.

HRP reviewed the incident and took the following actions:

- the temporary stairs were closed to the public while a review was undertaken; and
- the following additional safety measures were put in place to reduce the chance of a similar incident occurring:
 - boarding was installed between the handrails; and
 - additional signage was put in place to remind the public to be mindful while using the stairs.

The CRD received a letter during the reporting period dated May 10, 2018 regarding the safety incident that occurred on April 10 at the intersection of Niagara Street and Oswego Street in Victoria. The letter was sent to the CRD and the City of Victoria by counsel acting for the child's father, and provided notice in order to preserve the right for a potential claim for damages.

A near-miss incident occurred on May 1 at McLoughlin Point which involved a drone that was being used to take aerial photos of the Project site. A company specializing in aerial video had been hired to take the aerial photos of the site. A permit had been obtained from Nav Canada to fly the drone. Pictures of the site were successfully taken but when the drone was landing it made contact with Tower Crane B, approximately 30 feet from the ground and fell to the ground. The drone being used was new and equipped with a built-in GPS for the purpose of preventing it from contacting any objects. Nav Canada and the crane operator were notified that an incident had occurred. The tower crane operator performed an inspection of the tower crane and noted there was no damage to the crane. No personnel were in the area when the drone fell.

Corrective action included having the new drone sent back to the manufacturer to be inspected for possible internal UAV guidance/control systems malfunction. It was confirmed that a good radio controller signal to the aircraft and GPS coverage were maintained but the root cause of the un-demanded flight track could not be positively determined. Following a technical analysis, the UAV manufacturer did not identify an internal UAV guidance/control system malfunction and concluded that some external factor must have caused it; a suggestion was a possible small bird strike.

A near-miss incident occurred on May 1 at McLoughlin Point which involved a subcontractor worker on-site being identified by an HRP Safety Representative to be under the age of HRP's site requirement.

Corrective action taken with respect to the incident included:

- reminding the subcontractor of HRP's policy for new/young workers and their noncompliance to this policy;
- the worker was removed by HRP's subcontractor; and
- HRP is going to confirm the age of all workers to ensure that new and young workers are identified and all are of the adequate site age.

A first aid incident occurred on May 2 at McLoughlin Point and involved an employee walking towards the work area when they stepped on a large rock, causing the employee to slightly roll their ankle. The on-site first aid attendant evaluated, elevated, and applied ice to the employee's injured ankle. The employee returned to work after

treatment on modified duties for the rest of the day and the following two days, before returning to regular duty.

Corrective action taken with respect to the incident included:

- removing larger rocks from the work area to prevent possible trip hazards; and
- including awareness of surroundings and trip hazards as a toolbox meeting topic.

A near-miss incident occurred on June 18 at McLoughlin Point, which involved HRP's subcontractor (CDI Drilling) crew members using unsafe work practices to install rebar cages in preparation for a concrete pour. The pile that the cage was being installed in was less than eight feet up from ground level and required a ladder to disconnect the rigging. One employee used an extension ladder to disconnect the load while the other employee stood on an excavator bucket and had the operator lift the bucket up approximately three feet to disconnect his load. This did not result in an injury but is not an acceptable safe work practice as it put the worker at risk of falling causing injury as well as unsafe use of mobile equipment.

Corrective actions with respect to the incident were taken as follows:

- this unsafe work practice resulted in the termination of both the employee and the excavator operator;
- safety stand down with crew to review the proper use of equipment; and
- subcontractor hazard assessment was updated to include the proper use of equipment.

On June 22 a report only incident occurred at the McLoughlin site which involved an HRP employee that pulled out a telehandler to perform a task. Just after doing this, it was decided that the machine was not required and the employee reversed the machine to re-park it in its original spot. While trying to back the telehandler back into its spot the machine made minor contact with a skid steer that was parked in close proximity. The employee did not have a spotter to back the machinery into the spot. Minor damage was incurred to a hydraulic hose guard on the driver side lifting boom of the skid steer with an approximate value of \$500.00 to repair. The employee did have a training certificate to operate the telehandler on site.

Corrective actions with respect to the incident were taken as follows:

- Spotter to be used when moving equipment in restricted areas;
- Review of the incident in toolbox talk; and
- Worker was removed from site as a final strike on his file.

In April, key safety activities included:

- weekly prime contractor progress meetings;
- review of safety document submissions from prime contractors;
- review of incident investigations;
- site tours performed at all active sites;
- monthly office/site inspection with contractors and CRD Corporate Safety Representative at all active sites;
- monthly communication meeting with WTP Safety Manager and CRD Corporate Safety Manager;
- review of any high risk tasks;

- site safety plan review with Kenaidan's OHS Manager for Macaulay Point Pump Station;
- hazard assessment review for pipe pull on Niagara Street;
- accompanied CRD CAO Robert Lapham on a safety tour of the Niagara Street Pipe Pull and Clover Point Projects;
- performed a site safety tour with HRP group on Niagara Street to review safety details for the pipe pull;
- Critical Lift Plan review for pipe pull on Niagara Street; and
- traffic management reviews for Dallas Road and Niagara Street traffic.

In May, key safety activities included:

- site tours performed at all active sites;
- monthly office/site inspections with contractors and CRD Corporate at all active sites;
- monthly communication meeting with WTP Safety Manager and CRD Corporate Safety Manager;
- final hazard and operability report safety review for McLoughlin site;
- HRMG safety plan review;
- traffic management reviews related to Clover Point road closure (duct bank repairs);
- equipment inspection document review;
- blasting plan review with HRMG (the Design-Build-Finance-Operate-Maintain Contractor for the RTF);
- incident reporting review with prime contractors at active work locations; and
- emergency response review with prime contractors.

In June, key safety activities included:

- site tours performed at all active sites;
- weekly HRP site safety tours of the McLoughlin Site with CRD WTP management and HRP safety and management team;
- monthly office/site inspections with contractors and CRD Corporate at all active sites;
- monthly communication meeting with WTP Safety Manager and CRD Corporate Safety Manager. Discussion at the meeting was in regards to vehicle inspections for CRD fleet vehicles and mobile equipment on the project sites;
- incident response review meeting with HRMG and Kenaidan to go over call-in procedures in the event that workers had to be evacuated from the worksite due to an emergency. An updated CRD safety orientation presentation was provided to prime contractors with incident procedures and CRD contact information;
- working alone procedure was reviewed with HRMG. Workers have a call-in procedure that is followed in the event of an emergency;
- bi-weekly safety participation in Clover Point and Macaulay Point progress meetings. Site safety is discussed with outstanding actions or incident reporting; and
- office and site orientations were completed for new CRD WTP staff. Prime contractor orientations were arranged with any CRD WTP staff that may have to access project sites.

Table 2 – WTP Safety Information

	Reporting Period (Q2 2018)	Project Total to-Date (from January 1, 2017)
Person Hours		
PMO	14,941	60,945
Project Contractor	72,484	201,560
Total Person Hours	87,425	262,505
Employees		
PMO	37	
Project Contractors working on Project sites	138	
Total Number Of Employees	175	
Incidents		
Near Miss Reports	4	8
High Potential Near Miss Reports	0	2
Report Only	2	2
First Aid	1	2
Medical Aid	0	0
Medical Aid (Modified Duty)	0	0
Lost Time	0	0
Total Recordable Incidents	0	0
Frequency		
	2018 Frequency (from January 1, 2018)	Project Frequency (from January 1, 2017)
First Aid Frequency		1.5
Medical Aid Frequency		0
Lost Time Frequency		0
Total Recordable Incident Rate		0

2.2. Environment and Regulatory Management

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

2.2.1. Environment

Environmental work progressed as planned over the reporting period. Work focused on archaeological studies, environmental studies and reviewing contractors' and design consultants' environment-related submittals.

On April 20, a team of PMO employees represented the CRD Project Team at HRP's Earth Day Event, which included removing invasive species on DND lands at McLoughlin Point.

Key environmental management activities in April included:

- Parsons (as the Design Consultant for the RSCL) completed and submitted to the CRD an Environmental Impact Study (EIS) and Environmental Assessment and Protection Plan (EAPP) for the RSCL. The EIS evaluates potential effects on the environment from construction of the RSCL. The EAPP summarizes those potential effects and provides mitigation measures;
- Kerr Wood Leidal (as the Design Consultant for the Clover Forcemain) submitted to the CRD an Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) for the Clover Forcemain. The EIA evaluates potential effects on the environment from construction of the Clover Forcemain. The EMP summarizes those potential effects and provides mitigation measures; and
- Millennia Research (the Project's Archaeologist) continued advancing archaeological studies, while developing detailed Archaeological Management Plans for the construction of the RSCL, Clover Forcemain and Macaulay Pump Station and Forcemain.

Key environmental management activities completed in May included:

- HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) submitted the Marine Environmental Impact Study (EIS) to the BC Ministry of Environment and Climate Change Strategy (ENV) for the McLoughlin Point Outfall; and
- the PMO, CRD source control staff and Kenaidan (as the Design-Build Contractor for the Clover Point Pump Station) met to discuss water quality monitoring requirements associated with Kenaidan's CRD-issued Waste Discharge Permit. The Waste Discharge Permit authorizes Kenaidan to dispose of construction water (from excavation de-watering) in the sanitary sewer system.

Key environmental management activities completed in June included:

- HRMG (the Design-Build-Finance-Operate-Maintain Contractor for the RTF) monitored the activity of a breeding pair of Violet-green Swallows who are nesting on the RTF footprint where blasting is proposed. Blasting activities will be delayed until the hatchlings fledge and the nest becomes inactive; and
- Stantec (as the Owner's Engineer) completed and submitted an EIS to the PMO for review and comment prior to submission to ENV. The EIS addresses environmental effects from overflows at CRD facilities and is a requirement of the MWR Registration.

HRP experienced three environmental incidents over the reporting period:

- on April 6, there was a release of drilling fluid (bentonite slurry) at the Ogden Point end of the Cross-Harbour Forcemain when a hydro-vac truck malfunctioned. Bentonite slurry (an inert material) is utilized in the Horizontal Directional Drill (HDD) process to lubricate the drill head and carry rock cuttings from the hole. The volume of drilling fluid released to the ground at Ogden Point was approximately one cubic metre (1,000 litres). Crews worked immediately to stop and contain the release, and cleanup of the site with a second hydro-vac truck took place that day. There were no adverse effects on the environment from the release;
- on April 23, while sweeping the streets following the Cross-Harbour Forcemain pipe pull, the street sweeper leaked hydraulic oil on Niagara Street and Dallas Road. As soon as the driver of the street sweeper became aware of the leak he stopped work and informed HRP. HRP engaged a spill response company to assess the situation and remediate the sites. The streets were cleaned and no hydraulic oil entered the storm sewer system. There were no adverse effects on the environment from the release; and
- on May 15, there was a release of approximately 1,000 litres of freshwater from the Cross Harbour Forcemain at the Ogden Point end of the alignment. The release was the result of a valve being opened during the cleaning of the pipe. The water flooded the site, picking up soil and sediment, and then flowed down the nearby boat ramp into Victoria Harbour. A sediment plume was visible for two days following the release, however there was no visual evidence that the sediment had covered the ocean floor or marine vegetation. Crews notified federal and provincial authorities, as well as nearby stakeholders (e.g. Greater Victoria Harbour Authority). Following receipt of laboratory testing results, HRP concluded that although marine ambient water quality guidelines for turbidity were exceeded for up to 48 hours, the release had no long term adverse environmental effects.

2.2.2. Regulatory Management

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

Key permitting activities for the reporting period involved supporting HRP (as the Design-Build Contractor for the McLoughlin Point WWTP), Kenaidan (as the Design-Build Contractor for the Macaulay Point Pump Station and Forcemain), Kerr Wood Leidal (as the Design Consultant for the Clover Forcemain) and Parsons (as the Design Consultant for the RSCL) in the development of permit applications; engaging with the provincial and federal governments in support of obtaining key permits (summarized in Table 3); and continuing to advance the MWR Registration and planning for future permit applications.

In April, key regulatory activities included:

- Kenaidan (as the Design-Build Contractor for the Macaulay Point Pump Station and Forcemain) received a Development Permit for the Macaulay Point Pump Station from the Township of Esquimalt;

- the PMO, with support from Kerr Wood Leidal submitted an application to ENV for a Notice from the Director to Construct under Section 40 (b) of the MWR to authorize construction of the Clover Forcemain;
- Kenaidan submitted an application to ENV for a Notice from the Director to Construct under Section 40 (b) of the MWR to authorize construction of the Macaulay Pump Station and Forcemain;
- the PMO, with the support of Parsons submitted an application to ENV for a Notice from the Director to Construct under Section 40 (b) of the MWR to authorize construction of the RSCL; and
- the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNR) issued a *Water Sustainability Act* Section 11 approval to the Project, permitting the crossing of several watercourses along the RSCL alignment. A separate *Water Sustainability Act* Section 11 approval for three culvert replacements and a Colquitz River crossing will be applied for once the design and construction methods are finalized.

In May, key regulatory activities included:

- the CRD received a Notice from the Director to Construct under Section 40 (b) of the MWR authorizing construction of the Clover Forcemain;
- HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) submitted environmental effects assessment information to Transport Canada in support of the McLoughlin Outfall permitting process; and
- HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) re-submitted an application to Fisheries and Oceans Canada (DFO) for a Fisheries Act Authorization to construct the McLoughlin Outfall. The re-submission was to address information gaps identified by DFO in their initial review of the application.

In June, key regulatory activities included:

- the CRD received a Notice from the Director to Construct under Section 40 (b) of the MWR authorizing construction of the RSCL;
- Kenaidan received a Notice from the Director to Construct under Section 40 (b) of the MWR authorizing construction of the Macaulay Pump Station and Forcemain; and
- the CRD, HRP (as the Design-Build Contractor for the McLoughlin Point WWTP), DFO and Transport Canada met to discuss permitting related to outfall construction. The purpose of the meeting was to ensure coordination between all parties.

The status of key Project permits are summarized in Table 3. The Table is not a list of all required Project permits, but rather a summary of the status of key Project permits.

Updates to Table 3 from that were presented in the Project's Q1 2018 Quarterly Report are bolded in Table 3 and are as follows:

- i) related to the McLoughlin Point WWTP:
 - Township of Esquimalt Development Permit Amendment has been removed from the table as it was received in the last reporting period;
 - the anticipated date for the Township of Esquimalt Phased Building Permits has been updated from 'TBD' (to be determined) to Q3, 2018 to reflect HRP's submission of the 90% design; and

- additional building permits beyond phase 2 are not required from Township of Esquimalt, therefore the future phases have been removed from the table.
- ii) related to the McLoughlin Point Outfall:
- Provincial Tenure Crown Grant has been removed from the table as it was received in the last reporting period;
 - the anticipated date for Fisheries and Oceans Canada (DFO) *Fisheries Act* Authorization has been delayed until Q3, 2018 to reflect the re-submission of the application in response to DFO's request for additional information. Depending on DFO's review and approval timing, the start of outfall construction may be delayed until the winter 'least-risk timing window' of December 2018 - February 2019;
 - the anticipated date for Transport Canada Facilities Alteration Permit and Licence have been delayed until Q3, 2018 to reflect the fact that the Transport Canada authorizations must occur concurrently with the DFO *Fisheries Act* Authorization; and
 - the anticipated date for Notice from the Director to Construct under section 40(b) of the MWR has been delayed until Q3, 2018 to reflect delays in HRP's application submission.
- iii) related to the Macaulay Point Pump Station:
- status of Township of Esquimalt Development Permit has been changed to received;
 - added Township of Esquimalt Building Permit; and
 - status of Notice from the Director to Construct under section 40(b) of the MWR has been changed to received.
- iv) related to Clover Point Pump Station:
- the Clover Point Pump Station has been removed from the table, as all key permits have been obtained.
- v) related to the Clover Forcemain:
- status of the Notice from the Director to Construct under section 40(b) of the MWR has been changed to received.
- vi) related to the RSCL:
- Ministry of Transportation and Infrastructure permits (works access) removed as it is no longer required as outlined in the Project's Q1 2018 Quarterly Report; and
 - status of the Notice from the Director to Construct under section 40(b) of the MWR has been changed to received.
- vii) related to the Arbutus Attenuation Tank:
- added District of Saanich Building Permit.
- viii) related to the Residuals Treatment Facility:
- changed the anticipated date for District of Saanich Development and Building Permits to Q3, 2018 to reflect HRMG's current schedule.

Table 3- Key Permits Status

Permit / Licence	Anticipated Date	Status	Party Responsible for Obtaining Permit
McLoughlin Point WWTP			
Township of Esquimalt Phased Building Permits (Phase 1 obtained; Phase 2 submitted and anticipated in Q3 2018)	Q3 2018	Phase 2 submitted: under review by Township of Esquimalt On Track	HRP
Municipal Wastewater Regulation ("MWR") Registration	Q4 2019	On track	CRD
McLoughlin Point Harbour Crossing			
Transport Canada Lease	Following completion of construction	On track	HRP
McLoughlin Point Outfall			
Fisheries and Oceans Canada (DFO) Fisheries Act Authorization	Q3 2018	Submitted: under review by DFO	HRP
Transport Canada Facility Alteration Permit	Q3 2018	Submitted: under review by Transport Canada	HRP
Transport Canada Licence (works access)	Q3 2018	Submitted: under review by Transport Canada	HRP
Transport Canada Lease	Following completion of construction	On track	HRP
Notice from the Director to Construct under Section 40 (b) of the MWR	Q3 2018	On track	HRP
Macaulay Point Pump Station Upgrade			
Township of Esquimalt Development Permit	Q1 2018	Received	Kenaidan
Township of Esquimalt Building Permit	Q3 2018	On track	Kenaidan
Notice from the Director to Construct under Section 40 (b) of the MWR	Q2 2018	Received	Kenaidan
Clover Forcemain			
Notice from the Director to Construct under Section 40 (b) of the MWR	Q2 2018	Received	Kerr Wood Leidal
ECI/Trent Twinning			
Notice from the Director to Construct under Section 40 (b) of the MWR	Q4 2018	On track	Design engineer
City of Victoria Licence (works access)	Q1 2019	On track	Design engineer
Arbutus Attenuation Tank			
Notice from the Director to Construct under Section 40 (b) of the MWR	Q3 2018	On track	Kerr Wood Leidal
District of Saanich Building Permit	Q3 2018	On track	Kerr Wood Leidal
Residual Solids Conveyance Line			
Notice from the Director to Construct under Section 40 (b) of the MWR	Q2 2018	Received	Parsons
Residuals Treatment Facility			
Operational Certificate	Prior to start of RTF operations	On track	HRMG
District of Saanich Development and Building Permits	Q3 2018	On track	HRMG

2.3. First Nations

First Nations communication and engagement was ongoing over the reporting period. The CRD First Nations Relations Division worked with the Environmental, First Nations and Regulatory Manager to advance consultation and reporting in support of federal and provincial permit applications.

In April, Chief Andy Thomas of the Esquimalt Nation passed away suddenly. Members of the CRD and the Project Team attended the funeral and paid their respects to the family. Chief Thomas' son, Ed Thomas, is the Project Liaison and will assume the role of Hereditary Chief of the Esquimalt Nation. Ed Thomas confirmed that he intends to continue in his role as Project Liaison. Ed was unavailable for participation in the May biweekly Liaison meetings but the Project Team and the Songhees Nation Liaison continued to meet.

In May members of the PMO attended a cultural training session (Blanket Exercise) facilitated by the CRD Indigenous Relations department and the Songhees Nation Liaison. The Blanket Exercise provided attendees with a deeper understanding of the history of colonization in Canada so that they can better understand the perspectives of Indigenous people today.

Following the Project Board Chair's April 27, 2018 letter to Chief Don Tom of the Tsartlip First Nation, the Project Team received a response from the W̱SÁNEĆ Leadership Council on June 19, and continued to consider how to continue to engage the W̱SÁNEĆ Nations in meaningful ways. The Project Team anticipates sharing the RSCL Environmental Impact Study with the W̱SÁNEĆ Leadership Committee at the next meeting.

In June, the PMO, CRD First Nations Relations Division and the Songhees and Esquimalt Liaisons continued meeting and advancing work in areas of shared interest. This included planning around signage for various project components and management of archaeological materials during construction.

On June 19, PMO and CRD First Nations Relations Division staff met with representatives of the Malahat Nation to discuss the Project's archaeological program and possibilities for archaeological training.

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 reporting 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, notifications of construction through notices, and a public inquiry program, among other methods.

April Overview

The month of April marked the transition of the Niagara Street construction work from the pipe assembly phase to the pipe pull phase. As part of notifying residents and businesses, the Project website was updated frequently during this period to provide construction updates and information on the reopening of roads. The Help Tent, located at the corner of Niagara and Oswego Streets, was operational from the start of pipe assembly activities until the conclusion of the pipe pull. There were more than 1,881 interactions at the Help Tent in this period to provide information and assistance to residents in the neighbourhood. In addition, the communications and engagement team was on-site during the three-day pipe pull, which commenced on April 17, assisting the public and answering questions while the process was underway.

HRP provided many opportunities for the local community to be engaged with the Project, including offering a section of the pipe to a local artist to paint, classroom presentations from construction workers and engineers, and class field trips to learn about the Project.

Nine construction notices and updates were issued to stakeholders:

- Niagara Street Construction Update (April 3, 2018) (Appendix A);
- Niagara Street Construction Update: Pipe Pull (April 9, 2018) (Appendix B);
- Macaulay Point Pump Station and Forcemain: Preliminary Early Works (April 10, 2018) (Appendix C);
- Niagara Street Construction Update: Pipe Pull (April 11, 2018) (Appendix D);
- Niagara Street Construction Update: Pipe Pull (April 12, 2018) (Appendix E);
- Niagara Street Construction Update: Pipe Pull (April 13, 2018) (Appendix F);
- Niagara Street Construction Update: Pipe Pull (April 19, 2018) (Appendix G);
- Niagara Street Construction Update: Pipe Pull (April 20, 2018) (Appendix H); and
- Clover Point Pump Station: BC Hydro Service Works (April 24, 2018) (Appendix I).

HRP and the Project Team issued an invitation for residents of Niagara and surrounding streets to a community BBQ on May 1, 2018 at the Victoria Edelweiss Club as a thank you for their patience during the pipe assembly and pipe pull (Appendix J). The invitation was hand delivered to 1000 residents and businesses, emailed to more than 100 stakeholders and posted to the Project website.

In April, the Project Team held meetings with the following community groups and representatives, and municipality representatives:

- City of Victoria staff;
- District of Saanich staff;
- James Bay Neighbourhood Association;
- Township of Esquimalt Liaison Committee; and
- Township of Esquimalt staff.

May Overview

A highlight during the month of May was the community celebration of the completion of the pipe assembly and pipe pull on Niagara Street. HRP and the Wastewater Treatment Project Team invited residents of Niagara Street and the surrounding streets to a community BBQ on May 1, 2018 at the Victoria Edelweiss Club. Over 750 residents

attended the BBQ. Florence Dick, the Songhees Nation Liaison opened a short period of presentations by outlining the importance of the area to the Songhees Nation. The following Project representatives and special guests then spoke, acknowledging the Project milestone and commending the community for their attitude throughout the construction: Dave Clancy (Project Director); Don Fairbairn (Project Board Chair); Ernie Maschner (HRP's Project Director); Hon. Carole James (MLA Victoria-Beacon Hill); and Mayor Lisa Helps (City of Victoria).

Three construction notices and updates were issued to stakeholders:

- Clover Point Pump Station: Road Closure (May 2, 2018) (Appendix K);
- McLoughlin Point Wastewater Treatment Plant: Concrete Works (May 9, 2018) (Appendix L); and
- Residuals Treatment Facility–Construction Works (May 22, 2018) (Appendix M).

As well, two large signs of the Clover Point Pump Station: Road Closure Construction Notice were posted on site at Clover Point.

An information sheet outlining why and how the Project will treat wastewater was posted to the Project website. It also outlines in a two-page graphic the multi-stage treatment process starting from the initial collection of wastewater moving through the conveyance system and the primary, secondary and tertiary levels of treatment, including the purpose of the Residuals Treatment Facility and the Residual Solids Conveyance Line.

- About the Wastewater Treatment Process (May 18, 2018) (Appendix N)

Project Update #5 was distributed (Appendix O). This newsletter-style document highlights construction updates across various components of the Project, and also includes a feature article on Florence Dick, who works as the Songhees Nation Liaison to the Project. The Update was posted to the website, distributed to stakeholders, including municipal Mayors and Councillors, MLAs, and hand delivered to community centres.

The Project Team held meetings with the following community groups and representatives, and municipality representatives:

- City of Victoria staff;
- District of Saanich staff;
- District of Saanich Technical Working Group;
- Township of Esquimalt Liaison Committee;
- Victoria West Community Association; and
- Willis Point residents.

June Overview

In June, a highlight was the release of a two-minute video featuring a time lapse of the Niagara Street pipe pull that took place over three days in April, marking a key milestone on this phase of the Project. The video was posted on YouTube and linked from the Project website.

Two construction notices and updates were issued to stakeholders:

- Residuals Treatment Facility: Blasting Schedule (June 15, 2018) (Appendix P); and

- Macaulay Point Pump Station: Temporary Sewer Bypass Pumping (June 26, 2018) (Appendix Q).

As well, a letter was sent to residents of Esquimalt on June 28, 2018 regarding an amendment to the Traffic Management Plan for a new summer truck traffic route that will run from July 3 to August 24 (Appendix R). The letter was posted to the Project website and sent by email to over 100 stakeholders (including residents, the Esquimalt Liaison Committee, etc.). The amendment was reviewed and approved by the Esquimalt Liaison Committee and Council.

Signage displaying funding contributions from the Federal and Provincial Governments and the CRD was placed at the Residuals Treatment Facility site in Saanich.

Throughout the reporting period, the Project website, wastewaterproject.ca, was updated with information about the Project. The following items were posted: construction notices, an information sheet, Project Update #5, a letter to residents in Esquimalt about the summer truck traffic route, a time lapse video of the Niagara Street pipe pull and the Community Questions section was updated. As well, updated renderings were added to the McLoughlin Point Wastewater Treatment Plant and the Macaulay Point Pump Station were added.

The Project Team held meetings with the following community groups and representatives, and municipality representatives:

- District of Saanich Technical Working Group;
- James Bay Neighbourhood Association; and
- Township of Esquimalt Liaison Committee.

Public Inquiries

Public inquiry numbers from the Project email address and 24/7 information phone line (1-844-815-6132) are noted in Table 4.

Table 4 - Public Inquiries April - June, 2018

Inquiry Source	Contacts for April - June
Information phone line inquiries	135
Email inquiries responded to	59

Key themes of the public inquiries were as follows:

April

- requests for contractor contact information for hiring purposes;
- requests to be added to distribution list for construction notices;
- questions about work on Niagara Street (how the pipe pull works, noise, when will the roads reopen, remediation of the site);
- inquiries about the route of the bike path on Dallas Road;
- questions about when and where construction will start on Dallas Road;

- concern about water pooling on pathway around construction at Clover Point; and
- general Project questions (such as about the level of treatment and when will the project be finished).

May

- inquiries about Dallas Road/Clover Forcemain construction schedule;
- feedback about the community BBQ in James Bay;
- requests to be added to distribution list for construction notices; and
- inquiries about Niagara Street remediation.

June

- inquiries about jobs at construction sites and the treatment plant;
- questions about the alignment of the cycle path;
- concerns about construction noise;
- construction timing for different components of the Project; and
- questions about the treatment process.

2.5. Resolutions from Other Governments

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

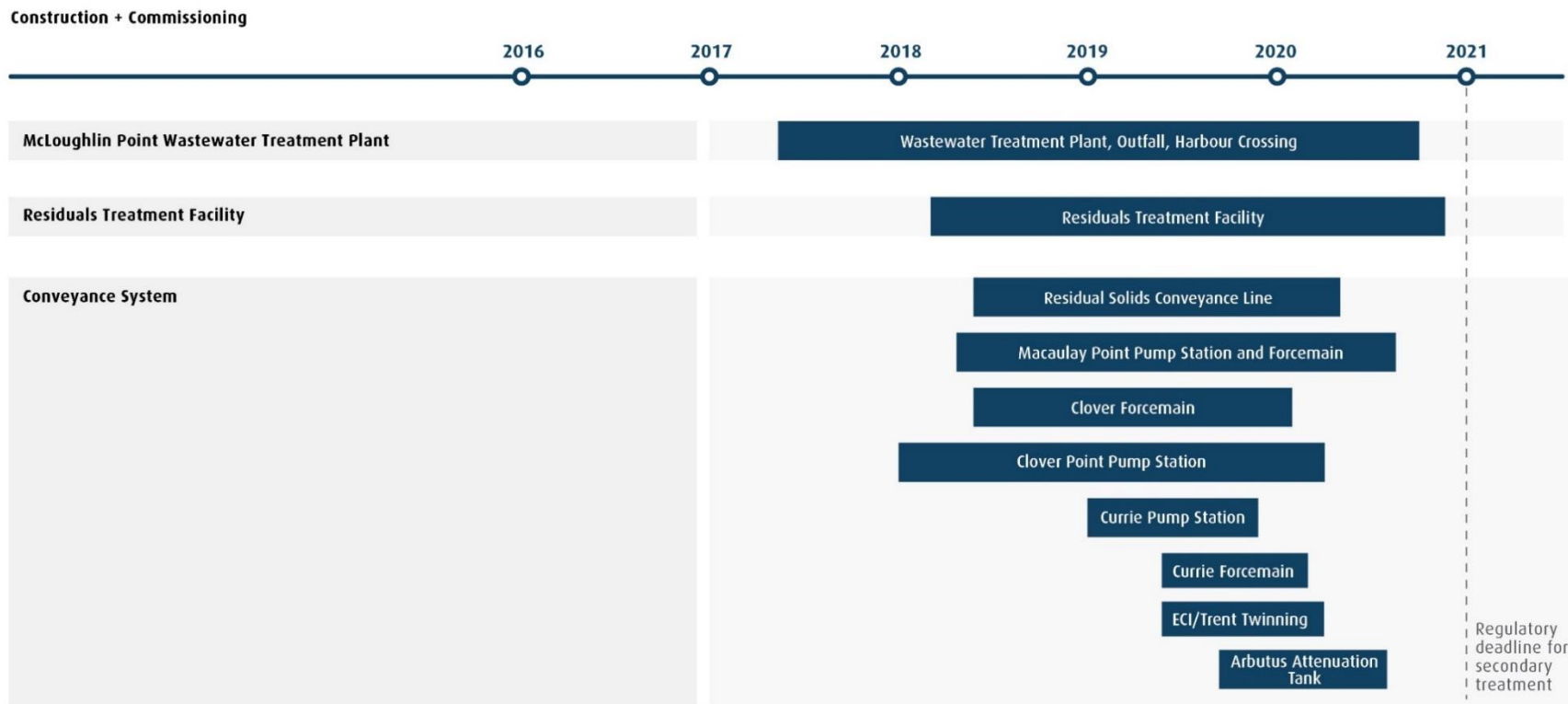
2.6. Schedule

Overall the Project's scheduled activities progressed as planned over the reporting period. All major and key interface milestones were on target to complete as per schedule. Progress over the reporting period is summarised in section 2.9.

Figure 1 shows the high-level Project schedule, which is schedule is unchanged from that shown in the previous Project report, however it remains subject to optimization as the Project and planning progresses.



Figure 1-High-Level Project Schedule¹



**Schedule subject to updates as project planning progresses.*

¹ The schedule remains subject to optimization.

2.6.1. 30 day and 60 day lookahead

Key activities and milestones for the next 30 days (July) are:

Safety

- review of any site specific safety plans or high risk tasks;
- Macaulay site safety orientation for CRD WTP staff;
- review safety expectations with new safety representative for HRMG at Hartland RTF site;
- WTP Safety Manager and/or Construction Manager will conduct regular site inspections at all active Project work sites;
- site tours performed at all active sites;
- monthly office/site inspections with contractors and CRD Corporate at all active sites;
- monthly communication meeting with WTP Safety Manager and CRD Corporate Safety Manager;
- bi-weekly HRP and CRD management site safety tour;
- periodic blasting and Rock Crushing safety reviews at Hartland; and
- demolition activity reviews at Macaulay.

Environment and Regulatory Management

- HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) with CRD to continue working with regulators to obtain outfall-related permits, approvals and authorizations; and
- HRP, Stantec and the CRD to continue advancing the MWR Registration.

First Nations

- the CRD, Millennia (as the Project's archaeological advisor) and Songhees and Esquimalt Nations to develop an archaeological training program for Songhees and Esquimalt Nation community members; and
- continue working with Songhees and Esquimalt Liaisons on topics of shared interest, including management of archaeological resources, identification of employment opportunities, and the development of plans for the installation of signage, artwork and use of native plants in landscaping for Clover Forcemain, Clover Point Pump Station, Macaulay Point Pump Station and McLoughlin Point WWTP; and
- schedule meeting with Project Board Chair and Chief Don Tom.

Stakeholder Engagement

- ongoing construction communications with stakeholders;
- signage placement at Macaulay Point Pump Station site; and
- ongoing community liaison meetings.

Cost Management and Forecast

- assign WBS codes to new contracts;
- prepare cost reports;

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

Construction

McLoughlin Point

- continue construction of tsunami and planter walls;
- continue installation of foundation piles in west Densadegs and north apron areas;
- continue installation of underground process piping in primary and secondary treatment areas;
- continue construction of mud slabs in process building areas;
- commence tertiary concrete foundations;
- commence excavation for O&M building foundations;
- continue surface runoff/groundwater treatment and discharge.

Clover Point Pump Station

- drill and cast perimeter caissons;
- align and weld king piles;
- commence excavation; and
- commence demolition of redundant equipment in existing pump station.

Macaulay Point Pump Station

- continue demolition of workshop and laboratory.

Residuals Treatment Facility

- mobilise remainder of office trailer complex to site;
- drilling, rock blasting and excavation; and
- commence widening of site access road.

Engineering

- advance construction package 2 deep foundations: 100% and Issued for Construction (IFC) design deliverables of the McLoughlin Point WWTP;
- complete construction package 4 yard piping: 100% and IFC design deliverables of the McLoughlin Point WWTP;
- advance construction package 5 process building slabs: 90% design deliverable of the McLoughlin Point WWTP;
- advance construction package 6 operations and maintenance (O&M) slabs: 100% design deliverable of the McLoughlin Point WWTP;
- complete construction package 7 tertiary slabs: 100% and IFC design deliverable of the McLoughlin Point WWTP;
- advance detailed design report for the outfall: 100% and IFC design deliverables of the McLoughlin Point WWTP;

- advance detailed design report: 100% design deliverable of the McLoughlin Point WWTP;
- review early works packages and continue development of 60% design for the RTF;
- complete the 90% design for the Macaulay Point Pump Station and Forcemain;
- complete final design for the Clover Point Pump Station;
- complete design of RSCL package 1 (residual solids pipes);
- advance design of RSCL package 2 (residual solids pump stations); and
- continue development of detailed design for the Arbutus Attenuation Tank.

Procurement

Clover Forcemain:

- respond to inquiries from pre-qualified contractors and issue addenda, as needed; and
- receive and evaluate proposals and select preferred proponent.

Residuals Solids Conveyance Line:

- respond to inquiries from pre-qualified contractors and issue addenda, as needed.

Arbutus Attenuation Tank

- CRD to continue work to finalize a blanket easement for pedestrian access on the tank site with the District of Saanich;
- KWL to complete road frontage improvement design for review; and
- KWL to complete an arborist survey for the construction laydown area and complete the Environmental Management Plan.

Key activities and milestones for the next 60 days (August) are:

Safety

- review document submissions from prime contractors;
- new staff orientations;
- development of any required safety documentation;
- site tours at all active sites;
- monthly office/site inspections with prime contractors; and
- attend Project progress meetings.

Environment and Regulatory Management

HRP anticipates receiving outfall related permits, approvals and authorizations.

First Nations

- continue working with Songhees and Esquimalt Liaisons on topics of shared interest, including the development of plans for the installation of signage, artwork and use of native plants in landscaping for Clover Forcemain, Clover Point Pump Station, Macaulay Point Pump Station and McLoughlin Point WWTP; and
- ongoing consultation and engagement with the WSÁNEĆ Nations.

Stakeholder Engagement

- ongoing construction communications with stakeholders;
- planning and preparations for fall community information meetings; and
- ongoing community liaison meetings.

Cost Management and Forecast

- assign WBS codes to the new contracts;
- prepare cost reports;
- monitor schedule; and
- submit funding claims to Infrastructure Canada (under the Building Canada Fund and Green Infrastructure Fund).

Construction**McLoughlin Point**

- continue installation of underground process piping in primary and secondary treatment areas;
- continue tertiary concrete base slabs;
- commence concrete base slabs in dirty backwash, biological aerated filters (BAF) and Densadeg West;
- commence concrete shared walls, moving bed biofilm reactor (MBBR) dirty backwash and Densadeg & plate settler – dirty backwash; and
- commence concrete foundations for the operations and maintenance (O&M) building; and
- continue surface runoff/groundwater treatment and discharge.

Clover Point Pump Station

- mobilise crane to site;
- drill and tension top row of tie back and weld king piles; and
- excavate to bottom row of tie back.

Macaulay Point Pump Station

- excavate footprint of pump station to bedrock;
- commence drilling and blasting; and
- rock removal to elevation 2.0m.

Residuals Treatment Facility

- drilling and blasting;
- crushing of blast rock and haul to stockpile; and
- commence excavation for storm water, potable water and fire water systems.

Engineering

- construction package 5 process building slabs: 100% and Issued For Construction (IFC) design deliverables for the McLoughlin Point WWTP;

- construction package 6 operations and maintenance (O&M) slabs: IFC design deliverable for the McLoughlin Point WWTP;
- overall design: IFC design deliverable for the McLoughlin Point WWTP.
- advance detailed design report for the outfall: 100% and IFC design deliverables of the McLoughlin Point WWTP;
- advance detailed design report: 100% design deliverable of the McLoughlin Point WWTP;
- review early works packages and continue development of 60% design for the RTF;
- complete the 90% design for the Macaulay Point Pump Station and Forcemain;
- complete final design for the Clover Point Pump Station;
- complete and issue IFC drawings for Clover Forcemain;
- complete design of RSCL package 1 (residual solids pipes);
- advance design of RSCL package 2 (residual solids pump stations); and
- continue development of detailed design for the Arbutus Attenuation Tank.

Procurement

Clover Forcemain:

- award contract to preferred proponent.

Residuals Solids Conveyance Line:

- respond to inquiries from pre-qualified contractors and issue addenda, as needed; and
- receive and evaluate proposals, select preferred proponent and award contract.

Arbutus Attenuation Tank

- KWL to complete revisions to the construction laydown area and additional geotechnical studies in support of the tank design and update design drawings as needed.

2.7. Cost Management and Forecast

The monthly cost report for June and the quarterly cost report are shown in Appendices S and T. The cost report summarizes Project expenditures and commitments by the three Project Components and the major cost centres common to the Project Components.

We have held constant the status of the cost key performance indicator as yellow, as a result of cost pressures identified in the Project's Q4 2017 Quarterly Report. In order to address these pressures the Project team in concert with Stantec (as the Owner's Engineer providing technical support for the CRD WTP), are reviewing the scope and construction cost estimates for the remainder of the contracts and identifying opportunities where savings could be realized. With this corrective action our confidence level is still high that we will be able to deliver the project within the Control Budget.

2.7.1. Commitments

Commitments were made over the reporting period in furtherance of delivering the Project. The commitments made during the reporting period resulted in an increase in committed costs of \$2.7M. The significant commitments made in the reporting period were:

- communications external support;
- Owner's Engineering task orders; and
- CFM Change Orders.

2.7.2. Expenses and invoicing

The Project expenditures for the reporting period were as expected. The main Project expenditures incurred over the reporting period were associated with: WWTP construction activities; conveyance systems and PMO-related costs.

The Project expenditures were within the budget allocations for each of the budget areas, with no variance to the planned budgets during the reporting period.

2.7.3. Contingency

\$2.4M of contingency draws were made over the reporting period, as itemized in Table 5. The remaining contingency and program reserve is anticipated to be sufficient to deliver the Project within the Control Budget.

Table 5 - Contingency and Program Reserve Draw-down Table

WTP Contingency and Program Reserve Draws and Reallocations	Draw Date	\$ Amount
Cumulative Contingency and Program Reserve Draws to Mar. 31, 2018¹		\$1,903,456
Archaeological monitoring for BC Hydro pole and anchor installation at St. Lawrence Street & Niagara Street	Jun-18	\$ (37,851)
WWTP Total Draw		\$ (37,851)
RTF Total Draw		\$ -
Conveyance Total Draw		\$ -
Costs related to communications and engagement were estimated when the PMO budget was established based on the level of effort that was anticipated to be required. The Project Team has been implementing the approved Communications and Engagement Plan and reports performance against the Project's key performance indicators to the Project Board on a monthly basis. Since the first quarter of 2017 the Project Team identified (and has reported) that the Project's stakeholder key performance indicator was at risk of being met, but that corrective actions had been identified. The corrective action included undertaking a greater level of engagement than had been anticipated to be required. This contingency draw is anticipated to be sufficient to cover the foreseeable communications and engagement activities.	Jun-18	\$ (595,265)
The cost of legal services were estimated when the PMO budget was established based on the level of effort that was anticipated to be required. A greater level of effort has been required than was previously-anticipated as a result of the need to seek legal advice and support related to: the procurement and drafting of multiple construction contracts; contract execution and implementation; regulatory, commercial, First Nations and environmental matters. This contingency draw is anticipated to be sufficient to cover the foreseeable legal support services.	Jun-18	\$ (1,404,735)
PMO Total Draw		\$ (2,000,000)
BC Hydro Total Draw		\$ -
WTP Program Reserve Draw		\$ -
Total Contingency and Program Reserve Draws over Reporting Period (April 1, 2018 – June 30, 2018)		\$ (2,037,851)
Cumulative Contingency and Program Reserve Draws to Jun 30, 2018		\$ (134,395)
Total Contingency and Program Reserve Remaining at Jun 30, 2018		\$ 69,183,656

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 up to \$248 million towards the three components of the project, while the Government of Canada is contributing:

- up to \$120 million through the Building Canada Fund – Major Infrastructure Component towards the McLoughlin Point Wastewater Treatment Plant;
- up to \$50 million through the Green Infrastructure Fund towards the conveyance system project; and
- up to \$41 million towards the Residuals Treatment Facility through the P3 Canada Fund.

The status of funding claims is summarised in Table 6. Note that the timing for the provision of the 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 Government of British Columbia cannot be claimed until the relevant Project components are substantially complete, which is scheduled to occur in 2020.

Table 6 – Grant Funding Status

Funding Source	Maximum Contribution	Funding Received in the Reporting Period	Funding Received to Date
Government of Canada (Building Canada Fund)	\$120,000,000	\$10,737,569	\$21,498,642
Government of Canada (Green Infrastructure Fund)	\$50,000,000	-	-
Government of Canada (P3 Canada Fund)	\$41,000,000	-	-
Government of British Columbia	\$248,000,000	-	-
TOTAL	\$459,000,000	\$10,737,569	\$21,498,642

2.8. Key Risks and Issues

The Project Team actively identified and managed Project risks over the reporting period.

Table 7 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.

Risk level trends have generally remained unchanged from the Project's Q1 2018 Quarterly Report.

The following risks were added to the highest level risk summary during the reporting period:

- lack of integration between Project Components was reported with a risk level of medium in consideration of the possibility that planning challenges and system integration between the WWTP, RTF and Conveyance System components of the Project could result in schedule delays and/or additional Project costs; and

- conveyance procurement delayed due to design challenges was increased to a risk level of medium in consideration that owners designs may not be developed to a sufficient level for DBB or DB procurement to proceed.

An additional risk mitigation activity was added to the change in law risk in response to the imposition of tariffs on steel and aluminium: monitor announcements re tariffs and consider expediting purchase of affected imports.

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

Table 6- Project Active Risks Summary

Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level (based on likelihood and potential impact)	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).	M	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.	M	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).	M	No change
Lack of integration between Project Components.	Planning challenges and system integration between the WWTP, RTF and Conveyance System components of the Project results in schedule delays and/or additional Project costs.	<p>Physical and schedule interfaces are clearly delineated in all construction contracts.</p> <p>The Project Team is using a single Owner's engineer (Stantec) to develop the indicative design for all critical project components with significant interfaces.</p> <p>Commissioning and control plans are under-development.</p>	M	Actively managed



Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level (based on likelihood and potential impact)	Trend in risk level from previous reporting period
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 have been assigned and are being monitored.	M	No change
Downstream works delays.	Delay from conveyance projects delay delivery of wastewater to WWTP.	Schedule has sufficient time allowance to ensure conveyance elements complete prior to requirement. Contractor agreements will include terms that require the contractor to recover schedule delays and/or allow for CRD acceleration.	M	No change
Downstream works delays.	Delay of the delivery of residual solids to the RTF.	Contract with HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) includes terms that require the contractor to recover schedule delays and/or allow for CRD acceleration. Liquidated damages for late delivery in HRP contract.	M	No change
Municipal Wastewater Regulation (MWR) Registration is not achieved or is delayed	A delay to achieving MWR Registration of the wastewater treatment system would mean that the CRD could not discharge treated effluent, and therefore would not be able to commission the WWTP or RTF.	The Project Team (with HRP and Stantec representatives) have been meeting regularly with Ministry of Environment representatives since September 2017 to review the MWR Registration application requirements and the Project’s schedule, in order to mitigate the risk of an incomplete application and/or schedule delays in the registration. A workplan and schedule have been developed and the Project Team, MOE and relevant contractors will continue to meet regularly to track progress and discuss issues.	M	No change



Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level (based on likelihood and potential impact)	Trend in risk level from previous reporting period
Public directly contacting contractors at sites.	Direct contact between the public and contractors could expose both parties to worksite hazards and potential injuries.	Communications and engagement plan, contractor orientation.	M	No change
Change in Law.	A change in law impacts the scope, cost or schedule of the Project.	Keep apprised of proposed modifications to relevant regulations so as to do the following as appropriate: submit comments on proposed modifications; consider including anticipated modifications in contracts. Monitor announcements re tariffs and consider expediting purchase of affected imports.	M	No change
Labour - Availability and/or cost escalation.	There is insufficient labour available to construct the Project, and/or there is significant labour cost.	The Project Team will, through the use of competitive selection processes for all construction contracts, ensure that all Project Contractors have appropriate experience and therefore understand labour risk.	M	No change
McLoughlin Point Wastewater Treatment Plant				
Unexpected contaminated soil conditions during excavation.	Site has more contaminated soils than initial assessment.	CRD and HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) are working collaboratively to minimize the costs associated with remediating the McLoughlin Point site while ensuring that contaminated materials are removed and disposed of in accordance with all applicable legislation.	H	No change



Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level (based on likelihood and potential impact)	Trend in risk level from previous reporting period
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Conveyance				
Unexpected geotechnical conditions results in higher procurement and/or construction costs.	Geotechnical conditions result in redesign and/or higher construction cost than budgeted.	Ensure adequate investigations to manage the risk of unexpected geotechnical conditions: comprehensive geotechnical investigations have been undertaken for the Clover Forcemain, Macaulay Point Pump Station and Forcemain, and RSCL. This geotechnical information has been provided to procurement participants. Geotechnical investigations are to be undertaken for ECI and Currie Forcemain.	M	No change
Cost of conveyance contracts higher than estimated and budgeted.	Due to high cost escalation (inflation) Conveyance works contracts' amount higher than budgeted.	Conveyance contracts will be competitively-procured. The Project Team in concert with Stantec are reviewing the scope and construction cost estimates for the contracts that haven't yet been awarded in order to identify opportunities where savings could be realized to offset escalation.	H	No change



Risk Event	Description of Risk Event	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level (based on likelihood and potential impact)	Trend in risk level from previous reporting period
Conveyance procurement delayed due to design challenges	Owners designs are not developed to a sufficient level for DBB or DB procurement to proceed.	Schedule design activities to ensure minimum conveyance elements required for WWTP and RTF commissioning are available. Accelerate procurement of critical path activities to allow for float in schedule. Periodic reviews with engineers to review design progress. Consideration of separating contracts if this would provide a schedule advantage. To avoid delaying components that are on the Project's critical path the Residual Solids Conveyance Line Pump Stations and Infrastructure Improvements will be delivered through construction contracts.	M	Increased
Engineering design development results in increases to the estimated construction cost.	Conveyance contract amounts higher than budget due to design development (through indicative and detailed design phases).	Reconfirm construction cost estimates at each stage of the design process. The Project Team in concert with Stantec are reviewing the scope in order to identify opportunities where savings could be realized to offset any increases during design development. Application of Value Engineering during design development and associated updated costs estimates at discrete design points.	H	No change

2.9. Status (Engineering, Procurement and Construction)

2.9.1. Updated Project Charter

A Project Charter was prepared by the Project Team and approved by the Project Board on April 4, 2017. The Project Charter has been a useful reference for the Project Team to-date and the Project Team intends to continue using it as the Project is planned, procured and implemented. Accordingly, the Project Team reviewed the Project Charter that was approved by the Project Board on April 4, 2017 and updated it in May 2018 to account for progress made on the Project in the twelve months since the Project Charter was approved. The Project's vision, mission, goals, key performance indicators, budget, schedule and scope remain the same as in the version originally-approved by the Project Board in April 2017; the Project Charter has been updated only as required to account for progress made in planning, procuring and implementing the Project. The updated Project Charter is available on the Project's website.

2.9.2. WWTP

The WWTP Project Component is continuing with Harbour Resource Partners ("HRP" as the Design-Build Contractor for the McLoughlin Point WWTP) progressing: engineering of the WWTP and outfall; and site work at McLoughlin Point including continuing installation of the foundation piles, continuing concrete pours for the tsunami and planter walls, continued installation of underground piping, and starting mudslab installation.

Engineering

HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) progressed planning and design activities, including:

April:

- responded to outstanding issues from the detailed design report (50%);
- submitted updated Computational Fluid Dynamic (CFD) Modeling Report for CRD review;
- submitted Construction Package 3 (90%) for CRD review;
- submitted Construction Package 4 (90%) for CRD review;
- submitted Construction Package 6 (90%) for CRD review;
- submitted Construction Package 7 (90%) for CRD review;
- submitted the detailed design report (90%) for CRD review; and
- submitted Outfall Basis of Design Report (90%) for CRD review.

May:

- submitted construction package 3 (100%) for CRD review;
- submitted construction package 4 (IFC) for CRD review;
- submitted construction package 5 (90%) for CRD review;
- 90% design workshop; and
- 90% hazard and operability workshop.

June:

- submitted construction package 2 (IFC) for CRD review;
- completed construction package 3 (IFC);
- responded to CRD comments construction package 4;
- submitted construction package 7 (IFC) for CRD review;
- submitted outfall basis of design report (90%) for CRD review; and
- responded to outstanding issues from the detailed design report (90%).

Construction

Key construction activities in progress or completed by HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) in April were as follows:

McLoughlin Point**April:**

- installed piles in biological aerated filters (BAF) area;
- installed piles in odour control area;
- continued forms, installed rebar and placed concrete of tsunami walls;
- continued forms, installed rebar and shotcrete of planter walls;
- drilling and blasting in the tertiary area; and
- installed mesh and shotcrete at sections of tertiary wall requiring additional support.

May:

- installed piles in the following areas: odour control; plate settlers; and dirty backwash;
- placed mud slab and gravel mattress at biological aerated filters (BAF) area;
- installed Hobas drainage pipe in the biological aerated filters (BAF) area;
- installation and alignment of stainless steel risers on Hobas piping; and
- continued construction of tsunami and planter walls.

June:

- continued installing structural piles in the West Densadeg and dirty backwash areas;
- continued installation of underslab drain piping;
- continued construction of tsunami and planter walls;
- applied anti-graffiti coating to tsunami and planter walls;
- installed security fencing at area "E" laydown;
- placed concrete mudslabs in tertiary and biological aerated filters (BAF) gallery areas;
- set rebar cages and forming for biological aerated filters (BAF) gallery sumps;
- installed forms for concrete placing boom foundation; and
- continued concrete encasement of biological aerated filters (BAF) underslab piping.

Ogden Point

April:

- completed 54" reaming pass for the Harbour Crossing;
- completed the internal lining of the Harbour Crossing pipe;
- mobilized equipment for the pipe pull;
- completed the swabbing passes of the Harbour Crossing Tunnel;
- welded the pull head on to the Harbour Crossing pipe;
- completed the Harbour Crossing pipe pull;
- demobilized equipment from Niagara Street;
- installed the hydrostatic test heads on the Harbour Crossing pipe;
- hydrostatic test was performed on Victoria Harbour Crossing pipe and passed; and
- BC Hydro installed new utility poles and power lines and reinstated power to the 100 block of Niagara Street.

May:

- backfilled HDD area;
- demobilization of office and crew facilities and reinstatement of the Ogden Point site to its pre-construction condition;
- reinstated permanent power to Niagara Street residents; and
- reinstated Niagara Street to pre-construction condition.

Photographs of construction progress over the month of June at McLoughlin Point are shown in Figures 2 - 8



Figure 2 – Pile rebar bending complete in odour control area



Figure 3 – Levelling of granular material in west biological aerated filters (BAF) gallery.

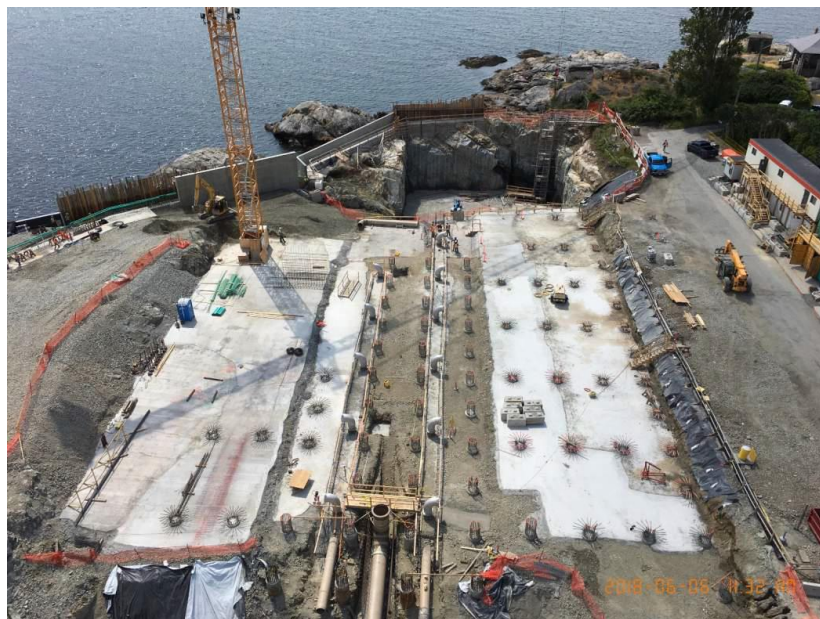


Figure 4 – View of Secondary area from the north tower crane.



Figure 5 – Mudslab placed in central biological aerated filters (BAF) area.



Figure 6 – Re-installing guardrail around outfall shaft.



Figure 7 – Stripping forms from concrete pipe encasement.



Figure 8 – Setting rebar cages for biological aerated filters (BAF) gallery sumps.

2.9.3. RTF

The RTF Project Component continued scheduled activities with HRMG (as the Design-Build-Finance-Operate-Maintain Contractor for the RTF) progressing: pre-construction planning and design engineering activities.

HRMG progressed planning and design activities in April, including:

- continued design development and working toward 60% design submission;
- prepared and submitted various project plans and submittals;
- progressed with vendor selection;
- issued Independent Certifier RFP;
- working with BC Hydro to confirm power requirements to the site; and
- working with District of Saanich on permitting requirements.

HRMG progressed planning and design activities in May including:

- continued design development and working toward 60% design submission;
- prepared and submitted various project plans and submittals;
- submitted its baseline schedule;
- progressed with vendor selection;
- evaluated Independent Certifier proposals;
- coordinated upcoming blasting activities with Hartland Landfill blasting contractors and operations staff;
- worked with BC Hydro to confirm power requirements to the site; and
- worked with District of Saanich on permitting requirements.

HRMG activities in June included:

- confirmation of peak demand load with BC Hydro;
- continued site mobilization;
- selected a preferred proponent for the Independent Certifier and advanced contract negotiations;
- submitted various revised project submittals and plans;
- obtained a blasting permit;
- obtained a sign permit;
- continued environmental monitoring through its Qualified Environmental Professional (QEP); and
- resubmitted its baseline schedule.
- set up of temporary power to the site trailer; and
- stripping and stockpiling of organics from the area to be used for construction.

Photographs of construction progress over the month of June at the RTF are shown in Figures 9-10.



Figure 9 – Stripping of organics from blast area.



Figure 10 – Office trailer with temporary power connected.

2.9.4. Conveyance System

The Conveyance System Project Component was in the engineering, procurement and construction phase during the reporting period and progressed as planned.

Pre-construction and construction activities for the two design-build Conveyance System contracts progressed over the reporting period, and the five design-bid-build Conveyance System contracts were in the engineering phase, with the majority of the work focused on the contracts summarised in the following sub-sections.

2.9.4.1. Clover Point Pump Station

The Clover Point Pump Station continued with design and construction activities during the reporting period.

In April, the Project Team presented the 50% design of the following to the City of Victoria Council and Council unanimously approved the 50% design for the following:

- design proposal for the exterior of the Clover Point Pump Station and the Public Realm Improvements associated with the Clover Point Pump Station; and
- feedback heard through community engagement, and how that feedback has been considered in the design.

Kenaidan (as the Design-Build Contractor) completed the following engineering activities:

April:

- held a 90% design workshop with CRD and Stantec staff;
- held a 90% Hazard and Operability workshop;
- held a Design Workshop with City of Victoria and Lekwungen representatives; and
- pump testing conducted on the existing Clover Outfall.

May:

- revision 2 of the 100% early works caisson construction package for CRD review; and
- revision 2 of the 100% geotechnical design report: 100% design deliverable.

June:

- review meeting to overview secant pile wall and geotechnical design.

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

May:

- installed new BC Hydro service feed;
- removed and disposed of existing duct bank;
- installed dewatering and filtration system;
- installed temporary concrete lock block shoring system adjacent to Clover Point Road in advance of caisson installation work; and
- installed concrete guide wall for secant pile wall installation.

June:

- mobilization of the caisson drilling contractor;
- alignment and welding of king piles;
- drilling and casting of perimeter caissons; and
- layout of future openings in the existing pump station.

Photographs of construction progress at the Clover Point Pump Station over the month of June are shown in Figures 11-13.



Figure 11 – Progressing king pile #20



Figure 12 – Hoisting king pile #17 into place.



Figure 13 – Layout of future opening for new corridor and outfall pipe path at lower level.

2.9.4.1. Macaulay Point Pump Station and Forcemain

Kenaidan (as the Design-Build Contractor) completed the following engineering activities:

April:

- held a 50% design workshop with CRD and Stantec staff;
- held a 50% Hazard and Operability workshop; and
- advanced the overall 90% design deliverable.

May:

- planning: design management plan and baseline schedule (update);
- submission early works package no. 1 demolition and temporary works: 90% design; and
- overall 90% design deliverable.

June:

- condition assessment of the existing incoming trunk sewer; and
- corrosion protection review meeting.

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

May:

- prepared laydown at Area “E”;
- prepared office and parking area at Vaughn and View Point Roads;
- installed temporary fencing at office and laydown area; and
- performed a topographical survey of the Macaulay Forcemain alignment.

June:

- received and set up the remainder of the office complex trailers;
- prepared a temporary access road to the screening area of the pump station for operations personnel;
- CCTV inspection of the existing drop structure and reinforced concrete pipe sewer;
- set up permanent fencing (for construction) and remove temporary fencing;
- installed project signage; and
- safed out and commenced removal of electrical from the workshop and laboratory

Photographs of construction progress at the Macaulay Point Pump Station over the month of June are shown in Figures 14 -17.



Figure 14 – Kenaidan second office trailer delivered to site



Figure 15 – Prepare access to screening entrance for CRD operations personnel.



Figure 16 – pumps being set up for CCTV inspection

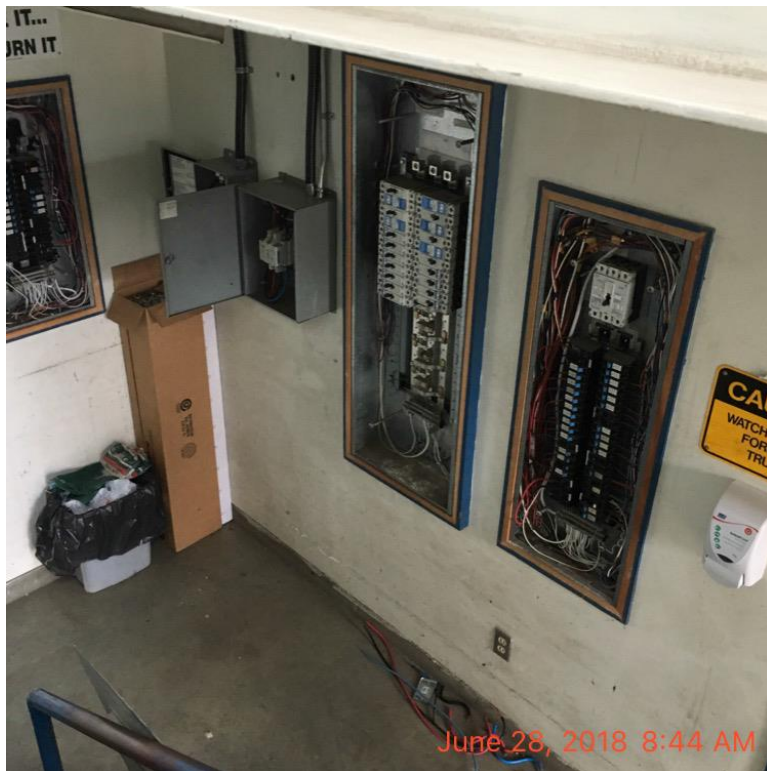


Figure 17 – Electrical panels being safed out prior to removal

2.9.4.2. Clover Forcemain

In April, Kerr Wood Leidal (as the Design Consultant):

- held the 90% design workshop with CRD and staff;
- held a 90% design workshop with City of Victoria and Lekwungen representatives; and
- advanced development of the final (100%) design deliverable.

In April, the Project Team presented the 50% design of the following to the City of Victoria Council and Council unanimously approved the 50% design for the following:

- alignment of the Clover Forcemain;
- alignment and design of the Cycle Path (connecting Clover Point to Dock Street) associated with the Clover Forcemain; and
- feedback heard through community engagement, and how that feedback has been considered in the design.

In May, Kerr Wood Leidal completed the final (Request for Proposal ready) design deliverable.

The Request for Proposals (RFP) was issued to pre-qualified contractors and an all-proponents meeting was held to outline key aspects of the contract to the proponents.

In June, addendums to the Request for Proposals (RFP) were issued to Proponents and to address enquiries from Proponents and City of Victoria design review comments.

2.9.4.3. Residual Solids Conveyance Line (RSCL)

The RSCL continues to progress through the detailed design phase.

In April, Parsons (as the Engineer of Record):

- held a design workshop with the District of Saanich to present the draft (50%) Design Submission;
- held a design review meeting with the Township of Esquimalt to present the 50% design deliverable; and
- advanced the overall 90% design deliverable.

In May, Parsons progressed and/or completed the following engineering activities:

- package no. 1 residual solids pipes: 90% design;
- package no. 1 residual solids pipes: 90% workshop;
- package no. 1 residual solids pipes: final (100%) design; and
- package no. 2 residual solids pump stations: develop 90% design.

In June, Parsons progressed and/or completed the following engineering activities:

- updated and finalized procurement documents including drawings and specification for the request for proposals (RFP); and
- updated the vault design for Residual Solids Conveyance Line based on feedback from CRD.

2.9.4.4. Arbutus Attenuation Tank

KWL (as the Design Consultant for the Arbutus Attenuation Tank), continued to finalize the drawings and specifications for the Arbutus Attenuation Tank.

CRD submitted the building permit application for the Arbutus Attenuation Tank to the District of Saanich.

2.9.4.5. East Coast Intercept/Trent Siphon and Currie Pump Station and Forcemain

The Project Team has developed a draft Request for Proposal (RFP) to retain a design consultant to provide preliminary and detailed design services for the ECI/Trent Siphon and Currie Pump Station and Forcemain. The scope of the RFP also includes engineer of record services during construction. The RFP is scheduled to be issued in Q3 2018.

Appendix A – Niagara Street Update (April 3, 2018)



**Wastewater
Treatment Project**
Treated for a cleaner future

Construction Update

April 3, 2018

Niagara Street Construction Update

- Montreal Street, Oswego Street and Menzies Street at Niagara are now closed for the duration of the pipe assembly and pipe pull
- The pipe is now laid out along Niagara Street from St. Lawrence Street to South Turner Street
- All local businesses will remain open
- Since the start of the pipe assembly a total of 72 calls have been responded to through the 24-7 call centre

Current Activities

April 2 - April 7

- Final tie-in weld to be completed this week
- Internal coating of the three tie in welds to be completed
- Ground preparations on the 100 block of Niagara in anticipation of crane mobilization

Completed Work

March 12 - March 17

- Completed welding of the second and third large sections of pipe
- Moved the second large section of pipe in the 300/400 block of Niagara Street
- Moved the third large section of pipe in the 200 block of Niagara Street
- Completed internal coating of the welds in the first section of pipe in the 500 block and the second section of pipe in the 300/400 block of Niagara Street

March 19 - March 24

- Completed welding of the fourth large section of pipe
- Completed internal coating of the welds in the third and fourth sections of pipe in the 200 and 100 blocks of Niagara

March 26 - March 31

- Completed two tie-in welds connecting the large sections of pipe

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 and will be complete by the end of 2020.

For more information, please visit wastewaterproject.ca

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix B – Niagara Street Construction Update: Pipe Pull (April 9, 2018)



**Wastewater
Treatment Project**
Treated for a cleaner future

Construction Update

April 11, 2018

Niagara Street Construction Update: Pipe Pull

- We are continuing preparations for the pipe pull.
- The pipe pull that was scheduled to begin on Friday, April 13 is now anticipated Monday, April 16.
- During the pipe pull, work will take place 24 hours a day for approximately 3 days, currently anticipated from Monday April 16 to Wednesday April 18.
- Dallas Road is currently anticipated to be closed to vehicle and pedestrian traffic at Niagara Street starting 7 am on Sunday, April 15.
- There will be local traffic only on Dallas Road between Montreal and Niagara Street and between Simcoe Street and Niagara Street.
- We will keep you updated as construction progresses.
- For the most up-to-date information please see the traffic signs, visit the Help Tent or our website at wastewaterproject.ca

About the Wastewater Treatment Project

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Appendix C - Macaulay Point Pump Station and Forcemain: Preliminary (April 10, 2018)**Wastewater
Treatment Project**
Treated for a cleaner future**Construction Notice**

April 10, 2018

Macaulay Point Pump Station and Forcemain: Preliminary Early Works

Construction of the new Macaulay Point Pump Station and Forcemain will be built as part of the Wastewater Treatment Project. The forcemain will pump wastewater directly to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment. The pump station will continue to provide bypass pumping to the existing outfall during heavy rainfall or emergency events.

The contractor for this component of the Project, Kenaidan Contracting Ltd., will begin to mobilize the site in the coming weeks in preparation for construction. Construction is anticipated to begin late spring 2018 and is anticipated to be complete in summer 2020. The waterfront trail will remain open during construction and operations.

What to Expect

Early works are anticipated to commence late April 2018 and will generally include the following activities:

- Installation of site offices.
- Setup of erosion and sediment controls.
- Establishing the laydown area and the temporary construction power feed.
- Demolition of the existing workshop.

Work Hours

- 7:00 a.m. to 5:00 p.m. Monday to Friday
- 9:00 a.m. to 5:00 p.m. Saturday

Traffic Impacts

- Traffic impacts are expected to be minimal during early works as the majority of work will be conducted on the existing Macaulay Point Pump Station site, and in the laydown area, which is located within the field between Vaughan Street and Munro Street.
- Truck traffic to and from the site will follow the Traffic Management Plan approved through the Township of Esquimalt.
- Additional notifications will be provided prior to work on the forcemain if work is required within the local roadways.

About the Wastewater Treatment Project

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Appendix D - Niagara Street Construction Update: Pipe Pull (April 11, 2018)



**Wastewater
Treatment Project**
Treated for a cleaner future

Construction Update

April 11, 2018

Niagara Street Construction Update: Pipe Pull

- We are continuing preparations for the pipe pull.
- The pipe pull that was scheduled to begin on Friday, April 13 is now anticipated Monday, April 16.
- During the pipe pull, work will take place 24 hours a day for approximately 3 days, currently anticipated from Monday April 16 to Wednesday April 18.
- Dallas Road is currently anticipated to be closed to vehicle and pedestrian traffic at Niagara Street starting 7 am on Sunday, April 15.
- There will be local traffic only on Dallas Road between Montreal and Niagara Street and between Simcoe Street and Niagara Street.
- We will keep you updated as construction progresses.
- For the most up-to-date information please see the traffic signs, visit the Help Tent or our website at wastewaterproject.ca

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 and will be complete by the end of 2020.

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Appendix E - Niagara Street Construction Update: Pipe Pull (April 12, 2018)**Wastewater
Treatment Project**
Treated for a cleaner future**Construction Notice****Update**

April 12, 2018

Niagara Street Construction Update: Pipe Pull

The pipe assembly and pipe pull work along the surface of Niagara Street is entering the final stage with the pipe pull anticipated to begin Monday, April 16.

What to Expect

Cranes and side booms are mobilizing on the 100 block of Niagara Street. During the pipe pull, cranes will pick up the pipe and thread it into the tunnel at Ogden Point. The equipment pulling the pipe will be located at the McLoughlin Point side of the harbour. The pull will be continuous until the pipe is all the way through to the other side.

During the pipe pull, there will be hydrovac trucks and other equipment running at the Ogden Point worksite. Part of the sound wall will be removed so that the pipe can be threaded through the pipe tunnel. Measures are being taken to minimize noise including placing mufflers on generators and not using back-up beepers after 7:00 p.m. whenever possible. Any equipment running at night will have spotters and be driven forward.

Hours of Work

- During the pipe pull, work will take place 24 hours a day for approximately three days, anticipated to be Monday, April 16 to Wednesday, April 18.

Traffic/Access

- There will be pedestrian and emergency service access on Niagara Street at all times.
- There will be resident-only access to the 100 block of Niagara Street.
- Niagara Street will remain closed to vehicle traffic for the duration of the pipe pull. Cross streets will reopen as the pipe is pulled through the tunnel.
- Dallas Road is anticipated to be closed starting at 7:00 a.m. on April 15 to vehicle and pedestrian traffic at Niagara Street. There will be local traffic only on Dallas Road between Montreal and Niagara streets and between Simcoe and Niagara streets. Dallas Road is anticipated to reopen April 19.

Viewing Opportunities

- Two designated viewing areas will be located on Dallas Road on either side of the pipe (see reverse for map).

Once the pipe pull is complete, equipment will be removed during regular work hours.

Thank you for your patience as this work is completed.

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

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 and will be complete by the end of 2020.

For more information, please visit wastewaterproject.ca

Map of Viewing Areas



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Appendix F - Niagara Street Construction Update: Pipe Pull (April 13, 2018)**Wastewater
Treatment Project**
Treated for a cleaner future**Construction Notice****Update**

April 13, 2018

Niagara Street Construction: Pipe Pull

The pipe assembly and pipe pull work along the surface of Niagara Street is entering the final stage with the pipe pull anticipated to begin Tuesday, April 17.

What to Expect

Cranes and side booms will be mobilized on the 100 block of Niagara Street the week of April 16. During the pipe pull, cranes will pick up the pipe and thread it into the tunnel at Ogden Point. The equipment pulling the pipe will be located at the McLoughlin Point side of the harbour. The pull will be continuous until the pipe is all the way through to the other side.

During the pipe pull, there will be hydrovac trucks and other equipment running at the Ogden Point worksite. Part of the sound wall will be removed so that the pipe can be threaded through the pipe tunnel. Measures are being taken to minimize noise including placing mufflers on generators and not using back up beepers after 7:00 p.m. whenever possible. Any equipment running at night will have spotters and be driven forward.

Hours of Work

- During the pipe pull, work will take place 24 hours a day for approximately three days, anticipated to be Tuesday April 17 to Thursday April 19.

Traffic/Access

- There will be pedestrian and emergency service access on Niagara Street at all times.
- There will be resident-only access to the 100 block of Niagara Street.
- Niagara Street will remain closed to vehicle traffic for the duration of the pipe pull. Cross streets will reopen as the pipe is pulled through the tunnel.
- Dallas Road is anticipated to be closed starting at 7:00 a.m. on April 16 to vehicle and pedestrian traffic at Niagara Street. There will be local traffic only on Dallas Road between Montreal and Niagara streets and between Simcoe and Niagara streets. Dallas Road is anticipated to reopen April 20.

Viewing Opportunities

- Two designated viewing areas will be located on Dallas Road on either side of the pipe (see reverse for map).

Once the pipe pull is complete, equipment will be removed during regular work hours.

Thank you for your patience as this work is completed.

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

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 and will be complete by the end of 2020.

For more information, please visit wastewaterproject.ca

Map of Viewing Areas



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Appendix G - Niagara Street Construction Update: Pipe Pull (April 19, 2018)



Wastewater
Treatment Project
Treated for a cleaner future

Construction Update

Update

April 19, 2018

Niagara Street Construction Update: Pipe Pull

- Day 3 of the pipe pull along Niagara Street.
- Additional equipment has been required for the final section of the work.
- The noise is from an air compressor that is helping push the pipe through the tunnel.
- This will continue throughout the day until the work is complete.
- The intersections at Menzies and Oswego Street are now open.
- Dallas Road will re-open when the pipe pull is finished.
- Thank you for your patience and understanding as we safely complete this work.

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix H - Niagara Street Construction Update: Pipe Pull (April 20, 2018)



Wastewater
Treatment Project
Treated for a cleaner future

Construction Update

April 20, 2018

Update

Niagara Street Construction Update

- The pipe pull along Niagara Street is now complete and under the harbour.
- Dallas Road and the intersections at Menzies and Oswego Street are now re-opened.
- Montreal Street will be re-opened by the end of day.
- Site demobilization is underway to remove equipment and return Niagara Street to its pre-construction condition.
- Side streets along Niagara Street will re-open as soon as possible.
- BC Transit has returned to their regular routes for Bus #2, #3 and #10. Please visit their website [here](#).
- Thank you for your patience and understanding throughout the completion of this work.

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix I - Clover Point Pump Station: BC Hydro Service Works (April 24, 2018)**Wastewater
Treatment Project**
Treated for a cleaner future**Construction Notice**

April 24, 2018

Clover Point Pump Station: BC Hydro Service Works

The Clover Point Pump Station is being upgraded and expanded as part of the Wastewater Treatment Project. The current pump station pumps sewage directly into the ocean. The expanded pump station will pump wastewater to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment and provide bypass pumping to the existing outfall during extreme storm events.

What to Expect

A new electrical service feed will be constructed for the expanded pump station. This work will include:

- Trenching across Dallas Road at the intersection of Clover Point Road.
- Installation of electrical conduit and junction boxes within the trench to facilitate the installation of underground electrical cables.

Work Hours

- Work activities will take place from April 25 - May 4 between 7:00 a.m. and 5:00 p.m.

Traffic Impacts

- Single lane alternating traffic will be required on Dallas Road at the intersection of Clover Point Road to facilitate construction activities.
- Temporary sidewalk closure on the north side of Dallas Road will be required.
- Traffic control areas will be marked by cones, signs and controlled by flaggers.
- Pedestrians will be re-routed around the construction zone via signage.
- Access to the seawall and parking at Clover Point will remain open.

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 and will be complete by the end of 2020.

For more information, please visit wastewaterproject.ca.

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix J – Community BBQ Invitation (May 1, 2018)



Community BBQ Invitation

Harbour Resource Partners and the Wastewater Treatment Project Team would like to invite the residents of Niagara and surrounding streets to a community BBQ as a thank you for your patience during the pipe assembly and pipe pull.

BBQ Details

Tuesday, May 1, 2018

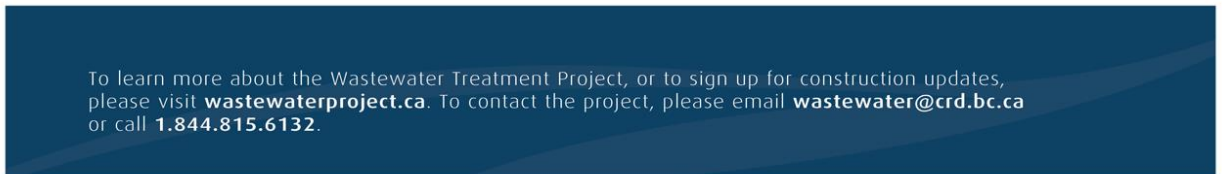
4:30 p.m. to 7:30 p.m.

Victoria Edelweiss Club, 108 Niagara Street



Please let us know if you are interested in attending wastewater@crd.bc.ca.

We look forward to seeing you.



To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix K – Clover Point Pump Station: Road Closure (May 2, 2018)



Wastewater
Treatment Project
Treated for a cleaner future

Construction Notice

May 2, 2018

Clover Point Pump Station: Road Closure

Clover Point Road will be closed to vehicle traffic and parking from May 7 - 18, 2018. Pedestrian access to the seawall and Dallas Road walkway will remain open.

The Clover Point Pump Station is being upgraded and expanded as part of the Wastewater Treatment Project. The current pump station pumps sewage directly into the ocean. The expanded pump station will pump wastewater to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment and provide bypass pumping to the existing outfall during extreme storm events.

What to Expect

A new electrical service feed has been constructed for the expanded pump station. The pre-existing electrical service infrastructure now needs to be removed. This work will include:

- Excavation and disposal of the previous concrete-encased electrical service. This work will take up the majority of Clover Point Road due to the depth of the service.
- Concrete removal including hauling away of materials by truck.
- Once work is complete, the road will be restored to the original condition and reopened.

Work Hours

- Monday to Friday 7:00 a.m. to 5:00 p.m.
- Saturday 7:00 a.m. to 4:00 p.m.
- Construction noise will be within the City of Victoria bylaw allowances.

Traffic Impacts

- Clover Point Road will be closed to vehicle traffic and parking to facilitate construction activities. Fencing and signage will be posted.
- Dallas Road will remain open to vehicle and pedestrian traffic.
- Pedestrian access to the seawall and Dallas Road walkway will remain open.

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 and will be complete by the end of 2020.

Thank you for your patience as this work is completed. For more information, please visit wastewaterproject.ca.

See map on page 2

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

 **Wastewater Treatment Project**
Treated for a cleaner future

Construction Notice

Clover Point Map



To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix L - McLoughlin Point WWTP: Concrete Works (May 9, 2018)**Wastewater
Treatment Project**
Treated for a cleaner future**Construction Notice**

May 9, 2018

McLoughlin Point Wastewater Treatment Plant: Concrete Works

As part of the Wastewater Treatment Project, construction activities for the McLoughlin Point Wastewater Treatment Plant are underway. The contractor, Harbour Resource Partners, will soon begin concrete pours to build the foundations of the Plant. This work is anticipated to begin mid-May and continue for 12 to 16 months.

What to Expect

- Concrete pours are anticipated to occur daily.
- Concrete mixing transport trucks will be used to supply and install concrete to the site.

Work Hours

- Monday to Friday 7:00 a.m. to 7:00 p.m.
- Saturday 9:00 a.m. to 5:00 p.m.
- When required, work may begin earlier than 7:00 a.m. or extend later than 7:00 p.m.

Traffic Impacts

- No street closures will be required.
- Local access to businesses and residences will be maintained at all times.
- Concrete mixing trucks will follow the Traffic Management Plan approved by the Township of Esquimalt.

About the Wastewater Treatment Plant

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 and will be complete by the end of 2020.

Thank you for your patience as this work is completed. For more information, please visit wastewaterproject.ca.

See map on page 2

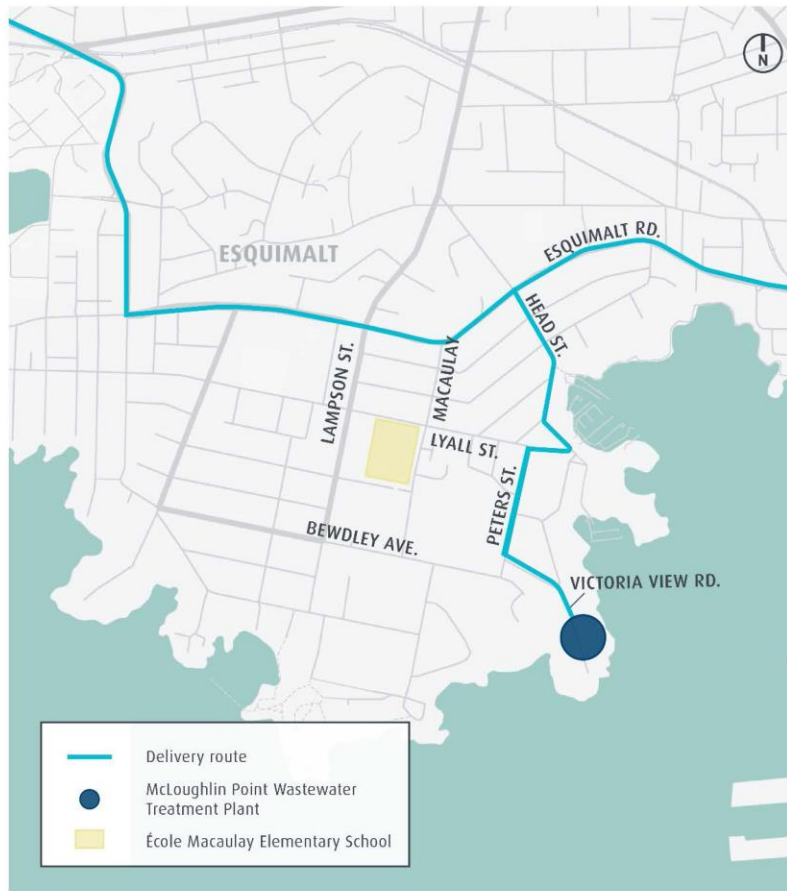
To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.



Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

CURRENT ROUTE



To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix M - Residuals Treatment Facility–Construction Works (May 22, 2018)**Wastewater
Treatment Project**
Treated for a cleaner future**Construction Notice**

May 22, 2018

Residuals Treatment Facility: Construction Works

The Residuals Treatment Facility (RTF) is being built as part of the Wastewater Treatment Project. Residual solids from the McLoughlin Point Wastewater Treatment Plant will be piped to the Residuals Treatment Facility at the Hartland Landfill, where they will be processed into what are known as Class A biosolids. These biosolids are a high-quality product safe for beneficial use.

The contractor for this part of the Wastewater Treatment Project, Hartland Resource Management Group, has initiated site surveying and mobilization in preparation for construction. Construction is anticipated to begin late spring 2018 and take approximately 2.5 years to complete.

What to Expect

- Blasting and excavation at the site.
- Site and concrete works to construct the foundations of the facility.
- Construction of the residuals treatment facility components including enclosed digester tanks, system-wide odour control and an operations building.

Work Hours

- Monday to Saturday 7:00 a.m. to 9:00 p.m.

Traffic Impacts

- Traffic impacts are expected to be minimal as volumes are not expected to be significant.
- Truck traffic and work vehicles will access the site from the north access on Willis Point Road.

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 and will be complete by the end of 2020.

For more information, please visit wastewaterproject.ca

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix N - About the Wastewater Treatment Process (May 18, 2018)

Wastewater Treatment Project
Treated for a cleaner future

What is wastewater?

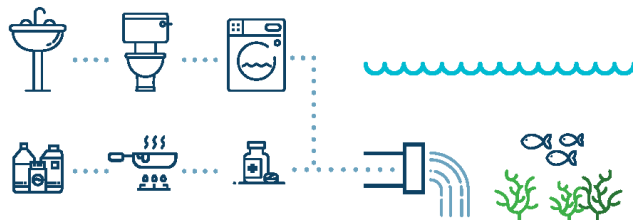
- Wastewater is used water from human activities such as washing dishes, doing laundry, and flushing the toilet.
- Some pollutants in wastewater include industrial and commercial waste, detergents, cooking fats, and prescription drugs.

Why we treat wastewater

- To reduce contaminants prior to releasing the effluent into the environment, helping to protect and maintain healthy waterways.
- If pollutants in wastewater are not removed, they flow directly into the ocean. This can threaten fisheries, wildlife habitat, recreation, quality of life, and public health.

About the system

- Wastewater flows from residences and businesses into a sewer pipe that connects to larger pipes under our streets, which ultimately connect to either the Clover Point Pump Station or the Macaulay Point Pump Station.
- At present, wastewater is screened at these pump stations and then discharged into the Strait of Juan de Fuca without treatment.
- The Wastewater Treatment Project will connect these two pump stations to the McLoughlin Point Wastewater Treatment Plant so that wastewater can be treated to a tertiary level prior to discharge.



Did you know?

In the Core Area:

- There are **seven municipalities** (Victoria, Esquimalt, Saanich, Oak Bay, View Royal, Langford, and Colwood) and the Esquimalt and Songhees Nations.
- The population is approximately **320,000 people** covering **215km²**.
- There are over **175 pump stations** and **110km** of existing sanitary sewer pipes.
- The McLoughlin Point Wastewater Treatment Plant will treat up to **108,000,000 litres** of wastewater per day, providing capacity to accommodate future population growth.
- Every person produces an average of **185-200 litres** of wastewater per day.
- Wastewater flows are greater on rainy days.

1 **CONVEYANCE SYSTEM**

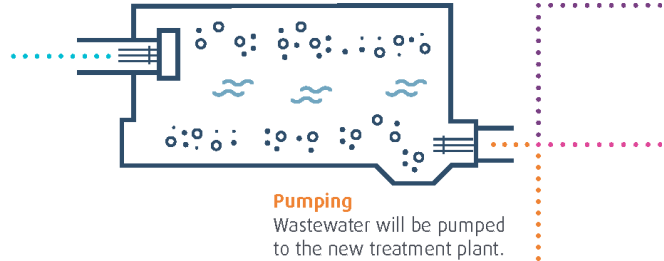
Collects wastewater from across the core area and conveys it to the Clover Point and Macaulay Point pump stations.

Screening

Wastewater is screened (6mm) to remove stones, paper, cloth, plastics and other debris.

Grit Removal

A vortex system uses centrifugal force to keep the organic material suspended while grit settles and is removed.



2 **MCLOUGHLIN POINT WASTEWATER TREATMENT PLANT**

PRIMARY TREATMENT

Is the physical separation of solids from wastewater.

Removing Solids

Heavier solids settle to the bottom and lighter 'scum' floats to the top.

SECONDARY TREATMENT

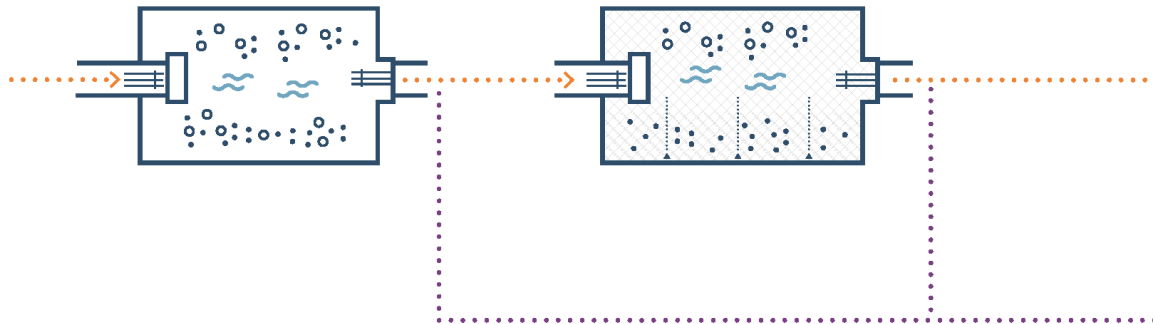
Is a biological process that removes dissolved and suspended organic compounds in the wastewater.

Fine Screening

Primary effluent will be finely screened (2mm) to remove smaller debris.

Biological Reactors

Wastewater flows through tanks where microorganisms grow. The microorganisms consume organic compounds in the wastewater and reproduce to form cells that result in residual biological solids. Solids are removed and sent to the Residuals Treatment Facility for further treatment. Treated secondary effluent is sent to tertiary treatment.



Treatment Process

.....> The grit and screenings are compacted and trucked to an approved landfill.

.....> **Storm Outfalls**

Currently, untreated wastewater is discharged out of the Clover Point and Macaulay Point outfalls. Once the Project is built, these outfalls will only be used to discharge storm flows associated with heavy-rain events. To reduce the need to discharge storm flows, a buried underground concrete tank (the Arbutus Attenuation Tank) will be built in Saanich to temporarily store flows during high volume storm events. In addition, core area municipalities have committed to an inflow and infiltration program that will reduce the volume of storm flows that need to be discharged.

TERTIARY TREATMENT

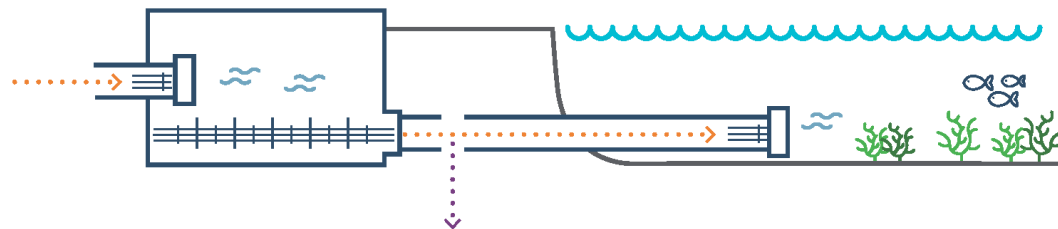
Is one of the highest levels of treatment, reducing contaminants that remain after the secondary treatment process.

Disc Filter

Wastewater will pass through a fabric disc filter (5-micron), reducing many pharmaceuticals, hormones, microplastics and other contaminants.

OUTFALL

The tertiary-treated effluent will flow to the outfall to be discharged into the ocean approximately 2km from shore and 60m deep.



RESIDUALS TREATMENT FACILITY

.....> **3**

As wastewater moves through the treatment process, residual solids are removed. These solids will be pumped to the Residuals Treatment Facility for further treatment.

Residual Solids Conveyance Line

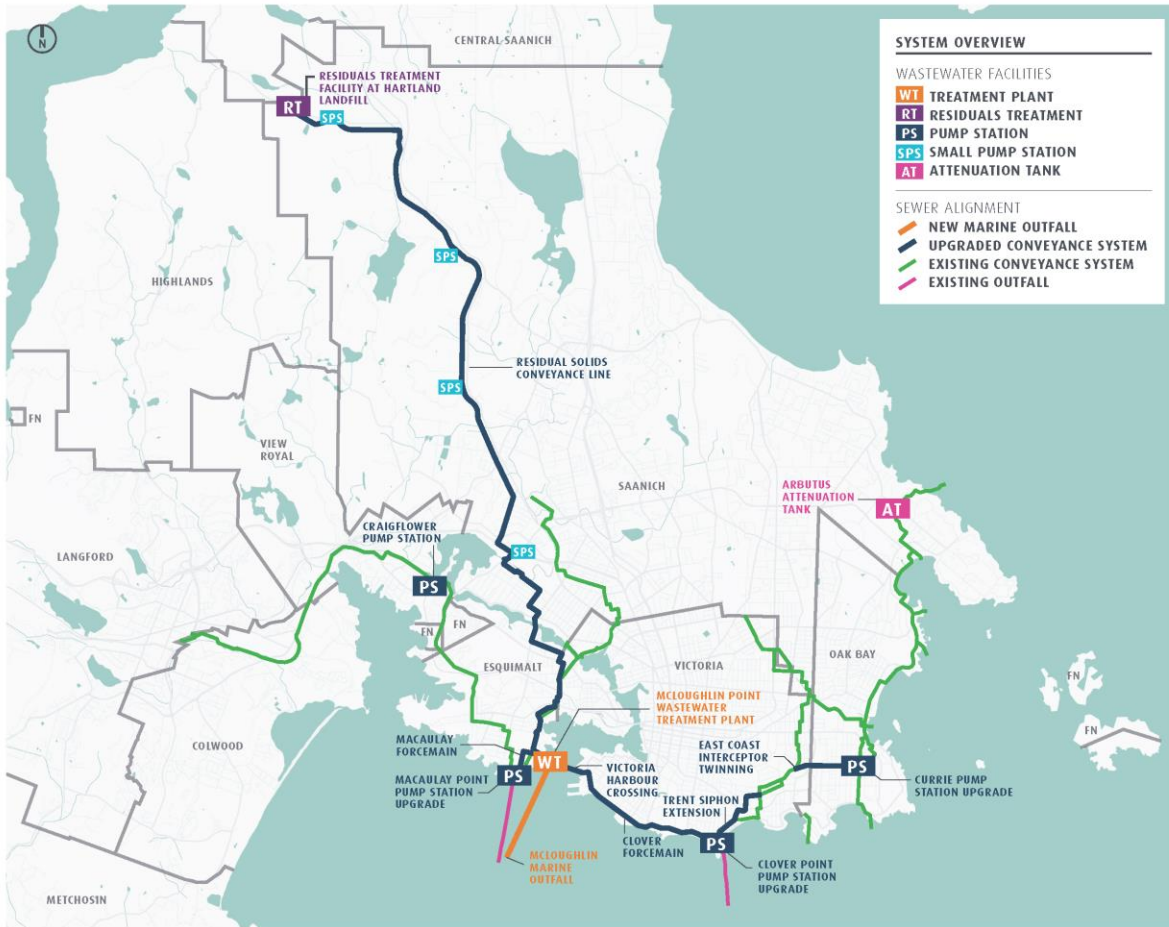
Will consist of two pipes and four small pump stations to transport all residual solids to the Residuals Treatment Facility. Liquid removed from the residual solids during the treatment process will be returned to the McLoughlin Point Wastewater Treatment Plant through the conveyance system.

Residuals Treatment Facility

The Residuals Treatment Facility will be built at the Hartland Landfill, to process residual solids produced by the McLoughlin Point Wastewater Treatment Plant into Class A biosolids – the highest level product suitable for beneficial use.

Wastewater Treatment Project Components

The Wastewater Treatment Project is being built to meet the provincial and federal regulations for treatment by December 31, 2020.



For more information



Website
wastewaterproject.ca



Email
wastewater@crd.bc.ca



24-7 Project information line
1.844.815.6132

Appendix O – Project Update #5 (May 2018)



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. The Project will be built to comply with federal regulations by December 31, 2020.

Construction Updates

NIAGARA STREET PIPE ASSEMBLY AND PIPE PULL

The Wastewater Treatment Project reached a key milestone with the installation of the undersea cross-harbour pipe from Ogden Point to McLoughlin Point, ahead of schedule. The pipe will transport wastewater from the Clover Point Pump Station to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment.

For a six-week period Niagara Street in James Bay was closed to vehicle traffic and used as a staging area for the assembly of a 940-metre-long pipe before it was pulled through a tunnel under the harbour to McLoughlin Point in Esquimalt. The tunnel under the harbour was drilled using a process called horizontal directional drilling, which began in July 2017.

Beginning the first week of March 2018, 78 sections of 12-metre-long pipe were welded together and moved into place along five blocks of Niagara Street from South Turner Street to St. Lawrence Street. Once the pipe was assembled, the pipe pull took place over three days. It took six cranes and four sidebooms to lift the pipe to thread it into the tunnel at Ogden Point. The pipe reached the McLoughlin Point side on April 19, 2018.

The Project Team thanks the residents of Niagara Street and James Bay for their patience during the construction work at Ogden Point and on Niagara Street.



Niagara Street Engagement

1881
help tent visits

28
emails

105
phone calls

2
community meetings



MCLOUGHLIN POINT WASTEWATER TREATMENT PLANT

The McLoughlin Point Wastewater Treatment Plant has been under construction since June 2017. Site preparation, blasting and excavation are now complete, and construction of the tsunami and planter walls and installation of the foundation piles is ongoing. Pouring concrete for the building structures is now underway.

MACAULAY POINT PUMP STATION AND FORCEMAIN

Construction of the new Macaulay Point Pump Station and Forcemain is anticipated to begin in late spring 2018. The pump station will pump wastewater to the McLoughlin Point Wastewater Treatment Plant through the Forcemain, which is the pipe that will connect this pump station to the treatment plant. The Forcemain will be installed in segments along existing roadways to minimize impacts to residents. The waterfront trail will remain open during construction and operations. A community meeting was held in March 2018 to provide information about construction activities and timing.

CLOVER POINT PUMP STATION

The Clover Point Pump Station is being upgraded and expanded to pump wastewater to the McLoughlin Point Wastewater Treatment Plant. Construction at the Clover Point Pump Station began in February 2018. There are two fenced-in areas for construction activities. Access to the parking and seawall will remain open during construction and operations.

CLOVER FORCEMAIN

The Clover Forcemain is a pipe that will run from the Clover Point Pump Station to Ogden Point where it will connect with the recently completed cross-harbour pipe. It will allow wastewater collected at Clover Point Pump Station to be pumped to the McLoughlin Point Wastewater Treatment Plant for treatment. Construction is anticipated to begin in late summer 2018. A community meeting will be held before construction starts to provide information about construction activities and timing.

Wastewater Treatment Project
Treated for a cleaner future

Project Update #5
May 2018

RESIDUALS TREATMENT FACILITY

The Residuals Treatment Facility will be located at the Hartland Landfill in Saanich. It will treat residual solids produced at the McLoughlin Point Wastewater Treatment Plant, and turn them into Class A biosolids suitable for beneficial use. Early work has begun on the facility, including site survey and layout, installation of site office trailers and facilities, on-site geotechnical investigations, and coordination with utility agencies. Construction is anticipated to begin in late spring 2018.

RESIDUAL SOLIDS CONVEYANCE LINE

The Residual Solids Conveyance Line includes two pipes and up to four small pump stations that will connect the McLoughlin Point Wastewater Treatment Plant to the Residuals Treatment Facility to be constructed at Hartland Landfill. Construction is anticipated to begin in late summer 2018. Community meetings will be held before construction starts to provide information about construction activities and timing.

Community Engagement Summary

OCTOBER 2017 – APRIL 2018

286

responses to phone inquiries

88

responses to email inquiries

59

meetings with community associations, municipalities, and stakeholders

7

public open houses





Wastewater Treatment Project
Treated for a cleaner future

Project Update #5
May 2018

Meet a Member of Our Team

The Esquimalt and Songhees Nations are partners with the CRD for the Wastewater Treatment Project. In this update, we are pleased to introduce you to Florence.

FLORENCE DICK, SONGHEES NATION LIAISON



Florence works as the Songhees Nation Liaison to the Wastewater Treatment Project.

ABOUT FLORENCE

Florence is passionate about her Nation. She describes herself as a “People Mover” and focuses her work on the betterment of people. To her it’s not about just doing something, but making sure it is something that is better for the next generation. She has worked on projects with the Greater Victoria Harbour Authority and was part of the group that organized the building of the Songhees Wellness Centre.

The best part of the job for Florence is building her office skills and learning more about the Project. For Florence, it’s an honour to be chosen by the Chief for this job as it shows she has the skills and confidence of her Nation.

STORIES OF THE LANDS

Some of the lands the Wastewater Treatment Project is being built on (McLoughlin Point, Macaulay Point, Clover Point, and Ogden Point) are significant to the Songhees Nation and each has a different meaning. These are their ancestors’ lands and each area contained important resources.

For example, the land from Clover Point to Ogden Point was a defensive location and a lookout to watch for tribes coming from the north to attack. The bluffs used to extend all the way between the two points, so there was no spot to land. Today, elders go to this area to maintain their cultural connection to the land where their ancestors have already walked.

It is important to the Songhees that people know what’s behind the lands and the importance of the cultural connection to the lands. Every four years, the Songhees acknowledge their ancestors and the lands in a Burning Ceremony.

STAY INFORMED

PROJECT WEBSITE wastewaterproject.ca.

The Project website is regularly updated with new information, including construction notifications, and answers to frequently-asked questions.

24-7 PROJECT INFORMATION LINE

1.844.815.6132

Residents can call the information line 24/7 to receive information or report a concern.

EMAIL ADDRESS wastewater@crd.bc.ca.

Please send us an email if you have a question or would like to receive Project updates and construction notices.

For More Information

Website: wastewaterproject.ca

Email: wastewater@crd.bc.ca

24-7 Project Information Line: 1.844.815.6132

Appendix P - Residuals Treatment Facility: Blasting Schedule (June 15, 2018)



**Wastewater
Treatment Project**
Treated for a cleaner future

Construction Notice

June 15, 2018

Residuals Treatment Facility: Blasting Schedule

Site preparation for the Residuals Treatment Facility is underway. The contractor, Hartland Resource Management Group, will conduct controlled blasting and excavation as a part of this work.

Blasting Schedule from June 19 to August 31

- Monday to Friday, between 2:30 and 3:30 p.m., anticipated to be at 2:45 p.m.
- Once per day.
- Blasting schedule is subject to change.

Traffic Impacts

- Expect minor traffic delays on Willis Point Road at blast times (approximately 5 minutes) controlled by flaggers.

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 First Nations by the end of 2020.

For more information, please visit wastewaterproject.ca.

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix Q - Macaulay Point: Temp. Sewer Bypass Pumping (June 26, 2018)**Wastewater
Treatment Project**
Treated for a cleaner future**Construction Notice**

June 26, 2018

Macaulay Point Pump Station: Temporary Sewer Bypass Pumping

There will be temporary sewer bypass pumping at the Macaulay Point Pump Station during the early morning of June 29, 2018 to accommodate video inspection of the influent pipe upstream of the pump station. This work is coordinated as part of the Macaulay Point Pump Station upgrades.

Construction of the new Macaulay Point Pump Station and Forcemain is being built as part of the Wastewater Treatment Project. The upgraded pump station and forcemain will convey wastewater directly to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment and will continue to provide bypass pumping to the existing outfall during heavy storm events.

What to Expect

This work is taking place in the early morning when flows are lowest. The sewage flow must be isolated to accommodate flushing operations and the camera equipment for the inspection. Measures have been taken to dampen the noise coming from the bypass pumps.

Work Hours

- Bypass pumping will occur between 12:00 a.m. and 8:00 a.m.

Traffic Impacts

- Any traffic impacts are expected to be minor.

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.

For more information, please visit wastewaterproject.ca.

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit wastewaterproject.ca. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix R – Summer Truck Traffic Route Letter (June 28, 2018)



**Wastewater
Treatment Project**
Treated for a cleaner future

June 28, 2018

Dear Resident,

Re: Summer Truck Traffic Route

Prior to the start of construction of the McLoughlin Point Wastewater Treatment Plant, a Traffic Management Plan was developed to ensure that all Project traffic follows designated traffic routes. The plan was approved by the Township of Esquimalt in May 2017 and construction of the plant started in June 2017.

On behalf of the Esquimalt Liaison Committee, the Wastewater Treatment Project Team, in conjunction with the Township of Esquimalt and the contractors for the treatment plant and Macaulay Point Pump Station and Forcemain, reviewed the option of an alternate traffic delivery route during the summer school months.

Following consultation in March 2018 with residents along the proposed summer route, feedback was compiled and shared with the Township of Esquimalt who provided the information to their Community Safety Working Group for input. A Staff Report was presented to Esquimalt Council in May 2018 where Council decided to adopt the summer route.

The contractors amended the Traffic Management Plan adding the summer truck traffic route and noting it will be used the week after school is out until the week before school returns. For 2018, the summer traffic route will run from July 3 to August 24.

Please find the maps of the current route and the summer traffic route on the next page.

If you have any questions, please contact us as wastewater@crd.bc.ca.

Thank you,

Wastewater Treatment Project Team



Wastewater Treatment Project
Treated for a cleaner future

CURRENT ROUTE



SUMMER TRAFFIC ROUTE





Appendix S – Monthly Asset Management Cost Report

ASSET MANAGEMENT COST REPORT as at June 30, 2018														
Project Component	Control Budget	Allocated Budget	COST EXPENDED					COMMITMENTS			FORECAST		VARIANCE	
			Expended to May 31, 2018	Expended over reporting period (June 2018)	Expended to June 30, 2018	Expended to June 30, 2018 as a % of Budget	Remaining (Unexpended) Budget at June 30, 2018	Total Commitment at June 30, 2018	Unexpended Commitment at June 30, 2018	Uncommitted Budget at June 30, 2018	Forecast to Complete	Forecast at Completion	Variance at Completion \$	Variance at Completion as a % of Budget
McLoughlin Point Wastewater Treatment Plant ^A	378.0	375.6	106.8	3.5	110.3	29%	265.3	340.6	230.3	35.0	265.3	375.6	-	0%
Residuals Treatment Facility ^A	195.0	176.7	14.4	0.3	14.7	8%	162.0	149.7	135.0	27.0	162.0	176.7	-	0%
Conveyance System ^A	192.0	212.7	36.2	1.1	37.3	18%	175.4	105.2	67.9	107.5	175.4	212.7	-	0%
Total Costs	765.0	765.0	157.4	4.9	162.3	21%	602.7	595.5	433.2	169.5	602.7	765.0	-	0%

A - Including PMO and Common Costs
 * Values presented in \$millions, results in minor rounding differences
 ** Cost report presents approved expenditures



Appendix T – Quarterly Cost Report

WTP QUARTERLY COST REPORT as at June 30, 2018														
Project Component	COST EXPENDED							COMMITMENTS			FORECAST		VARIANCE	
	Control Budget	Allocated Budget	Expended to March 31, 2018	Expended over reporting period (Q2 2018 Apr - June)	Expended to June 30, 2018	Expended to June 30, 2018 as a % of Budget	Remaining (Unexpended) Budget at June 30, 2018	Total Commitment at June 30, 2018	Unexpended Commitment at June 30, 2018	Uncommitted Budget at June 30, 2018	Forecast to Complete	Forecast at Completion	Variance at Completion \$	Variance at Completion as a % of Budget
McLoughlin Point Wastewater Treatment Plant ¹	316.6	319.4	86.1	11.6	97.7	31%	221.7	309.5	211.8	9.9	221.7	319.4	-	0%
Residuals Treatment Facility ¹	147.1	138.3	8.1	0.1	8.2	6%	130.1	135.0	126.8	3.3	130.1	138.3	-	0%
Conveyance System ¹	141.2	150.4	24.3	1.4	25.7	17%	124.7	82.1	56.4	68.3	124.7	150.4	-	0%
Project Management Office														
Project Management Office ("PMO")	71.1	75.6	22.7	5.0	27.7	37%	47.9	60.2	32.5	15.4	47.9	75.6	-	0%
Common Costs														
BC Hydro	11.6	4.0	0.8	-	0.8	19%	3.2	2.6	1.8	1.4	3.2	4.0	-	0%
Third Party Commitments	8.1	8.1	2.1	0.1	2.2	27%	5.9	6.1	3.9	2.0	5.9	8.1	-	0%
Program Reserve and contingencies	69.3	69.2	-	-	-	0%	69.2	-	-	69.2	69.2	69.2	-	0%
Total Costs	765.0	765.0	144.1	18.2	162.3	21%	602.7	595.5	433.2	169.5	602.7	765.0	-	0%

¹ - Excluding PMO, Common Costs and
^{*} Values presented in \$millions, results in minor rounding differences
^{**} Cost report presents approved expenditures