



**Wastewater  
Treatment Project**

Treated for a cleaner future

# CRD Wastewater Treatment Project

## Monthly Report

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Reporting Period: February 2018

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## 1 Executive Summary

### 1.1 Introduction

This monthly report covers the reporting period of February 2018 and outlines the progress made on the Wastewater Treatment Project during this time.

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

Overall the Project is progressing 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 McLoughlin Point WWTP) progressing: engineering of the WWTP and outfall; drilling of the harbour crossing from Ogden Point, with the 54” reaming pass commencing over the reporting period; and McLoughlin Point site work including beginning installation of the foundation piles and continuing concrete pours for the tsunami and planter walls.

Related to the McLoughlin Point WWTP, and more specifically the Harbour Crossing, the Project Team held Niagara Street Information Meetings on February 21<sup>st</sup> and February 24<sup>th</sup> at the Victoria Edelweiss Club in James Bay to provide information about the upcoming pipe assembly and pipe pull on Niagara Street.

The RTF Project Component reached financial close on February 6, 2018. The RTF Project Component commenced with Hartland Resource Management Group (“HRMG” as the Design-Build-Finance-Operate-Maintain Contractor for the RTF) progressing: geotechnical drilling, and engineering.

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

Progress on the two design-build contracts over the reporting period included:

- Clover Point Pump Station: Kenaidan (as the Design-Build Contractor for the Clover Point Pump Station):
  - held a 50% Hazard and Operability workshop to review maintainability, occupational health and safety operational considerations; and
  - progressed the 90% design submission.
- Macaulay Point Pump Station and Forcemain: Kenaidan (as the Design-Builder for the Macaulay Point Pump Station and Forcemain):
  - progressed the 30% design submission; and
  - presented the design concept to the Township of Esquimalt Advisory Design Review Committee, as part of the Development Permit process.

The five design-bid-build Conveyance System contracts are in the engineering phase. Progress over the period included:

- Clover Forcemain:
  - the Project Team reviewed the 50% design submission and provided comments for consideration in development of the 90% design submission; and
  - Kerr Wood Leidal Ltd. (as the Design Consultant for the Clover Forcemain) progressed the 90% design submission.
- Residual Solids Conveyance Line (the “RSCL”):
  - Parsons (as the Design Consultant for the RSCL) submitted the 30% design drawings and report and progressed the 50% design submission; and
  - the Project Team prepared and issued a Request for Qualifications (“RFQ”) to pre-qualify general contractors for construction of the RSCL.
- ECI/Trent Twinning, Currie Pump Station and Currie Forcemain:
  - the Project Team prepared a Request for Proposals (“RFP”) for design consultant services for ECI/Trent Twinning, Currie Pump Station upgrades and Currie Forcemain.

























Related to the Clover Point Pump Station and Clover Forcemain, the Project Team held the 50% Design Workshop with City of Victoria staff and Lekwungen representatives for:

- Public Realm Improvements and Building Exterior for the Clover Point Pump Station;
- Cycle Path alignment along Dallas Road, including assessment of impacts to on-street parking; and
- Clover Forcemain alignment along Dallas Road.





## 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 (“KPIs”) that were defined within the Project Charter.

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 with two community meetings held in Victoria. Significant efforts 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, Ogden Point Harbour Crossing, McLoughlin Point WWTP, and RTF sites. With ongoing construction activities on the Project these inspections continued and documented site inspections were performed weekly with an HRP and CRD representative. Office and site orientations were delivered as required. Over the reporting period there were two safety-related incidents that did not result in recordable incidents: one near-miss incident and one high-potential near-miss incident.

The near-miss incident occurred at the Hartland site and involved a subcontractor to Stantec. Stantec was determining the alignment of the water line which, once constructed, will service the RTF and while an excavator operator was digging a test pit they struck an underground low voltage utility line. The strike broke only the conduit and did not break the actual electrical line. The local utility was contacted and the conduit repaired.

The utility line was not listed on any drawings that had been provided at the time of the locate. A Geo-Scan of the area had also been performed which did not identify any underground lines. Stantec was on site and providing supervision and the subcontractor had completed their safety orientation prior to undertaking the work.

Corrective actions were taken as follows:

- the line was repaired and noted on the Hartland site drawings for any future work in the area;
- These drawings are retained by both the Hartland site staff and District of Saanich; and
- before more testing was performed alternate locations for the next test pit were determined and additional Geo-Scan of each was undertaken.

The work continued and is now completed.

On February 15<sup>th</sup> 2018 a high-potential near-miss incident occurred at the McLoughlin site and involved a subcontractor to Harbour Resource Partners (HRP). A drill rig company that was engaged in contamination monitoring activities contacted and damaged an underground conduit that was protecting the 600 voltage feeder cable which supplies the tower crane. The wires within the conduit were not damaged. Immediately HRP isolated and locked out the electrical service. The area was then roped off in order to allow for a comprehensive investigation.

Due to the severity of this incident HRP notified the CRD immediately and informed them a preliminary investigation was being initiated. A High Potential for Harm Incident Meeting was called by CRD at the McLoughlin site with HRP and its subcontractor involved in the contact with the 600 volt conduit. The CRD WTP Safety Manager and the CRD Corporate Manager

attended the incident site to discuss the immediate corrective actions that were put into place by HRP's management team. These actions included:

- suspension of all ground alteration activities until a comprehensive investigation of the incident was completed;
- removal of the ground disturbance permit;
- discussion of incident during the following days toolbox talks with all employees and subcontractors

Once the investigation was completed HRP hosted an Executive Incident Summary Meeting with the CRD Project Team. The meeting identified a weakness in HRP's internal process utilized to monitor sub-contractor work performed outside of regular working hours. HRP has initiated procedures to have a more stringent hazard assessment review, have a more comprehensive permit system and is providing re-training to all sub-contractors, employees, and supervisors.

Key safety activities conducted over the reporting period included:

- contractor orientation for HRMG for the RTF Project;
- updated the WWTP Safety Management Plan;
- completion of the CRD WWTP Emergency Response Plan, describing procedures for Working Alone and Tsunami Emergency;
- procurement of an Emergency Response Kit for PMO;
- review of an incident report involving release of a small amount of bentonite slurry from a drilling rig at Ogden Point;
- attendance at weekly prime contractors progress meetings;
- WTP Safety Manager and CRD Corporate Safety Representative participated in monthly coordination meeting to review project status and site activities;
- orientation of CRD WWTP personnel at Hartland site;
- review of the pipe assembly and execution plan for the Niagara Street pipe pull;
- participation in HRP risk review safety walk at Niagara Street; and
- completed monthly office inspection with the Worker Representative.

Table 2 – WTP Safety Information

	Reporting Period (February 2018)	Project Total to-Date (from January 1, 2017)
<b>Person Hours</b>		
PMO	3,848	41,207
Project Contractor	11,728	114,273
Total Person Hours	15,576	155,480
<b>Number Of Employees</b>		
PMO	30	
Project Contractors working on Project site	77	
Total Number Of Employees	107	
<b>Number Of Occurrences</b>		
Near Miss Reports	1	4
High Potential Near Miss Reports	1	2
Report Only	0	0
First Aid	0	1
Medical Aid	0	0
Medical Aid (Modified Duty)	0	0
Lost Time	0	0
Total Recordable Incidents	0	0
First Aid Frequency	0	1.2
Medical Aid Frequency	0	0
Lost Time Frequency	0	0
Total Recordable Incident Rate	0	0

## 2.2 Environment and Regulatory Management

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

### 2.2.1 Environment

Environmental work in February progressed as planned.



Key environmental management activities completed in February included:

- Parsons (as the Design Consultant for the RSCL) continued work on an Environmental Impact Study (EIS) for the RSCL.
- HRP (as the Design-Build Contractor for the WWTP), with input from the Project Team, continued preparing an updated Marine EIS for submission at the end of Q1 2018; and
- the Project Team, HRMG (as the Design-Build-Finance-Operate-Maintain Contractor for the RTF) and the BC Ministry of Environment and Climate Change Strategy (ENV) met to discuss the permitting process and EIS requirements for the RTF.

HRP experienced an environmental incident during the reporting period. On February 7<sup>th</sup> 2018, there was a release of drilling fluid (bentonite slurry) at the McLoughlin Point end of the Cross-Harbour Forcemain. Bentonite slurry (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 foreshore and Victoria Harbour was approximately one cubic metre (1,000 litres). Crews worked immediately to stop and contain the release, and cleanup of the ocean floor took place that day after the tide went out. HRP determined that the release resulted in Provincial Water Quality standards for turbidity and total suspended solids being exceeded for a period of less than 24 hours.

### 2.2.2 Regulatory Management

In February, 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 Clover Point Pump Station), and Parsons (as the Design Consultant for the RSCL) in the development of permit applications; engaging with the federal and provincial governments in support of obtaining key permits (summarized in Table 3); and continuing to advance the MWR Registration and planning for future permit applications.

Key permitting activities for February included:

- the Archaeology Branch of the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNR) issued a Site Alteration Permit (SAP) to the Project, permitting the disturbance of archaeological materials at a Registered Archaeological Site at Clover Point. The location of the Registered Archaeological Site is in conflict with Kenaidan's lay-down area and part of the Clover Forcemain, meaning that excavation in those areas could not occur without the SAP;
- Kenaidan (as the Design-Build Contractor for the Clover Point Pump Station) received a Notice from the Director to Construct under Section 40 (b) of the MWR from ENV, authorizing the construction of the Clover Point Pump Station to begin;
- HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) received a Development Permit Amendment from the Township of Esquimalt for the McLoughlin Point WWTP;
- HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) received a Licence of Occupation from FLNR for the portion of the McLoughlin Point outfall on Provincial Crown Land (this is the area beyond the limits of Victoria Harbour, which is Federal Crown Land);
- Kenaidan (as the Design-Build Contractor for the Macaulay Point Pump Station and Forcemain) presented the design of the Macaulay Point Pump Station to the Township

of Esquimalt Advisory Design Review Committee as part of the development permit process;

- the CRD, Stantec, and HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) continued to advance the MWR Registration application. This included holding bi-weekly coordination meetings with ENV; and
- HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) submitted an application for a *Fisheries Act* Authorization to Fisheries and Oceans Canada (DFO). The Authorization is required for McLoughlin outfall construction.

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.

Table 3 has been updated since the Project's January Monthly Report as follows:

- The status of the following permits have been changed from on track to received:
  - McLoughlin Point WWTP:
    - Township of Esquimalt Development Permit Amendment.
  - McLoughlin Point Outfall:
    - Provincial Tenure Crown Grant.
  - Clover Point Pump Station:
    - Notice from the Director to Construct under Section 40 (b) of the MWR.

*Table 3 - Key Permits Status*

Permit / Licence	Anticipated Date	Status	Party Responsible for Obtaining Permit
<b>McLoughlin Point WWTP</b>			
Township of Esquimalt Development Permit Amendment	Q1 2018	Received	HRP
Township of Esquimalt Phased Building Permits (Phase 1 obtained - Future phases to be determined with Township of Esquimalt)	TBD	TBD	HRP
Municipal Wastewater Regulation ("MWR") Registration	Q4 2019	On track	CRD
<b>McLoughlin Point Harbour Crossing</b>			
Transport Canada Lease	Following completion of construction	On Track	HRP
<b>McLoughlin Point Outfall</b>			
Fisheries and Oceans Canada (DFO) <i>Fisheries Act</i> Authorization	Q2 2018	On track	HRP
Transport Canada Facility Alteration Permit	Q2 2018	Submitted: under review by Transport Canada	HRP
Transport Canada Licence (works access)	Q2 2018	Submitted: under review by Transport Canada	HRP
Provincial Tenure Crown Grant	Q2 2018	Received	HRP
Transport Canada Lease	Following completion of construction	On track	HRP

Permit / Licence	Anticipated Date	Status	Party Responsible for Obtaining Permit
Notice from the Director to Construct under Section 40 (b) of the MWR	Q2 2018	On track	HRP
<i>Macaulay Point Pump Station Upgrade</i>			
Township of Esquimalt Development Permit	Q1 2018	On track	Kenaidan
Notice from the Director to Construct under Section 40 (b) of the MWR	Q2 2018	On track	Kenaidan
<i>Clover Forcemain</i>			
Notice from the Director to Construct under Section 40 (b) of the MWR	Q2 2018	On track	Kerr Wood Leidal
<i>Clover Point Pump Station</i>			
Notice from the Director to Construct under Section 40 (b) of the MWR	Q1 2018	Received	Kenaidan
<i>ECI/Trent Twinning</i>			
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
<i>Arbutus Attenuation Tank</i>			
Notice from the Director to Construct under Section 40 (b) of the MWR	Q3 2018	On track	Kerr Wood Leidal
Vancouver Island Health Authority Licence (works laydown)	Q2 2019	On track	CRD
<i>Residual Solids Conveyance Line</i>			
Ministry of Transportation and Infrastructure permits (works access)	Q1 2018	On track	Parsons
Notice from the Director to Construct under Section 40 (b) of the MWR	Q2 2018	On track	Parsons
<i>Residuals Treatment Facility</i>			
Operational Certificate	Prior to start of RTF operations	On track	RTF Project Co.
District of Saanich Development and Building Permits	Q2 2018	On track	RTF Project Co.

## 2.3 First Nations

First Nations communication and engagement was ongoing in February.

The Songhees Nation Liaison and Esquimalt Nation Liaison continued coordination activities with their respective Nations, including meeting with their leadership to discuss the incorporation of Songhees and Esquimalt heritage and culture in the Clover Forcemain and Clover Point Public Realm Improvements.

The Project Team, the Songhees Nation Liaison and a spiritual Elder from the Esquimalt Nation visited the Clover Forcemain alignment along Dallas Road to assess the need for traditional ceremonies prior to construction. It was determined that a Burning Ceremony to let the ancestors know about the upcoming work is warranted. The Burning Ceremony is scheduled for March.

Kenaidan (as the Design-Build contractor for the Macaulay Point Pump Station and Forcemain) requested a meeting with the Songhees and Esquimalt Nation Liaisons to discuss landscaping

and the use of native plants at the Macaulay Point Pump Station. A meeting has been scheduled for March.

The Project Team continued to consider how to continue to engage the W̱SÁNEĆ Nations in meaningful ways. The Project Team anticipates sharing the RSCL EIS with the W̱SÁNEĆ Leadership Committee at the next meeting.

## 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 two community information meetings, stakeholder meetings, Project website updates, notifications of construction through notices, and a public inquiry program, among other methods.

The Project Team held two Niagara Street Information Meetings on February 21<sup>st</sup> and February 24<sup>th</sup> at the Victoria Edelweiss Club in James Bay. The purpose of the meetings was to provide information about the upcoming pipe assembly and pipe pull on Niagara Street. The same information was provided at both meetings to provide flexibility for busy schedules. The first two hours of each meeting was a drop-in format where residents could view information boards and ask questions of the Project Team. It was followed by a presentation and a facilitated Q & A session. The two meetings were attended by approximately 135 residents in total. The key themes of questions included: parking, noise, transit and the post-construction resurfacing of Niagara Street. The local community was notified about these meetings through the hand delivery of invitations (see Appendix A) to almost 1,000 residents on Niagara and side streets intersecting Niagara, emails to over 40 people who signed up for Project updates, and on the Project website.

### **Construction Communications**

#### **Construction Notices:**

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

- Residuals Treatment Facility - Early Works: February 7, 2018 (Appendix B)
- Upgrade and Expansion of the Clover Point Pump Station: February 23, 2018 (Appendix C)
- Niagara Street: Pipe Assembly and Pipe Pull: February 27, 2018 (Appendix D)
- Niagara Street - Notice of Road Closure: February 27, 2018 (Appendix E)

The Clover Point Pump Station construction notice was also posted as a signage board in five places along the fencing on site at Clover Point.

#### **Construction Notifications**

McLoughlin Point WWTP blasting schedules were posted to the website to ensure the public was aware of what to expect in the upcoming week. An example of one of these blasting schedules is attached as Appendix F.

### Information Bulletins

Two information sheets were posted to the website in the reporting period:

- Macaulay Point Pump Station and Forcemain Contractor Selected: February 1, 2018 (Appendix G)
- Residuals Treatment Facility Contract Award: February 6, 2018 (Appendix H)

### Community Meeting Invitation

An invitation for the upcoming March 13<sup>th</sup> Macaulay Point Pump Station and Forcemain Community Information Meeting (Appendix I) was emailed to stakeholders and posted to the website on February 27<sup>th</sup>. It was also mailed to 6938 residents in Esquimalt.

### Project Website

Throughout the month of February, the Project website, wastewaterproject.ca, was updated with information about the Project. The following items were posted: four construction notices, four blasting notifications, two information bulletins, community meeting boards from the Niagara Street Information Meetings, and the creation of a Niagara-specific information section on the website. Invitations for the Niagara Street and the Macaulay Point Pump Station and Forcemain community information meetings were also posted.

### Community Meetings

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

- Two community information meetings regarding Niagara Street;
- City of Victoria staff;
- Department of National Defence;
- District of Saanich Technical Working Group;
- James Bay Neighbourhood Association;
- Township of Esquimalt Council;
- Township of Esquimalt Liaison Committee;
- Township of Esquimalt staff; and
- Township of Esquimalt Technical Working Group.

### Public Inquiries

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

*Table 4- Project Inquiries*

<b>Inquiry Source</b>	<b>Contacts for February</b>
Information phone line inquiries	34
Email inquiries responded to	7

Key themes of the public inquiries were as follows:

- questions about parking on Niagara Street during the pipe assembly and pipe pull;
- request for Project communications materials and event information;

- construction activity at Clover Point; and
- interest in the schedule and parking plans along Dallas Road.

## 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

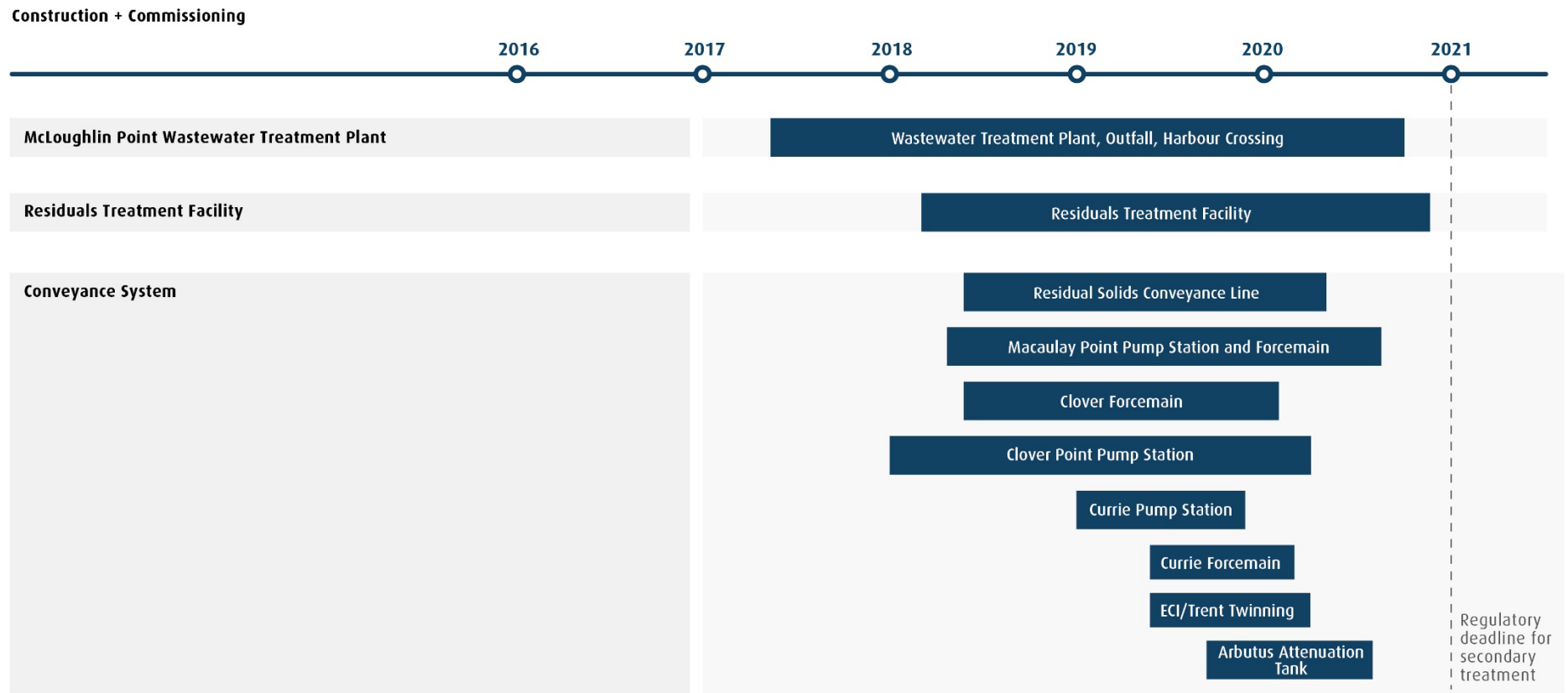
Overall the Project's scheduled activities progressed as planned during February. All major and key interface milestones were on target to be completed as per the schedule. Progress over the reporting period is summarised in section 2.9.

Figure 1 shows the high-level Project schedule. This schedule includes one change from that shown in the previous monthly report, and it remains subject to optimization as the Project and planning progresses.

The change is to the anticipated duration of construction of the Macaulay Point Pump Station and Forcemain. The construction schedule has been extended by six months as the existing pump station will be demolished once the new pump station is operational. This has no impact on the Project's overall schedule or on ability to meet the regulatory deadline, and was not previously included in the schedule as it was anticipated that the existing pump station would be upgraded rather than replaced.

However, the current Macaulay Point Pump Station was built in 1972 and would have required significant upgrades to allow it to continue to be safely operated as well as a significant expansion to allow it to pump wastewater to the McLoughlin Point WWTP. Replacing the existing pump station with a new pump station will provide better operating efficiency than the current pump station, providing lower operating and maintenance costs, and lower lifecycle costs.

Figure 1-High-Level Project Schedule<sup>1</sup>



<sup>1</sup> The schedule remains subject to optimization.



### 2.6.1 30 and 60 day lookahead

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

#### **Safety**

- debrief for high-potential near-miss at McLoughlin WWTP site;
- new contractor Project safety orientations;
- hazard assessment review with HRP for #2 Tower Crane Erection at McLoughlin WWTP;
- review of any site specific safety plans or high risk tasks; and
- WTP Safety Manager and/or Construction Manager will conduct daily site inspections at all active Project work sites.

#### **Environment and Regulatory Management**

- Project Team to continue preparing application deliverables (including HRP updates to the Marine Environmental Impact Study) for MWR Registration; and
- Project Team anticipates receipt of a Site Alteration Permit for all Project components for which there is a Registered Archaeological Site.

#### **First Nations**

- meeting with Songhees and Esquimalt Nation Liaisons, the Project Team and Kenaidan to discuss landscaping at the Macaulay Point Pump Station; and
- Esquimalt and Songhees Nations to host a Burning Ceremony for the Project Team and Project contractors.

#### **Stakeholder Engagement**

- ongoing engagement with Niagara Street residents in advance of and during the construction phase of the pipe assembly and pipe pull;
- Community Information Open House Meetings to provide an update on the Macaulay Point Pump Station and Forcemain;
- develop and post information sheets to the website on the RTF and Macaulay Point Pump Station;
- notifications of blasting schedule for the McLoughlin Point WWTP and RTF; and
- ongoing community liaison meetings.

#### **Cost Management and Forecast**

- prepare cost reports;
- monitor schedule;
- submit funding claims to Infrastructure Canada (under the Building Canada Fund);
- prepare funding claims for Infrastructure Canada (under the Green Infrastructure Fund); and
- fiscal year end preparation.



## **Construction**

### **Ogden Point**

- complete Harbour Crossing pipe internal lining;
- complete pre-work for relocation of the utility poles and power line relocation at Niagara Street;
- set up pipe welding station on Niagara Street;
- set up security fencing around Niagara Street work area;
- receive and stage Harbour Crossing pipe; and
- commence welding of Harbour Crossing pipe sections.

### **McLoughlin Point**

- continue tsunami wall and planter wall construction;
- erect tower crane #2 (North);
- install foundation piles at crane pad #2, and related areas;
- detailed excavation at BAF and tertiary treatment area;
- continue drilling program for delineation of contamination; and
- continue surface runoff/groundwater treatment and discharge.

### **Clover Point Pump Station**

- complete installation of filter fabric and compacted gravel at office and laydown area;
- complete set up of office complex including KCL, CRD and first aid trailers;
- complete temporary seawall walkway; and
- energize temporary power to site.

### **Residuals Treatment Facility**

- completion of geotechnical investigation; and
- topographical survey of site.

## **Engineering**

- advance 90% design for the McLoughlin Point WWTP;
- receive 90% design of the foundation system (piles) for the McLoughlin Point WWTP;
- receive and review construction packages for the McLoughlin Point WWTP;
- commence design of early works packages and advance the overall 50% design for the RTF;
- submit 50% Design Proposal to City of Victoria for the Clover Point Pump Station Building Exterior and Public Realm Improvements, Dallas Road (Clover) Cycle Path and Forcemain alignment;
- receive and review 90% design submission for Clover Point Pump Station including a Hazard and Operability workshop with CRD operations and maintenance staff;
- receive and review 30% design for the Macaulay Point Pump Station and Forcemain;
- progress 90% design for the Clover Forcemain and Cycle Path;
- complete 50% design and advance 90% design for the RSCL; and
- continue development of detailed design for the Arbutus Attenuation Tank.

## **Procurement**

- issue RFQs to pre-qualify general contractors for construction of the Clover Forcemain;
- review RFQ responses to pre-qualify general contractors for the RSCL;
- continue development of RFP for Design Consultant Services associated with the ECI/Trent Twinning and the Currie Pump Station and Currie Forcemain; and
- commence preparation of RFPs for construction of the Clover Forcemain and RSCL.

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

## **Safety**

- review of any site specific safety plans or high risk tasks; and
- WTP Safety Manager and/or Construction Manager will conduct daily site inspections at all active Project work sites.

## **Environment and Regulatory Management**

- Parsons (as the Design Consultant for the RSCL) to submit the EIS for the RSCL and an application to ENV for a Notice from the Director to Construct under Section 40 (b) of the MWR; and
- Kerr Wood Leidal (as the Design Consultant for the Clover Forcemain) to submit the Environmental Assessment Report for the Clover Forcemain and an application to ENV for a Notice from the Director to Construct under Section 40 (b) of the MWR.

## **First Nations**

- First Nations members will be in the field, supporting Millennia archeologists as they complete ongoing archaeological investigations and monitor construction activities;
- the Esquimalt and Songhees Nation Liaisons will continue working with the CRD to develop plans for incorporating Esquimalt heritage and culture in the design of the public realm improvements along Dallas Road; and
- CRD to attend WSÁNEĆ Leadership Committee Meeting

## **Stakeholder Engagement**

- ongoing engagement with Niagara Street residents during the anticipated final weeks of the pipe assembly and pipe pull;
- ongoing construction communications with stakeholders;
- ongoing community liaison meetings; and
- presentation to the City of Victoria Council of the:
  - design proposal for the exterior of the Clover Point Pump Station and the Public Realm Improvements associated with the Clover Point Pump Station;
  - 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.

### **Cost Management and Forecast**

- prepare cost reports;
- monitor schedule;
- prepare and submit funding claims to Infrastructure Canada (under the Building Canada Fund);
- prepare funding claims for Infrastructure Canada; and
- fiscal year-end audit.

### **Construction**

#### Ogden Point

- complete the 54"reaming pass for the Victoria Harbour Crossing;
- complete welding of Harbour Crossing pipe sections;
- complete Harbour Crossing pipe pull; and
- commence demobilization of Niagara Street work area.

#### McLoughlin Point

- complete construction of tsunami and planter walls;
- continue installing foundation piles in BAF and north apron areas;
- install underground process piping in secondary treatment area;
- complete construction of base/mud slabs at tertiary treatment and odour control area;
- continue drilling program for delineation of contamination; and
- continue surface runoff/groundwater treatment and discharge.

#### Clover Point Pump Station

- install internet at office complex; and
- commence drilling of secant piles.

#### Residuals Treatment Facility

- commence rock blasting and excavation on Project site.

### **Engineering**

- receive 90% design of the McLoughlin Point WWTP;
- review 90% design of foundation system (piles) for the McLoughlin Point WWTP;
- review early works design packages and continued development of the overall 50% design for the RTF;
- continue developing the 50% design for the Macaulay Point Pump Station and Forcemain;
- complete the design for the Clover Point Pump Station;
- complete the design of the Clover Forcemain;
- advance design of the RSCL; and
- continue development of detailed design for the Arbutus Attenuation Tank.

### **Procurement**

- complete evaluation of RFQ responses to pre-qualify general contractors for construction of the Residuals Solids Conveyance Line;

- complete evaluation of RFQ responses to pre-qualify general contractors for construction of the Clover Forcemain;
- issue RFPs to pre-qualified general contractors for construction of the Clover Forcemain; and
- prepare RFPs for construction of the RSCL.

## 2.7 Cost Management and Forecast

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

Cost pressures were identified in the Project's Q4 2017 Quarterly Report as a result of two risks that materialised over the July - September 2017 reporting period:

- contaminated materials at McLoughlin Point; and
- proposal price greater than budget for Clover Point Pump Station, expected to be on account of cost escalation due to inflationary pressures in the Victoria area construction market.

Inflationary pressures were confirmed through the receipt of proposals for the Macaulay Point Pump Station and Forcemain.

In order to address these cost pressures the Project team in concert with Stantec 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 \$127.2 million. The most significant commitment made in the reporting period was associated with the award of the Residuals Treatment Facility Contract.

### 2.7.2 Expenses and invoicing

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

### 2.7.3 Contingency and Program Reserves

There were no contingency or program reserve draws over the reporting period, the draws to date and remaining contingency and program reserve balance are itemised in Table 5. The remaining contingency and program reserve is anticipated to be sufficient to deliver the Project within the Control Budget.

Table 5 - Actual Contingency and Program Reserve Draw-Down Table

WTP Contingency and Program Reserve Draw	Draw Date	\$ Amount
<b>Total Contingency and Program Reserve Draw as at Jan 31, 2017</b>		<b>\$11,974,454</b>
WWTP Total Draw		\$ 0
RTF Total Draw		\$ 0
Conveyance Total Draw		\$ 0
PMO Total Draw		\$ 0
BC Hydro Total Draw		\$ 0
WTP Program Reserve Draw		\$ 0
<b>Total Contingency and Program Reserve Draw as at Feb 28, 2018</b>		<b>\$11,974,454</b>
<b>Total Contingency and Program Reserve Remaining</b>		<b>\$57,343,597</b>

## 2.7.4 Project Funding

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

The Government of British Columbia will provide 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 WWTP;
- up to \$50 million through the Green Infrastructure Fund towards the conveyance system project; and
- up to \$41 million towards the RTF 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)	120M	1.8M	1.8M
Government of Canada (Green Infrastructure Fund)	50M	-	-
Government of Canada (P3 Canada Fund)	41M	-	-
Government of British Columbia	248M	-	-
<b>TOTAL</b>	<b>459M</b>	<b>1.8M</b>	<b>1.8M</b>

## 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.

The following addition to the risk register was made during the reporting period:

- Change in Labour Law - Availability and/or cost escalation was added with an assessed a risk level of medium in consideration of the possibility that there is insufficient labour available to construct the Project, and/or there is significant labour cost escalation.

Table 7- 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
<b>Project</b>				
First Nations engagement	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 on-going over the reporting period with community meetings held in Victoria.	M	No change
Senior government funds issue delayed	The assessed risk level reflects the Project Team's priority of ensuring Project funding commitments are honoured.	Responsibility for meeting funding commitments have been assigned and are being monitored.	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
Downstream works delays	Delay from conveyance projects delay delivery of wastewater to WWTP and/or delivery of residual solids to RTF	Schedule has sufficient time allowance to ensure conveyance elements complete prior to requirement. Contractor agreement 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
Provincial or Federal government/agency permit requirements not met	Project Component required Provincial or Federal permit conditions are not met by Project contractors resulting in delays or work stoppage.	The Project Team maintain a centralized permit compliance register to monitor and manage Project permit condition compliance by Project contractors. Meetings held with Federal and Provincial agencies to fully understand and meet requirements in a timely fashion.	M	No change
Public directly contacting contractors at sites	Direct contact between the public and contractors could expose both parties to worksite hazards and potential injuries.	Communications and engagement plan, contractor orientation.	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
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.	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	Risk added this period
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
Conveyance				

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
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.	M	No change
Due to high cost escalation (inflation) Conveyance works contracts' amount higher than budgeted	Cost of conveyance contracts higher than estimated and 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
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 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.	H	No change

## 2.9 Status (Engineering, Procurement and Construction)

### 2.9.1 Wastewater Treatment Plant (WWTP)

The WWTP Project Component continued scheduled activities with HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) progressing: engineering of the WWTP and outfall; drilling of the harbour crossing from Ogden Point, with the 54" reaming pass progressing over the reporting period; and site work including commencing installation of the foundation piles and continuing concrete pours for the tsunami and planter walls of the WWTP at McLoughlin Point.

#### **Engineering**

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

- provided additional information to the Project Team to resolve outstanding questions on the 50% design Issues Tracking Form (ITF);
- continued design of foundation piles;
- continued development of the 90% design; and
- issued final Outfall Basis of Design Report.

#### **Construction**

Photographs of construction progress at McLoughlin Point are shown in Figures 2 – 7. Key construction activities in progress or completed by HRP (as the Design-Build Contractor for the McLoughlin Point WWTP) in February were as follows:

##### **McLoughlin Point**

- continued tsunami wall and planter wall construction;
- crushing of blast rock for use as structural fill and backfill;
- mobilized and set up piling rig and commenced drilling piles in the plate settler area;
- installed wick drains at tsunami wall scuppers;
- backfilled O&M building area and tsunami wall with crushed blast rock;
- completed erection of south tower crane;
- installed rock anchor bolts at outfall chamber;
- removal of old power lines and poles from the east side of Victoria View Road;
- groundwater treatment for hydrocarbon contamination and discharge; and
- erosion and sediment control monitoring to protect environment from runoff.

##### **Ogden Point**

- completed the 34" and 42" reaming passes;
- commenced the 54" reaming pass and progressed to 281 meters;
- commenced with Niagara Street pre-work for overhead BC Hydro power line relocation; and
- continued applying the internal liner to the Harbour Crossing pipe.



Figure 2 – Tower crane erection complete



Figure 3- View looking north from the tower crane



Figure 4 – View of the outfall shaft area from the tower crane





Figure 5 – Compaction of crushed rock backfill at tsunami wall



Figure 6 – Installing 54" reaming bit at Ogden Point



Figure 7 – Install rock anchor bolts at outfall



*Figure 8 – Remove old utility poles from East side of Victoria View Road*

## 2.9.2 Residuals Treatment Facility (RTF)

Hartland Resource Management Group (HRMG) and CRD achieved Financial Close for the RTF on February 6, 2018. HRMG (as the Design-Build-Finance-Operate-Manage Contractor for the RTF) is comprised of a consortium of experienced firms including:

- Bird Design-Build Construction Inc.;
- Maple Reinders Constructors Ltd.; and
- Synagro Technologies Inc.

The contract includes the design, build and finance of the RTF as well as the operation and maintenance of the facility over a 20-year term.

### **Engineering**

HRMG progressed planning and design activities in February, including:

- Participating in the following key meetings:
  - Project kickoff meeting;
  - CRD safety orientation meeting;
  - Prolog training;
  - landfill safety orientations;
  - preliminary design kick-off meeting;
  - development permit and building permit meeting with District of Saanich;
  - permit overview meeting with Ministry of Environment; and
  - weekly progress meetings.
- commenced design activities and submitted the Preliminary Design Report (30% Design) for the RTF.

### **Construction**

Photographs of construction progress at the RTF are shown in Figures 9-10, Key activities in progress or completed by HRMG in February included:

- HRMG mobilization to site;



- geotechnical drilling investigation;
- site delineation including temporary construction fencing;
- delivery of site trailer; and
- initial topographic site survey.



*Figure 9 - Geotechnical Drilling Operation*



*Figure 10 - Core Samples*

### 2.9.3 Conveyance System

#### **Engineering**

The 50% Design Workshop for the Clover Point Pump Station and Clover Forcemain was held with the 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, including assessment of impacts to on-street parking; and
- Clover Forcemain alignment along Dallas Road.

Kenaidan (as the Design-Build Contractor for the Clover Point Pump Station) progressed the 90% design of the Clover Point Pump Station, and held a 50% Hazard and Operability workshop to review maintainability, occupational health and safety operational considerations.

Kenaidan (as the Design-Build Contractor for the Macaulay Point Pump Station and Forcemain) presented the proposed design concept for the Macaulay Point Pump Station to the Township of Esquimalt Advisory Design Review Committee, as part of the Development Permit process. The DRC unanimously recommended that the Township Council approve the Development Permit.

The Project Team reviewed the KWL 50% design of the Clover Forcemain and submitted their comments for consideration in development of the 90% design submission.

Parsons progressed the preliminary design for the RSCL, and submitted their 30% design drawings and report for the RSCL.

#### **Procurement**

A RFQ for the RSCL was issued, to prequalify and shortlist general contractors for the RFP stage. A similar RFQ is in development for the Clover Forcemain.

A RFP is being prepared to solicit design consultant services for the ECI/Trent Twinning, Currie Pump Station and Currie Forcemain.

#### **Construction**

Photographs of construction progress at Clover Point Pump Station are shown in Figures 11 and 12. Key construction activities in progress or completed by Kenaidan (as the Design-Build Contractor for the Clover Point Pump Station) in February were as follows:

##### **Clover Point Pump Station**

- installed chain link fencing at the pump station construction and office/laydown areas;
- commenced installation of filter fabric and gravel base at office/laydown area; and
- commenced installation of temporary seawall walkway.






*Figure 11 – Compacting temporary seawall walking path*



*Figure 12 – Installation of gravel base at Office/laydown compound*

## Appendix A: Niagara Street Community Information Meetings Invitation



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

**WASTEWATER TREATMENT PROJECT**

# Niagara Street Information Meetings

You're invited to find out more about the pipe assembly and pipe pull that will take place on Niagara Street. This work is anticipated to begin in early March 2018. The Wastewater Treatment Project Team, along with representatives from the contractor, Harbour Resource Partners, will provide information and answer questions about the work.

### NIAGARA STREET INFORMATION MEETINGS

**Wednesday, February 21, 2018**  
**5:00 p.m. – 8:00 p.m.**

**OR**

**Saturday, February 24, 2018**  
**10:00 a.m. – 1:00 p.m.**

Victoria Edelweiss Club  
 108 Niagara Street

### MEETING FORMAT

Two meetings will be held to provide information about the pipe assembly and pipe pull on Niagara Street. The same information will be provided at both meetings to provide flexibility for busy schedules. The first two hours of each meeting will be a drop-in format where residents can view information boards and ask questions of the Project team. The presentation will begin at 7:00 p.m. for the Wednesday meeting and at noon for the Saturday meeting, and will be followed by a Q&A session.

### BACKGROUND

The McLoughlin Point Wastewater Treatment Plant includes the construction of a cross-harbour undersea pipe from Ogden Point to McLoughlin Point, using a process called horizontal directional drilling. This work is underway at Ogden Point behind the sound wall.

The pipe will be assembled above ground along Niagara Street. Once the drilling is complete, the pipe will be pulled through the directional drill passage between Ogden Point and McLoughlin Point.

Assembling the pipe involves delivery of the pipe segments, and welding the pipe together. Niagara Street between Dallas Road and Menzies Street will be temporarily closed to general traffic while this work is underway.

This work is expected to take about six weeks, and is anticipated to begin in early March 2018. The exact timing of this work will be determined based on construction operations. More information on construction work and timing will be available at the meetings and online.

Some BC Hydro work in the 100 block of Niagara Street will be required in advance of construction. BC Hydro will notify residents about this work.

For more information about the Wastewater Treatment Project, please visit [wastewaterproject.ca](http://wastewaterproject.ca), e-mail [wastewater@crd.bc.ca](mailto:wastewater@crd.bc.ca) or call **1.844.815.6132**.

### 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. The Project will be built so we comply with federal regulations by the end of 2020, and is being funded by the Government of Canada, the Government of British Columbia and the CRD.

## Appendix B: Construction Notice - Residuals Treatment Facility - Early Works - February 7, 2018



**Wastewater  
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### Construction Notice

February 7, 2018

### Residuals Treatment Facility: Early 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 treated and turned into what are known as Class A biosolids. These biosolids are a high quality by-product safe for beneficial reuse.

#### What to Expect

Early works are anticipated to commence starting the week of February 12. Early work activities will be intermittent and will generally include:

- Site survey and layout.
- Installation of site office trailers and facilities.
- On-site geotechnical investigations.
- Coordination with utility agencies.

#### Location

- Work is within the footprint of the Hartland Landfill site.

#### Work Hours

- 8:00 a.m. to 5:00 p.m. Monday to Friday.

#### Traffic Impacts

- Traffic impacts are expected to be minimal as work will be contained within the footprint of the Hartland Landfill site.
- 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](http://wastewaterproject.ca)

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit [wastewaterproject.ca](http://wastewaterproject.ca). To contact the project, please email [wastewater@crd.bc.ca](mailto:wastewater@crd.bc.ca) or call 1.844.815.6132.

## Appendix C: Construction Notice - Clover Point Pump Station - Early Works - February 7, 2018



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

### Construction Notice

## Upgrade and Expansion of the Clover Point Pump Station

The Clover Point Pump Station will be 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 McLoughlin Point Wastewater Treatment Plant where it will undergo tertiary treatment, and the pump station will also provide bypass pumping through the existing outfall during extreme storm events.

The Clover Point Pump Station expansion will be below the grade of the adjacent section of Dallas Road and will blend into the existing facility and surrounding area.

Work to be completed under this Project includes:

- Concrete works to expand the existing underground structure.
- Upgrades to process mechanical equipment in the pump station.
- Excavation for the foundation of the pump station.
- Connection to the new Clover Forcemain (pipe) which will convey wastewater to the McLoughlin Point Wastewater Treatment Plant.
- Public space improvements, including a new public washroom, bike and pedestrian amenities, public viewing plaza and improved green space.

#### Work Hours

- Weekdays from 7:00 a.m. to 7:00 p.m.
- Saturdays from 10:00 a.m. to 7:00 p.m.

#### Traffic Impacts

- There will be minimal traffic impacts on Dallas Road associated with the upgrade and expansion of the Clover Point Pump Station. Brief lane closures on Clover Point Road will be required when material and equipment are brought to site.

**Access to the seawall and the parking at Clover Point will remain open during construction.**

**Construction is scheduled to be completed by mid-2020.**

#### 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. The Project will be built so we comply with federal regulations by the end of 2020, and consists of the McLoughlin Point Wastewater Treatment Plant, the Residuals Treatment Facility at Hartland Landfill, and the conveyance system that will carry wastewater from across the core area to the McLoughlin Point Wastewater Treatment Plant, and residual solids to the Residuals Treatment Facility.

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit [wastewaterproject.ca](http://wastewaterproject.ca). To contact the project, please email [wastewater@crd.bc.ca](mailto:wastewater@crd.bc.ca) or call 1.844.815.6132.

## Appendix D: Construction Notice - Niagara Street - Pipe Assembly and Pipe Pull - February 27, 2018



**Wastewater  
Treatment Project**  
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### Construction Notice

February 27, 2018

### Niagara Street: Pipe Assembly and Pipe Pull

The pipe assembly and pipe pull work along the surface of Niagara Street will start the first week of March and will take approximately six weeks to complete.

Here is some information on what to expect:

#### Hours of Work

- Monday - Friday 7:00 a.m. - 7:00 p.m. Saturdays from 10:00 a.m. - 7:00 p.m. (first five weeks).
- During the pipe pull, work will take place 24 hours a day for approximately three days (final week).
- Work may occur outside of these hours as allowed under the City of Victoria bylaw.
- Best efforts will be made to mitigate construction noise as this work is completed.

#### Traffic / Access

- There will be pedestrian access to all residences and businesses at all times.
- Niagara will be closed to vehicle traffic between St. Lawrence and Menzies. One-way residential traffic will be maintained on the south side of Niagara between Menzies and South Turner.
- Montreal, Oswego and Menzies will be intermittently closed (road signage will indicate the timing).
- Side streets intersecting Niagara will have resident loading zones to assist with deliveries and pick-up/drop-off.
- Access route information will be provided for the James Bay Community School.

#### Parking

- There will be no parking on Niagara and no access to residential driveways between St. Lawrence and South Turner for the duration of the construction.
- Niagara residents will be able to park on side streets during construction.
- Hand-delivered notification will be provided to residents 48 hours in advance of parking relocation.
- Alternative parking arrangements have been made for residents of high-density buildings.

#### Key Services / Safety

- Emergency services will have access at all times.
- Active construction work areas will be fenced.
- Garbage and recycling will be picked up as usual.
- Bus numbers 2, 3 and 10 will be rerouted. More information can be found at [bctransit.com/victoria](http://bctransit.com/victoria).
- A Help Tent will be set up at the 200 block of Niagara during working hours each day to provide information and answer questions.

(Continued on next page)

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit [wastewaterproject.ca](http://wastewaterproject.ca). To contact the project, please email [wastewater@crd.bc.ca](mailto:wastewater@crd.bc.ca) or call 1.844.815.6132.




**Wastewater  
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## Construction Notice

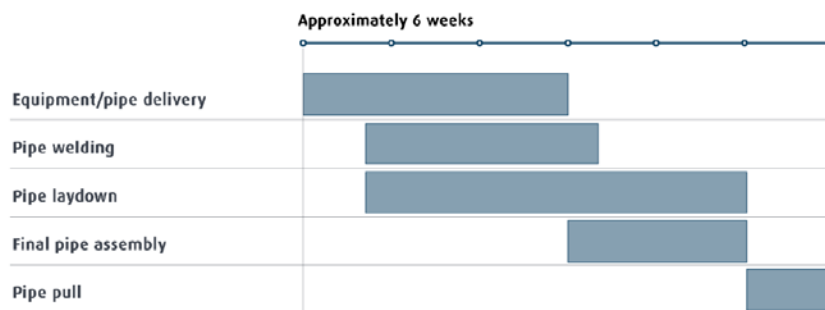
### Niagara Street Construction Overview

The McLoughlin Point Wastewater Treatment Plant includes the construction of a cross-harbour undersea pipe from Ogden Point to McLoughlin Point, using a process called horizontal directional drilling. The pipe will transport wastewater from the Clover Point Pump Station to the treatment plant for tertiary treatment.

The cross-harbour pipe will be assembled above ground along Niagara Street. Once the drilling is complete, the pipe will be pulled through the drill passage between Ogden Point and McLoughlin Point.

**The pipe assembly and pipe pull are anticipated to take about six weeks.**

There are five main activities you will see along Niagara Street as the work is completed. The exact timing of these activities is subject to updates as construction progresses.



**Thank you for your patience as this work is completed. Here's how you can get more information about this work.**



#### Help Tent

A Help Tent will be located in the 200 block of Niagara, by the school. A Project representative will be available during working hours each day to provide information and answer questions.



#### Niagara Street Web Page

**wastewaterproject.ca**  
Will be updated regularly with construction and traffic information.



#### Email and 24-7 Phone Line

Residents can email and call to receive information or report a concern.  
**wastewater@crd.bc.ca**  
**1.844.815.6132.**

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 E: Construction Notice - Niagara Street - Notice of Road Closure - February 27, 2018****Wastewater  
Treatment Project**  
Treated for a cleaner future**Construction Notice**

Feb 27, 2018

**Notice of Road Closure**

The McLoughlin Point Wastewater Treatment Plant includes the construction of a cross-harbour undersea pipe from Ogden Point to McLoughlin Point, using a process called horizontal directional drilling. The cross-harbour pipe will be assembled above ground along Niagara Street. Niagara Street will be closed to vehicles for the duration of this work.

**Niagara Street from Dock Street to Montreal Street**

- Will be closed to vehicles at 7:00 a.m. on Thursday, March 1, 2018
- Motorists are asked to please ensure all vehicles are removed from Niagara Street prior to this date

**Access**

- Pedestrian and emergency access will be maintained at all times
- Dock Street will have a turnaround area and a resident loading zone to assist with deliveries and pick-up/drop-off

**Parking**

- No parking along Niagara Street
- Niagara Street residents will be able to park on side streets during construction

Here's how you can get more information:

**Help Tent**

A Help Tent will be located in the 200 block of Niagara, by the school. A Project representative will be available during working hours each day to provide information and answer questions.

**Niagara Street Web Page**

**wastewaterproject.ca**  
Will be updated regularly with construction and traffic information.

**Email and 24-7 Phone Line**

Residents can email and call to receive information or report a concern.

**wastewater@crd.bc.ca**  
**1.844.815.6132**

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 F: Blasting Schedule for the Week of February 5, 2018



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

### Construction Notice

February 2, 2018

### McLoughlin Point: Blasting Schedule

Site preparation for the McLoughlin Point Wastewater Treatment Plant is underway. The contractor, Harbour Resource Partners, will conduct controlled blasting and excavation as a part of this work.

#### Blasting Schedule for the week of February 5\*:

Monday, February 5	4-6 blasts per day
Tuesday, February 6	4-6 blasts per day
Wednesday, February 7	4-6 blasts per day
Thursday, February 8	4-6 blasts per day
Friday, February 9	4-6 blasts per day

\*Blasting Schedule is subject to change.

#### Blasting Procedure

- Each blast will last less than 60 seconds.
- All blasts will be covered with 5,000 pound blast mats. Blasting signs will be posted on the site boundary, and warning signals will be used as follows:
  - 12 short whistles at one second intervals followed by a two minute pause
  - Blast will be detonated
  - One long whistle signals all is clear

**Blasting Hours:** Monday to Friday, 8:00 a.m. to 4:30 p.m.

#### About the Wastewater Treatment Project

The Wastewater Treatment Project will provide tertiary treatment for wastewater from the core area municipalities of Victoria, Esquimalt, Saanich, Oak Bay, View Royal, Langford and Colwood, and the Esquimalt and Songhees First Nations. The Wastewater Treatment Project will be built so we comply with federal regulations by the end of 2020, and is being funded by the Government of Canada, the Government of British Columbia and the CRD.

Harbour Resource Partners is the contractor selected by the CRD to build the McLoughlin Point Wastewater Treatment Plant, cross-harbour undersea pipe, and marine outfall for treated wastewater at McLoughlin Point.

To learn more about the Wastewater Treatment Project, or to sign up for construction updates, please visit [wastewaterproject.ca](http://wastewaterproject.ca). To contact the project, please email [wastewater@crd.bc.ca](mailto:wastewater@crd.bc.ca) or call 1.844.815.6132.



## **Appendix G: Macaulay Point Pump Station/Forcemain Contractor Selected - February 1, 2018**



**Wastewater  
Treatment Project**

### **Information Bulletin**

For Immediate Release  
February 1, 2018

#### **Macaulay Point Pump Station and Forcemain Contractor Selected**

**Victoria, BC**—The contractor for the Macaulay Point Pump Station and Forcemain has been selected and is Kenaidan Contracting Ltd. The Macaulay Point Pump Station is being upgraded as part of the Wastewater Treatment Project, and the Capital Regional District (CRD) has entered into a \$35.9 million contract with Kenaidan to design and build a new pump station and forcemain.

Kenaidan Contracting Ltd. (Kenaidan) was selected by the CRD through a competitive selection process. Kenaidan has more than 30 years of experience building, modernizing, and expanding waterworks facilities within British Columbia and southern Ontario. Kenaidan is also the contractor recently selected to design, build and expand the Clover Point Pump Station.

The new Macaulay Point Pump Station will pump wastewater from western core area municipalities and the Esquimalt and Songhees Nations to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment. The Macaulay Forcemain is the pipe that will connect the Macaulay Point Pump Station to the McLoughlin Point Wastewater Treatment Plant.

The design for the new pump station considers its location on the waterfront and will have similar standards of design, material and quality of construction as the CRD's recently built Craigflower Pump Station.

Construction of the Macaulay Point Pump Station and Forcemain is anticipated to start in March 2018 and will take approximately two years to complete. To minimize impacts to residents and all road users, the forcemain will be installed in segments. All work will be completed within the existing Macaulay Point Pump Station site and existing road right-of-ways.

The waterfront trail will remain open to the public during construction and operation of the Macaulay Point Pump Station and Forcemain.

The Wastewater Treatment Project is being funded by the Government of Canada, the Government of British Columbia and the CRD.

**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. The Project will be built to comply with federal regulations by the end of 2020, and consists of the McLoughlin Point Wastewater Treatment Plant, the Residuals Treatment Facility at Hartland Landfill, and the conveyance system that will carry wastewater from across the core area to the McLoughlin Point Wastewater Treatment Plant, and residual solids to the Residuals Treatment Facility.

For more information, please visit: [wastewaterproject.ca](http://wastewaterproject.ca)

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**For media inquiries, please contact:**

Andy Orr, Senior Manager  
CRD Corporate Communications  
Tel: 250.360.3229  
Cell: 250.216.5492

## Appendix H: Residuals Treatment Facility Contract Award - February 6, 2018



**Wastewater  
Treatment Project**

### Information Bulletin

For Immediate Release  
February 6, 2018

#### Residuals Treatment Facility Contract Award

**Victoria, BC**– The Capital Regional District (CRD) has entered into a contract with Hartland Resource Management Group to design, build, finance, operate and maintain the Residuals Treatment Facility over a 20-year term. The contract is performance-based, with payment tied to the quantity of residual solids treated. The capital cost of the Residuals Treatment Facility is \$126.8 million.

Hartland Resource Management Group was selected by the CRD through a competitive selection process and is a consortium of experienced firms including:

- Bird Construction Inc.;
- Maple Reinders PPP Ltd.; and
- Synagro Capital

The Residuals Treatment Facility 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 Hartland Landfill, where they will be treated and turned into what are known as Class A biosolids.

The biosolids produced at the facility will be a high quality dried product that will look similar to granules of dark ash and will be suitable for several beneficial reuses, including as an alternative energy source. The beneficial reuse will be determined by the CRD through a separate competitive selection process.

Located within the footprint of the Hartland Landfill in Saanich, the facility site was selected in 2013, after an assessment of potential locations that included technical, environmental, social and economic considerations. All treatment processing tanks will be covered and odour control systems will ensure there is no discernible odour in the community from the facility. Noise from the facility will be minimal and will comply with District of Saanich bylaws.

A community engagement plan will ensure the surrounding community have advance notice of construction activity. Communication tools will include: project information line phone number, email, social media, website, community updates, construction bulletins, traffic media updates, door-to-door advisories where appropriate and community information meetings.

The Residuals Treatment Facility is being funded by P3 Canada, the Province of British Columbia and the CRD. Construction is anticipated to begin Spring 2018 and take approximately 2.5 years to complete.

***About the Wastewater Treatment Project***

*The Residuals Treatment Facility is being built as part of 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. The Project will be built to comply with federal regulations for treatment by December 31, 2020.*


*For more information please visit: [wastewaterproject.ca](http://wastewaterproject.ca).*

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**For media inquiries, please contact:**

Andy Orr, Senior Manager  
CRD Corporate Communications  
Tel: 250.360.3229  
Cell: 250.216.5492

## Appendix I: Macaulay Pump Station and Forcemain Community Information Meeting Invitation



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

**WASTEWATER TREATMENT PROJECT**

# Macaulay Point Pump Station and Forcemain Community Information Meeting

You're invited to find out more about construction of the Macaulay Point Pump Station and Forcemain. This work is anticipated to begin in March 2018. The Wastewater Treatment Project Team, along with representatives from the contractor, Kenaidan Contracting Ltd., will provide information and answer questions about the work.

### MACAULAY POINT PUMP STATION AND FORCEMAIN COMMUNITY INFORMATION MEETING

**Tuesday, March 13, 2018  
5:00 p.m. - 7:00 p.m.**

Royal Canadian Legion  
Esquimalt Branch  
622 Admirals Road

### MEETING FORMAT

The Wastewater Treatment Project Team will provide an update on the Macaulay Point Pump Station and Forcemain. The format will be drop-in to provide flexibility for busy schedules. Come by any time during the meeting to review updated project information, find out about upcoming construction activities and timing, meet Project Team members and ask questions about the Project.

### MACAULAY POINT PUMP STATION AND FORCEMAIN

The new Macaulay Point Pump Station will pump wastewater from the western core area municipalities and the Esquimalt and Songhees Nations to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment. The Macaulay Forcemain is the pipe that will connect the Macaulay Point Pump Station to the McLoughlin Point Wastewater Treatment Plant.

The new pump station will be aesthetically appealing and will be further set back from the waterfront than the existing pump station, providing landscaped public space adjacent to the existing walkway. The waterfront trail will remain open to the public during the construction and operation of the Macaulay Point Pump Station and Forcemain.

### TIMING

Construction of the Macaulay Point Pump Station and Forcemain is anticipated to start in March 2018 and will take approximately two years to complete. To minimize impacts to residents and all road users, the pipe will be installed in segments. All work will be completed within the existing Macaulay Point Pump Station site and existing roadways.

### FOR MORE INFORMATION ABOUT THE WASTEWATER TREATMENT PROJECT:

Visit [wastewaterproject.ca](http://wastewaterproject.ca)  
E-mail [wastewater@crd.bc.ca](mailto:wastewater@crd.bc.ca)  
Call 1.844.815.6132

Appendix J: February Monthly Cost Report

ASSET MANAGEMENT COST REPORT as at February 28, 2018														
Project Component	Control Budget	Allocated Budget	COST EXPENDED			COMMITMENTS			FORECAST		VARIANCE			
			Expended to January 31, 2018	Expended over reporting period (February 2018)	Expended to February 28, 2018	Expended to February 28, 2018 as a % of Budget	Remaining (Unexpended) Budget at February 28, 2018	Total Commitment at February 28, 2018	Unexpended Commitment at February 28, 2018	Uncommitted Budget at February 28, 2018	Forecast to Complete	Forecast at Completion	Variance at Completion \$	Variance at Completion as a % of Budget
378.0	375.4	83.0	7.4	90.4	24%	285.0	338.6	248.2	36.8	285.0	375.4	-	0%	McLoughlin Point Wastewater Treatment Plant <sup>A</sup>
195.0	176.8	12.6	0.3	12.9	7%	163.8	148.4	135.5	28.3	163.8	176.8	-	0%	Residuals Treatment Facility <sup>A</sup>
192.0	212.8	30.1	0.9	31.0	15%	181.9	103.7	72.7	109.1	181.9	212.8	-	0%	Conveyance System <sup>A</sup>
765.0	765.0	125.7	8.6	134.3	18%	630.7	690.7	456.4	174.2	630.7	765.0	-	0%	Total Costs
<div>A - Including PMO and Common Costs</div> <div>* Values presented in \$millions, results in minor rounding differences</div> <div>** Cost report presents approved expenditures</div>														