



Wastewater Treatment Project

Treated for a cleaner future

CRD Wastewater Treatment Project

Monthly Report

Reporting Period: July 2017

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1 Executive Summary

1.1 Introduction

This monthly report covers the reporting period of July 2017 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 “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. The WWTP Project Component is continuing with Harbour Resource Partners (“HRP”) progressing engineering of the WWTP and outfall, drilling of the harbour crossing from Ogden Point, and site preparation at McLoughlin Point.

The RTF Project Component is in the procurement phase. The Request for Proposals (RFP) is progressing as planned, with technical submissions due in September 2017 and financial submissions due in October 2017.

The Conveyance System will be delivered through seven contracts. The two design-build Conveyance System contracts were in procurement during the reporting period:

- The RFP for the Clover Point Pump Station was issued on May 22, 2017 and is scheduled to close on August 16, 2017.
- The Request for Qualifications (“RFQ”) for Macaulay Point Pump Station and Forcemain was issued on May 24, 2017 and closed on July 5, 2017. Evaluation of the submissions started in the reporting period.

The five design-bid-build Conveyance System contracts are in the engineering phase. Stantec (as the owner's engineer) progressed the indicative design over the reporting period, including planning geotechnical and geophysical work related to the Residual Solids Conveyance Line.

For each of the design-bid-build contracts the Project Team will procure design consultant services (including the “Engineer of Record” role). An RFP was issued for design consultant services for the Clover Forcemain and planning for the procurement of design consultant services progressed for the Arbutus Attenuation Tank and the Residual Solids Conveyance Line.

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.

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; corrective actions identified and taken on a safety-related incident.
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.					Extensive engagement activities were completed in the reporting period related mainly to the Ogden and McLoughlin Point construction activities. 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

* 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.

A safety-related incident occurred in the recording period that did not result in a recordable incident, it is shown as a 'High Potential Near Miss Report' in Table 2. A utility line was contacted at McLoughlin Point worksite; reasons for the incident are as follows: improper position of the excavator and failure to follow SOP-31-00-12 Working Near Overhead Power lines and SOP-31-00-28 Equipment Spotting.

Corrective actions taken were as follows:

- the utility owner contacted and repaired damaged lines;
- review of the contractor's practices and procedures was conducted; and
- overhead lines were marked with flagging.

One hazard incident was issued in the reporting period. The hazard ID was issued to HRP at Ogden Point site when a sub-contractor excavator operator was observed moving a concrete block too quickly. The excavator also tracked too closely to the excavation causing some material to fall back into the excavation. The work was immediately stopped and the operator was instructed on the safe handling of materials and instructed to level out the work area close to the excavation to prevent any further impact.

Other safety activities conducted over the reporting period included:

- five Project Team safety orientations completed, this included a review of tasks, the hazards associated with those tasks and control measures to mitigate the identified hazards for the WTP office and active worksites;
- the WTP Safety Manager attended a coordination meeting with CRD corporate safety representatives and HRP with a WorkSafeBC officer at the McLoughlin site. Roles and responsibilities, safety compliance and expectations in regards to Project Management were discussed;
- the WTP Safety Manager attended a safety meeting with CRD corporate safety representatives and HRP regarding reporting procedures and timelines for incident reporting;
- Project Team construction and safety personnel conducted daily site safety tours of the Ogden Point and McLoughlin Point work sites;
- Project Team construction and safety personnel conducted documented weekly safety inspections of Prime Contractor sites;
- the CRD Safety Manager accompanied the geotechnical drilling crew to complete the study of Dallas and Douglas Road;
- the Project Team reviewed HRP's revised and updated Blasting Plan; and
- the Project Team reviewed CRD's Corporate Fleet Driver and Management policies and procedures manual to integrate CRD policies and procedures into vehicle training for all Project Team drivers to ensure safe and courteous motor vehicle operation.

Table 2 – WTP Safety Information

	Reporting Period (July 2017)	Project Total to-Date (from January 1, 2017)
Person Hours		
Project Management Office	3,232	13,302
Project Contractor	10,728	31,677
Total Person Hours	13,960	44,979
Number Of Employees		
Project Management Office	23	
Project Contractors working on Project site	62	
Total Number Of Employees	85	
Number Of Occurrences		
Near Miss Reports	0	1
High Potential near Miss Reports	1	1
Report Only	0	0
First Aid	0	0
Medical Aid	0	0
Medical Aid (Modified Duty)	0	0
Lost Time	0	0
Total Recordable Incidents	0	0
Frequency Rates		
First Aid Frequency	0	0
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 both to the planning of upcoming work and the execution of current work.

2.2.1 Environment

Environmental work in July progressed as planned, with a focus on archaeological-related activities and the management of contaminated soils. Key activities completed in July included:

- Millennia submitted a Heritage Conservation Act Inspection Permit application to the Province, to enable intrusive (i.e. ground disturbing) studies to be undertaken to inform Millennia's Archaeological Impact Assessment of the entire Project. Referrals by the Province to potentially affected First Nations were made as part of the permitting process. The referral time is typically 30 days, however Malahat First Nation requested an additional 14 days. Millennia, the Project Team and the Province all agreed to this request;
- HRP began characterizing and delineating contaminated soils at the McLoughlin Point site. Test-pitting and analysis of soil samples followed Provincial protocols and continued throughout the month;
- HRP finalized an amendment to the Environmental Effects Determination (EED) Report for submission to the Department of National Defence (DND). The EED Report outlined proposed changes to the scope of work on DND property (i.e. the construction of a truck turn around), described potential adverse environmental effects and proposed mitigation measures to reduce those effects. Following application of the proposed mitigation measures, no residual adverse environmental effects are anticipated; and
- the Project Team had a field visit with City of Victoria staff to plan the management of rare plants at Clover Point.

2.2.2 Regulatory Management

In July, the Project Team monitored and supported the advancement of construction-related regulatory approvals to help ensure that permit applications progressed as planned. The permitting activities for the reporting period involved engagement with municipalities and the provincial government in support of the key permits summarized in Table 3 below.

The progression of the various Project permits continues to be an area of focus due to the potential for adverse schedule impacts. The regulatory management activities were in line with the planned Project progress for the period.

The Project Team, Stantec and HRP have been progressing construction-related and geotechnical investigation-related regulatory approvals in accordance with the overall schedule. Key permitting activities for July included:

- Stantec (as owner's engineer) submitted applications to the Township of Esquimalt and District of Saanich for street-occupancy permits related to geotechnical investigations for the Residual Solids Conveyance Line;

- the Project Team and HRP met with the BC Ministry of Environment to discuss the Municipal Wastewater Regulation (MWR) Registration process and how it applies to the McLoughlin Wastewater Treatment Plant;
- HRP submitted a request to the BC Ministry of Environment for permission to begin construction of the McLoughlin facility prior to the MWR Registration being in effect;
- the Project Team met with the BC Ministry of Environment to discuss the Residuals Treatment Facility and the regulatory framework and permitting regime that is applicable; and
- archaeological (*Heritage Conservation Act*) permits from the Ministry of Forests, Lands, and Natural Resource Operations for the Project were submitted by Millennia, the Project's archaeological contractor.

The status of the 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. There have been no changes to the table from that presented in the April – June 2017 Quarterly Project Report.

Table 3 - Key Permits Status

Permit / Licence	Anticipated Date	Status	Responsible Party
McLoughlin Point WWTP			
Rezoning within the Township of Esquimalt	Obtained	Complete	CRD
Township of Esquimalt Development Permit	Obtained	Complete	HRP/CRD
Township of Esquimalt Development Permit Amendment	Q4 2017	On track	HRP
Township of Esquimalt Phased Building Permits <ul style="list-style-type: none"> • Phase 1: Early Works 	Obtained	Complete	HRP
Township of Esquimalt Phased Building Permits <ul style="list-style-type: none"> • Future phases to be determined with Township of Esquimalt 	TBD	TBD	HRP
Department of National Defence Licence (facility siting, works access and laydown, including for Macaulay Point)	Obtained	Complete	CRD
Municipal Wastewater Regulation ("MWR") Registration	Q4 2018	On track	HRP
McLoughlin Point Harbour Crossing			
Greater Victoria Harbour Authority Licence (works access)	Obtained	Complete	CRD
Transport Canada Licence (works access)	Obtained	Complete	HRP
Transport Canada Facility Alteration Permits (HDD and installation of the casing and pipe)	Obtained	Complete	HRP
Transport Canada lease	Following completion of construction	On track	CRD
McLoughlin Point Outfall			

Permit / Licence	Anticipated Date	Status	Responsible Party
Transport Canada Facility Alteration Permit	Q4 2017	Submitted: under review by Transport Canada	HRP
Transport Canada Licence (works access)	Q4 2017	Submitted: under review by Transport Canada	HRP
Provincial Tenure Crown Grant	Q4 2019	On track	CRD
Transport Canada Lease	Following completion of construction	On track	CRD
Macaulay Point Pump Station Upgrade			
Township of Esquimalt Development Permit	Q1 2018	On track	DB Contractor
Clover Forcemain			
City of Victoria Licence (works access)	Obtained	Complete	CRD
Clover Point Pump Station			
Rezoning within the City of Victoria	Obtained	Complete	CRD
City of Victoria Licence (facility siting)	Obtained	Complete	CRD
ECI/Trent Twinning			
City of Victoria Licence (works access)	Q1 2019	On track	Design Consultant
Arbutus Attenuation Tank			
Vancouver Island Health Authority Licence (works laydown)	Q2 2019	On track	CRD
Residual Solids Pipelines and Pump Stations			
Ministry of Transportation and Infrastructure permits (works access)	Q1 2018	On track	Design Consultant
Residuals Treatment Facility			
District of Saanich Development Permits	Q2 2018	On track	RTF Project Co

2.3 First Nations

First Nations communication and engagement was ongoing over the period.

Following the appointment in June of the Songhees First Nation Liaison, the Esquimalt First Nation Liaison was appointed in July. These two positions will support the Project Team by providing cultural awareness training, assisting in identifying potential candidates for employment opportunities, disseminating Project-related notices to their communities and working to develop protocols for the management of archaeological materials.

In July, the Songhees First Nation Liaison facilitated the hiring of a First Nation monitor to assist Millennia with their archaeological monitoring responsibilities at the Ogden Point site. Activities performed by the First Nation monitor included screening excavated soils for archaeological material, identifying and classifying those archaeological materials and sharing traditional knowledge of the area with the on-site crew.

As described in the Environment and Regulatory sections above, Millennia submitted a Heritage Conservation Act Inspection Permit application to the Province in July. As part of the application, Millennia notified the Esquimalt, Songhees and Saanich First Nations of the proposed Archaeological Impact Assessment work. Additionally, Millennia reviewed Stantec's proposed Residuals Pipeline geotechnical borehole locations, to assess and mitigate potential conflicts with archaeological resources.

In April seven letters signed by the CRD Chair (acting) were sent to neighbouring First Nations to give notice of the pending construction on the Project, including an invitation to have further discussions and Nations were asked to respond by the end of May. One Nation (Pauquachin) responded and requested an opportunity to discuss the Project further. The CRD anticipated that there would be further discussion at the WSANEC Leadership Committee (a committee made up of Saanich First Nations Chiefs, Council members and elders) in June but the Pauquachin Nation were not represented at the meeting. The CRD has made several efforts to follow up with the Pauquachin Nation since the meeting and will continue efforts to follow up in August.

2.4 Stakeholder Engagement

During the month of July 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 is 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 materials and methods supported the implementation of the Communications and Engagement Plan, including a public inquiry program, Project website updates, construction notifications, and community and stakeholder meetings.

Project Updates

Project Update #3 (Appendix A) was developed and distributed in July. It was posted to the Project website; mailed to 34,000 households in James Bay, Fairfield, Esquimalt, and Victoria West; hand delivered to the City of Victoria, Township of Esquimalt and District of Saanich mayors and councillors; and emailed to stakeholder lists in July.

Briefing Notes

There were two Briefing Notes developed and distributed in July (Appendices B and C). The Briefing Notes were developed to provide detailed information to the Project Board on how the casing installation at Ogden Point was proceeding. The Briefing Notes were distributed by email to the CRD Board, the City of Victoria Mayor and Council, MLA Carole James, members of the CRD Project Team Joint Committee, and the James Bay Neighbourhood Association. The Briefing Note which provides information about the completion of the casing installation was also posted to the Project website.

Construction Communications

Construction was underway in the month of July at two main work sites: McLoughlin Point and Ogden Point. Key communications tools were used to keep the community aware of construction activities including construction notices emailed to James Bay and Esquimalt email list and stakeholders, website updates, 24-7 phone line, and community meetings.

Construction Notices

In July three construction notices (Appendices D to F) were issued to stakeholders and uploaded onto the Project website:

- McLoughlin Point: Excavation and Controlled Blasting: July 14, 2017
- Ogden Point Casing Installation Construction Notice – Update: July 17, 2017
- Ogden Point: Drilling Construction Notice: July 25, 2017

In addition, weekly McLoughlin Point blasting schedules have been posted to the website to ensure the public is aware of what to expect in the upcoming week. An example of one of these blasting schedules is attached as Appendix G.

Project Website

The Project website, wastewaterproject.ca, was updated throughout the month. The site includes all construction and media releases, relevant reports, and updates to the “Community Questions” webpage to provide stakeholders with answers to commonly-asked questions.

Community Meetings

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

- James Bay Neighbourhood Association; and
- Esquimalt Liaison Committee.

The Project Team and/or members of the Project Board also held meetings with the following Members of the Legislative Assembly of BC:

- MLA Andrew Weaver, Oak Bay – Gordon Head;
- MLA Adam Olsen, Saanich North and the Islands; and
- Hon. Lana Popham, Saanich South.

The Project Team also held meetings with representatives of the following municipalities:

- District of Saanich Technical Working Group; and
- Township of Esquimalt Liaison Committee Meeting.

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

Inquiry Source	Contacts for July
Information phone line inquiries	19
Email inquiries responded to	36

Key themes of the public inquiries are as follows:

- impact of noise of the casing installation at Ogden Point;
- geotechnical work along Dallas Road and the plan for the Clover Forcemain;
- the effectiveness of the noise wall at the Ogden Point construction site;
- amenities in Esquimalt and public realm improvements in Victoria;
- risk management and home insurance for homes and buildings which may be impacted by construction;
- construction work at Ogden Point;
- environmental impact of construction; and
- employment, supplier and contractor interest.

Communications Planning

As construction plans progress, the Team will continue to inform the community through various information channels and meetings.

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

The Project progressed as planned during July.

In July the WWTP Project Component moved forward with the progression of engineering, drilling of the harbour crossing from Ogden Point, and site preparation at McLoughlin Point. Procurement activities advanced as per schedule with the closure of the RFQ for the Macaulay Point Pump Station and Forcemain Design-Build contract and the issue of the RFP for the Clover Forcemain design consultant services.

A number of Project planning related activities were ongoing throughout July. Key amongst these were detailed schedule integration activities including:

- on-going review of HRP's baseline schedule for alignment and incorporation into the Project's detail schedule and project controls structure; and
- HRP continue to refine their schedule with details from the 30% design information which will be reflected in the overall integrated schedule.

Cost-loading of the Project schedule to support earned value management is planned to be completed by HRP within the next 60 days.

Figure 1 shows the high-level Project schedule. This schedule is unchanged from that shown in the April – June Project Quarterly Report , however it remains subject to optimization as the Project and planning progress.

Figure 1-High-Level Project Schedule



2.6.1 30 day and 60 day lookahead

Key activities and milestones for the next 30 days are:

Safety

- the WTP Safety Manager will provide office safety orientations to any new Project Team staff;
- the WTP Safety Manager will organize First Aid training for Project Team designated Level 1 First Aid Attendants;
- the WTP Project Safety Manager will provide an orientation presentation to the crews who will work on the geophysical and geotechnical work for the Residual Solids Conveyance Line;
- WTP Safety Manager and/or Construction Manager will conduct daily site inspections at all active Project work sites;
- Project Team review of incident reports: these reviews will be ongoing for the duration of the Project. As incident reports are submitted by Project contractors they will be reviewed to ensure that measures are put in place to prevent a recurrence. Depending on the type of incident notices may be sent to other Project contractors to advise them of the incident and the preventative measures taken;
- participation in Joint Occupational Health and Safety Committee meeting;
- participation in bi-weekly CRD safety meetings;

Environment and Regulatory Management

- issue of a Heritage Inspection Permit to allow for the field portion of the Archaeological Impact Assessment work to proceed;
- HRP is expecting to receive 'Notice from a Director' that construction of the McLoughlin facility may proceed;
- Project Team anticipates completing a draft Information Requirements Table to submit to the Ministry of Environment to scope the MWR Registration application;

First Nations

- engagement of Pauquachin Nation;
- continued engagement and cooperation with the Esquimalt Nation and the Songhees Nation through their designated liaisons;

Stakeholder Engagement

- construction notifications to be sent to Saanich, Esquimalt and Victoria regarding the geophysical and geotechnical work for the Residual Solids Conveyance Line;
- communication of weekly blasting schedule for the McLoughlin Point Wastewater Treatment Plant;
- Wastewater Treatment Project information booth in Esquimalt at Canada 150 celebration event;
- ongoing community liaison meetings;

Construction

McLoughlin Point

- establish trailer complex in Area A;
- connect temporary power;
- continue site rock blasting;
- start outfall shaft blasting;
- continue contaminated soils removal and disposal;
- tsunami and planter wall construction;

Ogden Point

- continue drilling of HDD pilot hole (expected to reach McLoughlin Point by end of September, in accordance with the schedule);
- complete handling of contaminated materials;

Engineering

WWTP

- CRD to provide formal response to 30% Design comments;
- HRP to continue progress of 50% Design;

Conveyance

- commence geotechnical drilling along the Residual Solids pipeline alignment;
- commence topographical surveying along the Residual Solids pipeline alignment;
- commence geophysical testing along the Residual Solids pipeline alignment;

Procurement

RTE

- third round of collaborative meetings;
- issue the Final Draft Project Agreement;

Conveyance System

- closure of the RFP for Clover Point Pump Station;
- selection of short-list to participate in the Macaulay Point Pump Station and Forcemain RFP;
- issue RFP for Macaulay Point Pump Station and Forcemain;
- closure of RFP for Clover Point Forcemain design consultant services;
- issue RFP for Residual Solids Conveyance Line design consultant services; and
- issue contract documents to KWL for design consultant services – Arbutus Attenuation Tank.

Key activities and milestones for the next 60 days are:

Environment and Regulatory Management

- Project Team to meet with the Ministry of Environment to discuss the draft Information Requirements Table and MWR Registration;
- Project Team plans to meet with Department of National Defence staff to discuss post-construction ecosystem restoration activities;

Stakeholder Engagement

- coordination with the District of Saanich and community association representatives for upcoming public engagement;
- planning for Fall community information sessions in Victoria and Saanich;
- ongoing community liaison meetings;
- development of Project Update #4;

Construction

McLoughlin Point

- remove fill behind existing retaining wall and demolition of retaining wall;
- continue blasting and excavation at McLoughlin site (estimated completion date mid-September);
- trailer complex setup including office, crew and sanitary facilities (estimated move-in to site in September);

Ogden Point

- continue HDD pilot hole (expected to reach McLoughlin Point by end of September 2017);
- continue site remediation (contaminated soils removal and disposal);

Engineering

WWTP

- HRP to submit 50% design;

Conveyance System

- complete geotechnical drilling along the Residual Solids pipeline alignment;
- complete topographical surveying along the Residual Solids pipeline alignment;
- complete geophysical testing along the Residual Solids pipeline alignment;

Procurement

RTF

- Technical Submissions due September;
- begin the evaluation of the Technical Submissions;

Conveyance System

- closure of the RFP for Residual Solids Conveyance Line design consultant services; and
- evaluation of RFP's for Clover Pump Station and Forcemain.

2.7 Cost Management and Forecast

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

The Project expenditures for the reporting period were as expected. No contingency or program reserve was drawn upon during the reporting period.

The main Project expenditures incurred over the reporting period were associated with: WWTP construction activities; third-party commitments; communications and engagement activities and PMO-related costs.

2.7.1 Commitments

No significant financial commitments were made during the reporting period.

2.7.2 Expenses and invoicing

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

No contingency funds were drawn during the reporting period.

2.8 Key Risks and Issues

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

Table 5 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.

Table 5 - Project Active Risks Summary

Risk No.	Risk	Risk Status	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
2	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
6	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
7	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. Esquimalt liaison committee established and 2 community WTP updates were held in the period.	M	No change
10	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 No.	Risk	Risk Status	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
18	Provincial or Federal government/agency permit requirements not met	Project Component required Provincial or Federal permit conditions are not met by WTP works contractors resulting in delays or work stoppage.	The Project Team will compile and maintain a permit compliance register to monitor and manage Project permit condition compliance by the WTP works contractors. Meeting with Federal and Provincial agencies to fully understand and meet requirements in a timely fashion	M	No change

Risk Level Key

Risk Level Range	Risk Level Range
L	Low
M	Medium
H	High

2.9 Status (Engineering, Procurement and Construction)

2.9.1 Wastewater Treatment Plant (WWTP)

The WWTP Project Component is continuing with HRP progressing engineering of the WWTP and outfall, drilling of the harbour crossing from Ogden Point, and site preparation at McLoughlin Point.

Engineering

HRP progressed multiple design and detailed planning work fronts in July, including:

- Completion of DND Environmental Effect Determination (EED) Amendment No. 2

Construction

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

McLoughlin Point

- completed construction of Department of National Defence (DND) laydown areas (Areas A, D and E) to support the WWTP construction;
- completed installation of gate;
- mobilized equipment and started rock blasting;
- demolished portions of the existing retaining wall;
- started installation of temporary dewatering and water treatment system; and
- started the site characterization process in response to multiple contamination finds.

Ogden Point

- completed installation of the steel casing to facilitate the Horizontal Directional Drilling (HDD);
- re-graded site to manage contaminated soils;
- completed mobilization of equipment at Ogden to support the HDD operation;
- commenced HDD pilot hole (375 mm); and
- visited homeowners regarding perceived vibrations during casing installation and followed up with vibration testing at the location which confirmed that there is no impact.

At McLoughlin Point construction progressed in line with the schedule with HRP furthering design and mobilizing blasting equipment (Figure 1) and commencing blasting (Figure 2) and preparing Area “E” for employee parking (Figure 3). HRP installed the water treatment plant (Figure 4) and established erosion and sediment control (Figure 5) to protect the environment from runoff.

At Ogden Point the installation of the steel casing for the HDD was completed. As noted in the June monthly project report the casing installation started two weeks later than was initially scheduled, starting on June 29th rather than during the week of June 12th. The casing installation took longer than the anticipated two weeks, and was completed on July 22nd, just

over three weeks after starting. This has not had an impact on the overall Project schedule, but did have a noise impact on residents. Between June 29th and July 22nd casing installation occurred on seven days, and in total took just under 12 hours. Over those 12 hours the noise level in Dallas Road was between 74 and 89 decibels. The Project Team received complaints from residents and in response looked to minimise the number of hours that casing installation took place on any day, and casing installation was not undertaken on the July long weekend.

After completion of the casing installation, HRP commenced drilling of the HDD pilot hole (Figure 6). Since commencing drilling the noise levels have reduced significantly, as anticipated, and are now in the range of 70-75 decibels during working hours (7am – 7pm Monday-Friday, and 10am – 7pm on Saturdays). The Project Team will continue to monitor noise levels as the drilling operation continues, however noise levels are not anticipated to increase from the current levels.



Figure 1- Mobilization of blasting equipment



Figure 2- Blast rock from rock outcrop



Figure 3- Employee parking lot constructed at DND Area "E"



Figure 4 - Installation of water treatment plant



Figure 5 – Erosion and sediment control in place



Figure 6 – Drilling of HDD pilot hole

2.9.2 RTF

The Residual Treatment Facility is in the procurement phase. The procurement phase progressed as planned for the period.

The Project Team released addenda making updates and changes to the RFP and the Initial Draft Project Agreement.

The team prepared for the third and final round of Collaborative Meetings, with each shortlisted proponent team designated an entire day to meet with the Project Team. The Proponents provided agendas and, comments on the Initial Draft Project Agreement for the team to review prior to the scheduled meetings.

The Project Team continues to receive enquiries from all three proponent teams with most of them being technical in nature and is working hard to ensure they are all addressed in a timely manner.

2.9.3 Conveyance System

Engineering

The indicative alignment design continued to be progressed for both the Clover Point Forcemain and the Residuals Solids Pipes and Pump Stations.

Planning continues for the geophysical and geotechnical work for the Residual Solids Conveyance Line.

Procurement

The Request for Proposals for the Clover Point Pump Station Design-Build contract is scheduled to close on August 16, 2017.

The RFQ for the Macaulay Point Pump Station and Forcemain Design-Build contract closed on July 5, 2017. Evaluation of the submissions started in July and a short-list of three will be selected in August. Work continues on the preparation of the RFP documents for the contract, and the RFP is scheduled to be sent to the three short-listed proponents in August.

Planning for the procurement of the design consultant services (including the “Engineer of Record” role) for the five design-bid-build conveyance contracts is underway and ongoing.

The RFP for the Clover Forcemain design consultant services was issued on July 6, 2017 with a closing date of August 3, 2017.

Construction

Geotechnical and environmental investigations are ongoing and the geotechnical drilling of boreholes along the Clover Forcemain and Macaulay Point Pump Station and Forcemain alignments were completed in July 2017. Topographical surveys commenced in late July 2017 and geotechnical and geophysical investigations will follow in August and September 2017 along the proposed Residual Solids Conveyance Line alignment.

Appendix A: Project Update #3

Wastewater Treatment Project: Construction Underway

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 Project will be built so we comply with federal regulations by the end of 2020.

The Wastewater Treatment Project includes three main components: the Residuals Treatment Facility, the McLoughlin Point Wastewater Treatment Plant and the Conveyance System (which includes the pump stations and pipes).

CONSTRUCTION IS UNDERWAY ON THE MCLOUGHLIN POINT WASTEWATER TREATMENT PLANT AND CROSS-HARBOUR UNDERSEA PIPE

The first phase of construction includes work at the McLoughlin Point Wastewater Treatment Plant and the cross-harbour undersea pipe from Ogden Point to McLoughlin Point.

At McLoughlin Point, site preparations are underway, and excavation and blasting will start in the coming weeks.

At Ogden Point, crews have installed a 5-metre high sound wall, and are installing the casing, or entry point, for the cross-harbour pipe between Ogden Point and McLoughlin Point. This is the noisiest part of the work at Ogden Point, and we thank local residents for their patience while this work is completed. Crews will begin the horizontal directional drilling for this pipe in the coming weeks, which will involve mobilizing equipment and running generators to power the equipment.

THREE COMPONENTS OF THE WASTEWATER TREATMENT PROJECT ARE IN THE PROCUREMENT PHASE

Competitive selection processes are underway for the Residuals Treatment Facility, the Clover Point Pump Station, and the Macaulay Point Pump Station and Forcemain. More information on procurement can be found on the website at: crd.bc.ca/project/wastewater-treatment-project/news-and-information/procurement.



Crews placing aggregate in a laydown area for the McLoughlin Point Wastewater Treatment Plant in Esquimalt.



The horizontal directional drill bit being used to drill the hole for the cross-harbour undersea pipe that will go from Ogden Point to McLoughlin Point.

Wastewater Treatment Project
Treated for a cleaner future

Project Update #3
July 2017

Talking About Treatment

WHAT IS WASTEWATER?

Wastewater is the term used to describe water that has been contaminated by human activity such as dishwashing, doing laundry, and flushing the toilet. Some pollutants in wastewater include industrial and commercial waste, detergents, cooking fats and prescription drugs.

High concentrations of these pollutants can have negative effects on fish and wildlife.

The purpose of treating wastewater is to remove contaminants prior to releasing the effluent into the environment. There are three different levels of treatment: primary, secondary and tertiary. Each level of treatment removes a higher percentage of contaminants from the wastewater.

The McLoughlin Point Wastewater Treatment Plant will provide tertiary treatment for wastewater from the core area municipalities.

What's Happening in the Next Three Months?

- **Construction of the cross-harbour undersea pipe continues** from Ogden Point to McLoughlin Point using a process called horizontal directional drilling.
- **Geotechnical investigation work** to inform the design of the pipe to the Residuals Treatment Facility.
- The project team is looking forward to **meeting with the Saanich community** this fall, as we move into the next phase of project planning and construction for project components in Saanich.
- **Ongoing meetings with the Esquimalt Liaison Committee** and Victoria, Saanich and Esquimalt municipal technical working groups.
- **Continuing to engage with communities** to provide updates on current and future construction.

Wastewater Treatment Project Community Engagement Summary

OCTOBER 2016 – JUNE 2017

40 meetings with municipalities (Mayors, Councils, and staff)

21 meetings with funding agencies (federal government, P3 Canada, Infrastructure Canada, provincial government)

14 meetings with community associations

5 public open houses

14 meetings with stakeholders (such as the Department of National Defence, Tourism Victoria and Greater Victoria Harbour Authority)

211 responses to email inquiries

30 responses to phone inquiries

Project Update #3
July 2017

Wastewater Treatment Project
Treated for a cleaner future

Meet a Member of the Project Team

ERNIE MASCHNER, PROJECT DIRECTOR FOR HARBOUR RESOURCE PARTNERS



Ernie enjoys a weekend afternoon with his dogs, Daphne and Zeke.

Ernie Maschner is the Project Director for Harbour Resource Partners (HRP). HRP 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. As Project Director, Ernie has overall responsibility for delivery of this part of the project to the CRD. He has been involved in a variety of large wastewater treatment plants in Canada, the United States, and Europe. He is the winner of the Associated General Contractors project of the year award for the North Shoreline Protection Project on the Point Loma Wastewater Treatment Plant in California.

Which wastewater projects have you worked on?

I recently spent five years at the Point Loma Wastewater Treatment Plant in San Diego, California performing various projects (a 900 megalitre/day plant). I also have worked on the Beckton Sewage

Treatment Works in London, UK. Beckton is one of the largest sewage treatment plants in Europe, serving 3.5 million people. I have been involved in the construction of other plants in Canada and the United States.

What is your educational background?

I have a BSc in Applied Mechanics and Engineering Science from the University of California, San Diego and an MBA from San Diego State University. I also have executive education from the University of Michigan and University of California, Los Angeles.

What do you see as some of the challenges for the Wastewater Treatment Plant?

Construction in an urban area is always more challenging. We need to get the plant built while being respectful of the communities and try to mitigate impacts and disruption as much as we can.

What is the best part of your job?

Leading teams of the best construction and engineering professionals in the country.

What do you do in your spare time?

In my spare time I like to cycle, play guitar and visit my children and grandchildren with my wife.

What do you like about Victoria?

Since moving to Victoria, I've come to appreciate the proximity to outdoor recreation and have had a chance to cycle throughout the region. I like the ease and ability of bicycle commuting to work every day. I also like Victoria's strong sense of community.

How long have you had your Great Danes?

My wife and I have been raising Great Danes for six years, we have two with us in Victoria (Daphne is on the left in the photo, and Zeke on the right), and one has remained with my daughter. All three are rescue dogs.



Wastewater Treatment Project
Treated for a cleaner future

Project Update #3
July 2017

By the Numbers: Project Facts



The project will cost **\$765 million**. The government of Canada is contributing \$120 million through the Building Canada Fund, \$50 million through the Green Infrastructure Fund and \$41 million through P3 Canada. The Government of British Columbia will provide up to \$248 million for the project and the CRD will provide the remaining \$306 million.



The Wastewater Treatment Plant at McLoughlin Point will provide tertiary treatment to **108 megalitres of wastewater per day**.

The Arbutus Attenuation Tank is an underground concrete container in Saanich which will provide temporary storage of wastewater during large storm events to prevent overflows at various points along the coastline of Saanich, Oak Bay, and Victoria. The Arbutus Attenuation Tank will have a **volume of 5,000 metres cubed**.



The cross-harbour undersea pipe from Ogden Point to McLoughlin Point is almost **1 kilometre long (940 metres)**.

The pipe under Dallas Road carrying wastewater from the Clover Point Pump Station to the McLoughlin Point Wastewater Treatment Plant will be approximately **1.2 metres in diameter, and 1.2 metres underground**.



The Wastewater Treatment Project will be **complete by the end of 2020**.



3 WAYS TO KEEP INFORMED ABOUT THE WASTEWATER TREATMENT PROJECT

Project Website: wastewaterproject.ca

It is regularly updated with new information, including construction bulletins, media releases, and reports. There is a "Community Questions" section on the website that provides answers to commonly-asked project questions and is frequently updated.

24-7 Project Information Line: 1.844.815.6132

Residents can call to receive information or report a concern.

Email Address: wastewater@crd.bc.ca

Submit inquiries or let us know you are interested in being on a distribution list to receive construction notices.

For More Information

Website: wastewaterproject.ca

Email: wastewater@crd.bc.ca

24-7 Project Information Line: 1.844.815.6132

Appendix B: Project Board Briefing Note July 7, 2017

Wastewater Treatment Project T: 250.360.3002
510-1675 Douglas Street F: 250.360.3071
Victoria, BC, V8W 2G5 www.wastewaterproject.ca



Wastewater Treatment Project
Treated for a cleaner future

Wastewater Treatment Project

Briefing Note

July 7 2017

Casing installation at Ogden Point began on June 29. The work has occurred intermittently for a few hours on each of the following days: June 29, July 4 and July 6. This work is required to install the casing, or entry point, in preparation for the horizontal direction drill operation. We had indicated that this particularly noisy part of the work would take about two weeks, which remains the case.

On July 6th we received a number of complaints from area residents regarding the noise generated by the activities occurring at the Ogden Point construction site. HRP (the Contractor) was installing another section of the casing which started at approximately 1 p.m. The driving of the casing finished at approximately 3 p.m., however limited progress was made due to encountering an obstruction. The contractor will be mobilizing an auger in order to clear soil from the casing in an attempt to facilitate installation. Once this operation is complete we anticipate recommencing driving the casing the early part of next week.

The sound wall is working to reduce the noise from the site to levels that are generally in accordance with the City of Victoria Noise By-Law, although we understand that it is still impacting residents in the area. We anticipate the casing installation will be complete within the next week. Over the coming days, excluding Sunday, the driving of the casing will occur intermittently but will not be continuous throughout the day.

CRD staff and our noise consultant (RWDI) have been on site each day the driving operation has taken place to monitor the activities and review noise levels in the area. We have summarized the driving time and measured noise levels on each of those days:

Date	Driving Time	Noise Level	Noise Level
		Top of Sound Wall	Dallas Road
June 29, 2017	35 minutes	85 db	74-78 db
July 4, 2017	3 hours	99-101 db	85-89 db
July 6, 2017	2 hours	100 db	83-88 db

We completed broad notification for this work that included hand-delivering notices to local residents, e-mailing those who have signed up for project updates, and posting a notice to the sound wall, so local residents are aware of the work. We also provided the Project information phone line and e-mail address so that people can contact us directly with concerns or questions.

These communication methods will continue to be used as construction progresses. Once the casing installation is complete, the noise level will be significantly lower for the remainder of the construction at Ogden Point within the 75 db, which we had indicated. However the project team will continue to monitor the noise levels and work with the contractor to consider additional noise mitigation measures to further reduce noise levels.



Project Board - July 7, 2017
Casing installation at Ogden Point

2

Our dialogue with the James Bay Neighborhood Association is continuing. We had a prescheduled meeting with the Neighborhood Committee yesterday at 2:30pm and we took the opportunity to discuss the project on the Ogden site. We discussed the progress and the current noise issue and provided an update on activities scheduled over the next 90 days. It was a productive and positive meeting and we are looking forward to working with the Committee as we continue to progress the components of the project affecting James Bay and its residents.



Appendix C: Project Board Briefing Note July 25, 2017

Wastewater Treatment Project T: 250.360.3002
510-1675 Douglas Street F: 250.360.3071
Victoria, BC, V8W 2G5 www.wastewaterproject.ca



Wastewater Treatment Project
Treated for a cleaner future

Wastewater Treatment Project Briefing Note
July 25, 2017

Casing Installation Complete

On Saturday July 22, the Wastewater Treatment Project completed driving the casing, which provides the entry point for the horizontal direction drill at Ogden Point. This casing installation work was the noisiest part of the work that will take place at Ogden Point.

The installation work began on June 29th and occurred intermittently for a few hours on each of the following days: June 29, July 4, July 6, July 17, July 19, July 21, and July 22. The total time that was required to drive the casing was 11 hours and 56 minutes over the 7 days outlined above.

After the first three days of the casing being driven the Project Team began to hear from residents regarding the impact of the noise. In order to further mitigate the noise the Project Team, when possible, looked to minimise the number of driving hours on any given day.

CRD staff and our noise consultant (RWDI) were on site each day the driving operations took place to monitor the activities and review noise levels in the area. The data from the first three days of driving was provided previously. The final four days of driving time and measured noise levels at Dallas Road are provided below:

Date	Driving Time	Noise Level at Dallas Road
July 17, 2017	1 hour 43 minutes	81-87 dBA
July 19, 2017	1 hour 13 minutes	81-87 dBA
July 21, 2017	2 hours 5 minutes	83-89 dBA
July 22, 2017	1 hour 20 minutes	79-82 dBA

The data collected by our noise consultant further confirmed that the sound wall is an effective barrier and is working to reduce the level of noise from the site, although we fully understand that the noise was still impacting residents in the area.

The Project Team will now begin implementing the Horizontal Directional Drilling operation. The Project Team has identified the anticipated noise level during the drilling operations as 75dBA at the midpoint of Dallas Road. Now that the casing installation is complete, the noise level will be significantly lower for the remainder of the construction at Ogden Point and is anticipated to be within the previously identified 75 dBA. This phase of the work is anticipated to take approximately one year to complete. The sound wall will remain in place for the duration of the work at Ogden Point and will continue to reduce noise during the drilling operation.

Our approach has been to inform residents and stakeholders of the Wastewater Treatment Project's ongoing progress. We completed broad notification for the casing installation that included hand-delivering notices to local residents, e-mailing those who have signed up for project updates, and posting a notice to the sound wall, so local residents are aware of the work, as well as providing the project information phone line and e-mail address.

WWTP-694219604-838



July 25, 2017

Casing installation Complete**2**

These communication methods will continue to be used as we move into the directional drilling phase of work. The Project Team will monitor the noise levels and continue to consider additional noise mitigation measures to further reduce noise levels if necessary.

We are extremely appreciative of the patience and understanding shown by the residents in the area as we completed the casing installation and the noisiest portion of the work at Ogden Point.

Safety Alert

The Wastewater Treatment Project Team has identified a safety concern at the Ogden Point work site. Members of the public have been approaching the gate where heavy trucks are entering and exiting.

The Project Team has been advised that people have been coming inside the restricted area to take pictures and to measure sound. Given the active nature of the construction site this represents a significant safety concern. Harbour Resource Partners, the contractor who is in charge of this work, have had a meeting with GVHA to go over this issue. They have increased the safety and warning signage and have painted warning markings on the ground to more clearly indicate the area where pedestrians are not allowed.

The Project Team has also followed up with the James Bay Community Liaison Committee to inform them of the issue and request that they assist in distributing the information regarding safety at the site and encouraging people to refrain from approaching the gate area.

We fully understand the interest that the public has in the work happening at the Ogden Point site. The Project Team is committed to providing updated information as the project progresses and will work to ensure that the public is well informed about what is happening on site through previously outlined communication methods.

Our main priority is the safety and wellbeing of the public and Project Team members in and around our construction sites. We ask you for your cooperation to keep this area a safe and functional work place.



Appendix D: Construction Notice- McLoughlin Point Excavation and Controlled Blasting



Wastewater
Treatment Project
Treated for a cleaner future

Construction Notice

UPDATE

July 14, 2017

McLoughlin Point: Excavation and Controlled Blasting

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. Excavation work has begun and blasting is expected to begin next week. It is anticipated that this work will take approximately four months to complete.

What to Expect

- Fencing around the McLoughlin Point construction site has been installed
- Heavy equipment will be used
- No street closures will be required
- On average 30 trucks per day (roundtrips) hauling excavated material from the site

Blasting Procedure

- Blasting will occur approximately 2-4 times per day, with each blast lasting 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

Work Hours: Blasting Hours: Monday to Friday, 8:00 a.m. to 4:30 p.m.
 Excavation Hours: Monday to Friday, 7:00 a.m. to 7:00 p.m.

The Wastewater Treatment Plant includes construction of a cross-harbour undersea pipe from Ogden Point to McLoughlin Point. More information on the directional drilling and timing will be provided in a subsequent 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 First Nations and will be complete by the end of 2020.

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. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix E: Construction Notice- Ogden Point: Casing Installation



Wastewater
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Construction Notice

UPDATE

July 17, 2017

Ogden Point: Casing Installation

The McLoughlin Point Wastewater Treatment Plant includes construction of a cross-harbour undersea pipe from Ogden Point to McLoughlin Point. The contractor for the treatment plant, Harbour Resource Partners, will complete this work using a process called horizontal directional drilling. Crews are installing the casing, or entry point for the pipe, in preparation for the horizontal directional drill operation. This involves driving the casing into place (a process similar to pile driving). This work will continue during the week of July 17 behind the 5-metre high noise wall.

What to expect

- 5-metre high noise wall and signage will be in place
- Intermittent noise while casing is being driven into place (this is the noisiest part of the work at Ogden Point)
- Once casing installation is complete, the directional drilling will begin, which involves running equipment and generators for the drilling operation

Traffic Impacts

- No traffic disruptions are anticipated as part of this work
- On average five trucks per day (round trips) to and from the site
- Local access to businesses and residences will be maintained
- The boat launch will remain open with minor access delays
- Crews will park at the Ogden Point worksite, not on local streets

Work Hours:

- Monday to Friday, 7:00 a.m. to 7:00 p.m.
- Saturday, 10:00 a.m. to 7:00 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 and will be complete by the end of 2020.

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. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix F: Construction Notice- Ogden Point: Horizontal Directional Drilling



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

Construction Notice

July 25, 2017

Ogden Point: Horizontal Directional Drilling

The McLoughlin Point Wastewater Treatment Plant includes construction of a cross-harbour undersea pipe from Ogden Point to McLoughlin Point. The contractor for the treatment plant, Harbour Resource Partners, will complete this work using a process called horizontal directional drilling.

On Saturday, July 22, the Wastewater Treatment Project completed driving the casing, which provides the entry point for the horizontal direction drill. This concluded the noisiest part of the work that will take place at Ogden Point.

Thank you for your continued patience during the course of construction. The drilling operation will commence this week and will continue for approximately one year.

What to expect

- 5-metre high noise wall and signage are in place
- In order to begin the drilling operation, the site will be graded for safety and erosion control
- Equipment will be running in the work area
- Approximately 10 person work crew

Traffic Impacts

- No street closures will be required
- On average five trucks per day (round trips) to and from the site
- Local access to businesses and residences will be maintained at all times
- Boat launch will remain open with minor access delays
- Work crews will park at the Ogden Point site

For the safety of the public and workers, please respect the posted restricted construction access zones.

Work Hours: Monday to Friday, 7:00 a.m. to 7:00 p.m.
Saturday, 10:00 a.m. to 7:00 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.

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

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. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix G: Blasting Schedule- week commencing July 24th



Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

July 24, 2017

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 July 24*:

Monday, July 24	4-6 blasts per day
Tuesday, July 25	4-6 blasts per day
Wednesday, July 26	4-6 blasts per day
Thursday, July 27	4-6 blasts per day
Friday, July 28	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. To contact the project, please email wastewater@crd.bc.ca or call 1.844.815.6132.

Appendix H: Monthly Cost Report

ASSET MANAGEMENT COST REPORT as at July 31, 2017													
Project Component	Control Budget	COST EXPENDED					COMMITMENTS			FORECAST		VARIANCE	
		Expended to June 30, 2017	Expended over reporting period (July 2017)	Expended to July 31, 2017	Expended to July 31, 2017 as a % of Control Budget	Remaining (Unexpended) Budget at July 31, 2017	Total Commitment at July 31, 2017	Unexpended Commitment at July 31, 2017	Uncommitted Budget at July 31, 2017	Forecast to Complete	Forecast at Completion	Variance at Completion \$	Variance at Completion as a % of Control Budget
McLoughlin Point Wastewater Treatment Plant ^	378	43	4.3	48	13%	330	333	285	45	330	378	-	0%
Residuals Treatment Facility ^	195	10	0.3	10	5%	185	17	6	179	185	195	-	0%
Conveyance System ^	192	25	0.4	25	13%	167	35	10	156	167	192	-	0%
Total Costs	765	78	5	83	11%	682	385	302	380	682	765	-	0%

^ - Including PMO and Common Costs

* Values presented in \$millions, results in minor rounding differences



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